53. The effect of social media addiction on communication skills: A meta-analysis study

Hıdır POLAT[1]

APA: Polat, H. (2023). The effect of social media addiction on communication skills: A meta-analysis study. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, (Ö13), 905-921. DOI: 10.29000/rumelide.1379244.

Abstract

The growing prevalence of digital tools in our daily lives exposes us to various forms of addiction. The rise in social media usage places social media addiction at the forefront of concerns. Numerous studies exist on the impact of this addiction on individuals' lives. The impact of social media on individuals' communication skills is an important research area due to its effective use in the communication process. Studies investigating the impact of social media addiction on communication skills have found different results. This study aims to evaluate the overall impact of social media addiction on communication skills. In this direction, a meta-analysis was conducted on 16 studies dealing with the relationship between social media addiction and communication skills. CMA software was used in all analyses. The results show that social media addiction has a moderate negative effect on communication skills. The average effect was tested in the context of moderator variables. Accordingly, the average effect does not show a significant difference according to disciplines, while it shows a significant difference according to countries. The study suggests an explanation for developing further research and protecting communication skills from the negative effects of social media.

Keywords: social media, addiction, communication skills, meta-analysis, Comprehensive Meta-Analysis Software (CMA)

Sosyal medya bağımlılığının iletişim becerileri üzerindeki etkisi: Bir meta-analiz çalışması

Öz

Dijital araçların günlük hayatımızdaki artan yaygınlığı bizi çeşitli bağımlılık türlerine maruz bırakmaktadır. Sosyal medya kullanımındaki artış, sosyal medya bağımlılığını endişelerin ön saflarına yerleştirmektedir. Bu bağımlılığın bireylerin yaşamları üzerindeki etkisine ilişkin çok sayıda çalışma mevcuttur. Sosyal medyanın bireylerin iletişim becerileri üzerindeki etkisi, iletişim sürecindeki etkin kullanımı nedeniyle önemli bir araştırma alanıdır. Sosyal medya bağımlılığının iletişim becerileri üzerindeki etkisini araştıran çalışmalarda farklı sonuçlar elde edilmiştir. Dolayısıyla bu çalışma, sosyal medya bağımlılığının iletişim becerileri üzerindeki etkisini genel olarak değerlendirmeyi amaçlamaktadır. Bu doğrultuda, sosyal medya bağımlılığı ve iletişim becerileri arasındaki ilişkiyi ele alan 16 bilimsel araştırma üzerinden bir meta-analiz gerçekleştirilmiştir. Tüm analizlerde CMA yazılımı kullanılmıştır. Sonuçlar, sosyal medya bağımlılığının iletişim becerileri üzerinde orta düzeyde negatif yönde anlamlı bir etkiye sahip olduğunu göstermektedir. Ortalama etki, moderatör değişkenler bağlamında test edilmiştir. Buna göre, ortalama etki disiplinlere göre

[1] Dr. Öğr. Üyesi, Tokat Gaziosmanpaşa Üniversitesi, Niksar Uygulamalı Bilimler Fakültesi, Halkla İlişkiler ve Reklamcılık Bölümü (Tokat, Türkiye), hidirpolattt@gmail.com, ORCID: 0000-0002-7839-4666 [Araştırma makalesi, Makale kayıt tarihi: 13.08.2023-kabul tarihi: 23.10.2023; DOI: 10.29000/rumelide.1379244]

anlamlı bir farklılık göstermezken, ülkelere göre anlamlı bir farklılık göstermektedir. Çalışma, daha fazla araştırma geliştirmek ve iletişim becerilerini sosyal medyanın olumsuz etkilerinden korumak için bir açıklama önermektedir.

Anahtar kelimeler: sosyal medya, bağımlılık, iletişim becerileri, meta-analiz, Comprehensive Meta-Analysis Software (CMA)

1. Introduction

Throughout history, humanity has undergone revolutionary turning points that have totally transformed economic, sociological, cultural, and political systems. The first such turning point occurred with the shift to an agricultural society, while the second was marked by the Industrial Revolution. The third revolutionary shift of humanity is the information age, brought about by digitalisation. As a result, all aspects of life have become digitized, represented through 0's and 1's. As an effect of this, social media has become an integral part of everyday life (Allen et al., 2014, p. 18) and communication (Fox et al., 2013, p. 772). Today, 7.91 billion people use digital tools and services. Of these, 4.62 billion are active users of social media (Wearesocial, 2022). Individuals use social media platforms to create general profiles, interact with friends, make friends with different people with similar interests (Kuss & Griffiths, 2011, p. 3529), develop romantic relationships, share and disseminate information about the relationship (Fox et al., 2013, p. 772), and use for various purposes such as boycotts, organizing rallies (Adams, 2011). According to the 2022 study, the main reasons people aged 16-64 use social media are to keep in touch with friends and family, fill their free time, read new stories, find content, find out what is being said about it, find inspiration for things to do or sell, buy products, discuss and share ideas with other people, make new connections, find partner groups, follow live broadcasts and sports programs, watch their favorite brands, follow famous people and influencers (Wearesocial, 2022). Therefore, with its power and ubiquity, social media has become a tool for communication and sharing processes that individuals set up with their entire environment (Stone & Wang, 2019, p. 774).

It is a fact that whilst the internet has benefits for individuals in their personal and professional lives, it also has some drawbacks. Easy access to the internet and the ubiquity of social media pave the way for individuals' excessive use of social media platforms. It is argued that excessive use of social media leads to addiction (Dhir et al., 2018; Hou et al., 2019; Smith & Anderson, 2018) and negatively affects many processes (Dalvi-Esfahani et al., 2019; Hou et al., 2019; Kuss & Griffiths, 2011; Shin & Shin, 2016; Van Deursen et al., 2015). Although social media has broadened the scope of digital communication, it is necessary to understand its impact on the 'analog' communication structure (Stone & Wang, 2019, p. 775). With this idea, the research explores the relationship between social media addiction and communication skills.

1.1. Communication skills and social media addiction

The concept of addiction is frequently employed to describe various situations in individuals' life processes. Excessive usage characterizes addiction, which is also utilized to describe an individual's relationship with the Internet and social media in the aftermath of digitalisation. According to the literature, social media addiction is a subtype of internet addiction (Al-Samarraie et al., 2021, p. 2316; Hou et al., 2019, p. 2) characterized by an excessive interest in social media usage, loss of time, resistance, and adverse impacts on one's life (Andreassen & Pallesen, 2014, p. 4054). Social media addiction describes preoccupation with social media, extending time to get more pleasure, discomfort

when prohibited, ignoring other obligations to use social media, interference with other areas of life, and loss of control when using social media (Andreassen et al., 2017, p. 288). Therefore, social media addiction expresses that social media is perceived as the only area to be dealt with, that valuing oneself and using social media are seen as equivalent, and not being able to be without social media (Aslan & Yaşar, 2020, p. 471). As a result, social media addiction is classified as a psychological problem that affects the individual's cognitive, behavioral, and emotional states (Peker & Yildiz, 2022, p. 564).

Addiction is not only a consequence of lousy substance use, such as alcohol, tobacco, and drugs. Even good behavior, when it reaches a compulsive level, becomes an addictive act with harmful consequences (Grover et al., 2013, p. 2). The effects of addiction resulting from excessive use of social media are also dangerous. So much so that the withdrawal symptoms seen in a person with a smoking addiction are also seen in people who stay away from social media platforms (Hough, 2011). Studies on social media addiction show that it positively affects personality traits such as extraversion, neuroticism, and narcissism (Chi et al., 2022; Choi, 2018; Mohammed-Issa, 2017; Tekin & Turhan, 2021). On the other hand, they negatively affect labor market participation, work performance (Hoşgör et al., 2021; Ibrahim et al., 2022; Zivnuska et al., 2019), academic performance (Ajibade et al., 2022; Malak et al., 2021; Zhao, 2021) and relationship with parents (Bilgin et al., 2020; White-Gosselin & Poulin, 2022). In addition, social media addiction also affects the individual's communication skills.

There are international studies that assist in comprehending the impact of digitisation on people's lives. These studies offer empirical data on the frequency of social media usage. As per research, individuals aged between 16-64 use social media for a duration of two hours and twenty-five minutes on a daily basis.(Global Web Index, 2022). A person spent 6 hours 58 minutes daily on the internet in 2022. 2 and 27 minutes belonged to social media (Wearesocial, 2022). Such intense use of the internet and social media creates addiction (You & Liu, 2022, p. 2) and changes the nature of communication (Hou et al., 2019; Kot et al., 2017). Therefore, there is a relationship between communication and social media use. It is claimed that individuals with weak communication skills are more likely to use mediated communication (Wang et al., 2008). The increase in the use of social media negatively affects communication (Peker & Yildiz, 2022, p. 564). However, while some of the studies conducted in this context support this idea (Aftab et al., 2015; Rhodes et al., 2015; Ulusoy & Gürsoy, 2020), on the contrary, some find a positive relationship between social media addiction and communication skills (Awobamise et al., 2022; Ezen et al., 2019; Thomas, 2018; Topal & Çolak, 2021). Although many studies have investigated the relationship between research variables, no analysis was found that combined these studies. The studies show that the relationship between social media addiction and communication skills is contradictory. With a meta-analysis study to be conducted, the studies looking at the relationships between social media addiction and communication skills will be combined, and a general assessment can be made. Therefore, a holistic inquiry is necessary to better understand the relationship between social media as a type of addiction and communication skills. Thereupon the following research questions were then focused on within the scope of the research:

RQ1. How much does social media addiction affect communication skills?

RQ2. Does the impact of social media addiction on communication skills differ significantly according to moderator variables (discipline and country)?

2. Methodology

2.1. Research method

The method of meta-analysis, one of the quantitative research designs, was used in the research. Meta-analysis is the synthesis of quantitative research conducted in the field of the same research questions (Şen & Yıldırım, 2020). Studies dealing with the relationship between "social media addiction" and "communication skills" were included in the study. PRISMA guidelines were followed in reporting the study. PRISMA aims to improve the reporting process of meta-analysis studies and systematic reviews (Moher et al., 2009, p. 2).

2.2. Literature review

Web of Science, Scopus, Proquest, EBSCOhost, Google Scholar, and the National Thesis Centre databases were used to collect research data. Without a time limit, "Social Media Addiction", "Facebook Addiction", "Instagram Addiction", "Youtube Addiction", "Twitter Addiction", "Tik-Tok Addiction", "Excessive Use of Social Media", and "Excessive Social Media Use" were respectively associated with the keywords "Communication" Skills" during the research. The research terms were combined with the Boolean operators "AND" and "OR" and searched. As a result of the research conducted in the databases, 1155 research entries were found in Google Scholar, 327 in Web of Science, 352 in Scopus, 1020 in Proquest, 54 in EBSCOhost, and 238 in the National Thesis Centre. In total, 3146 studies were scanned. Keywords were searched in the titles, abstracts, or keywords of the studies using the research features of the databases.

2.3. Inclusion/exclusion criteria

As a result of the scanning, 39 studies were found. Among these studies, six studies were found to be similar. This left 33 studies after duplicate studies were removed. Including the accepted studies in the review depends on the inclusion and exclusion criteria. Accordingly, the study inclusion and exclusion criteria are as follows:

- Studies written in Turkish and English language only,
- Studies that meet the research aim,
- Studies with the necessary data (Pearson product-moment correlation coefficient) to calculate effect size

When 33 studies obtained according to inclusion/exclusion criteria were examined, ten studies that did not fully reflect the relationship between research variables were excluded. After this process, the coding process was started. It was observed that seven studies did not have correlation values during the coding process and were not included in the research according to the criteria. As a result, 16 studies were included in the study. The selection process of the studies analyzed within the scope of the research is given in Figure 1.

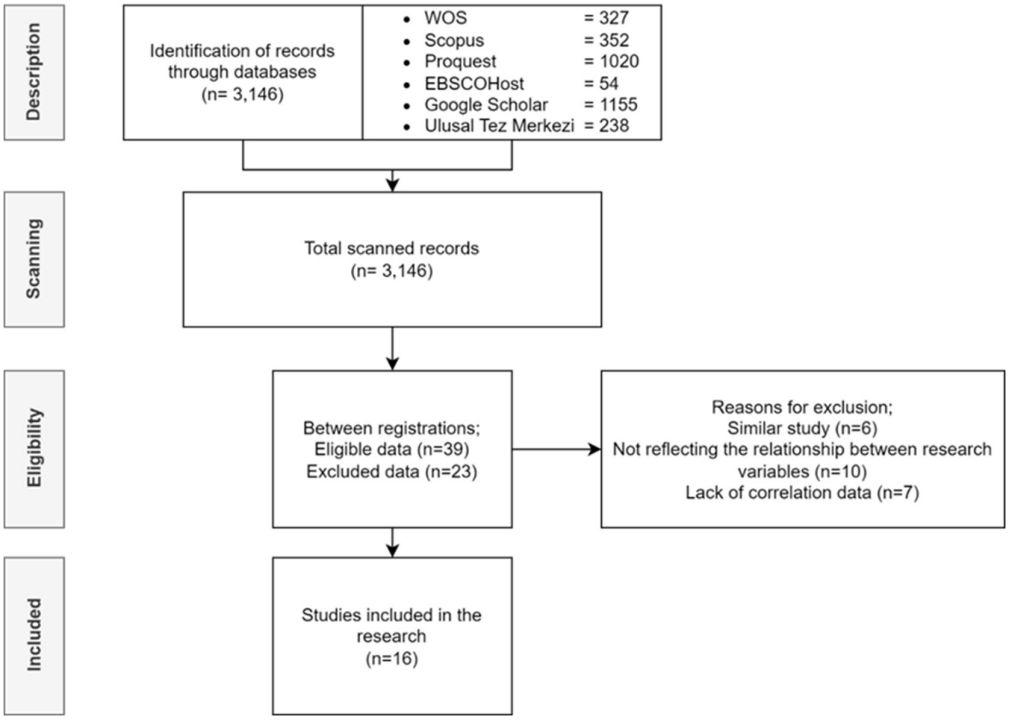

Figure 1. PRISMA diagram showing the selection of included studies

2.4. Data encoding procedure

A coding form was developed to identify the studies to be evaluated within the scope of meta-analysis. The names of the study and authors, publication years, countries, research discipline, publication type, study group, and statistical values (sample size, correlation coefficient) were entered in the coding form. The literature review and data collection process were carried out, as shown in Figure 1. While coding the data, a different researcher was also asked to do coding for research reliability. As a result of the cross-coding, the intraclass correlation coefficient (ICC) between the two raters was calculated as 0.97. Disagreements were overcome as a result of discussions between the two researchers.

2.5. Calculation of effect sizes and statistical analysis

The study focuses on addiction to social media and communication skills. The Pearson product-moment correlation coefficient (r) was used in this context. A comparative review of the literature found that most studies included correlation results. However, among these studies, those that address the relationship between social media dependency and the sub-dimensions of communication skills contain multiple correlation values. For this reason, the mean values of the multiple correlation values were taken. The average values obtained were used as an effect size index (Field & Gillett, 2010, p. 670; Madison & Kellermanns, 2013, p. 167). The strong effect of correlation coefficients on variance makes it necessary to convert them to Fisher's z-scores in meta-analysis studies. The Fisher's z-score is used for analysis, while the correlation scores are used for reporting (Borenstein et al., 2009, p. 41).

Most meta-analysis studies are based on two models, "the fixed effects model and the random effects model". The fixed effects model assumes that all studies have a single effect size and that the observed effects are due to sampling error. The random effects model assumes that the effect is not the same and varies from study to study. Therefore, different effect sizes exist in different studies (Borenstein et al., 2009, pp. 61–62). The main difference between the two methods is due to the sources of error. While the fixed effects model only allows conclusions to be drawn about the studies included in the meta-analysis, the random effects model allows generalization beyond these studies. Therefore, it is recommended to use the "random effects model" for research in the social sciences (Field & Gillett, 2010, p. 673).

It is crucial to assess the consistency in effect sizes between studies. It is easier to generalize the findings by knowing the degree of consistency. At this point, heterogeneity tests are widely used to evaluate the consistency and inconsistency of the study's effect sizes. In heterogeneity tests, I^2 and Q values come to the fore. $I^2= 100\%\times(Q - df)/Q$.

The I^2 value describes the percentage of the total variance in the studies, the Q value indicates the Cochran heterogeneity statistic, and df is the degrees of freedom. The I^2 value takes a value between 0 and 100. A value of 0 indicates no heterogeneity, while a value closer to 100 indicates more significant heterogeneity. It is possible to specify the strength of this statistic as 25-low, 50-medium, and 75-high (Higgins et al., 2003, pp. 557–559). The heterogeneity of the studies allows us to evaluate the influence of moderator variables on effect size. At this stage, the analogous ANOVA method was used.

It is scientifically proven that studies with a high effect size are more likely to be published than those with a small effect size. Therefore, this situation raises the issue of publication bias in meta-analysis studies (Borenstein et al., 2009, p. 280). Publication bias in research, the funnel plot was assessed using Rosenthal's and Orwin's fail-safe N, Begg and Mazumdar's rank correlation test, and Duval and Tweedie's trim and method methods. Comprehensive Meta-Analysis Software (CMA) was used for all analyses performed.

3. Results

3.1. Descriptive results

The meta-analysis shows 16 studies showing the relationships between social media addiction and communication skills. Table 1 lists all studies' authors, publication years, sample sizes, associated communication skills, sub-dimensions, originally reported statistics, average effect sizes, and country information. Some studies also examined the relationship between social media addiction and sub-dimensions of communication skills. This information is in the associated communication skills and sub-dimensions column in Table 1.

Table 1. Information of the study group

Authors	Country	Communication skills	N	Originally reported statistic (r)	Effect size (r)
Aftab et al., 2015	Türkiye	Communication skills	272	-0.45	-0.45
Akbulut, 2022	Türkiye	General communication skills	1060	-0.84	-0.84
Aliusta et al., 2019	KKTC	General communication skills	137	-0.185	-0.185
Alkış, 2020	Türkiye	General communication skills	333	-0.197	-0.197
Bhojak and Bapu, 2021	India	Empathy	332	-0.25	-0.25
Rhodes et al., 2015	USA	General communication skills	136	-0.29	-0.29
Erdoğan, 2019	Türkiye	Active listening	260	-0.266	-0.296
		Self-disclosure	260	-0.374	
		Empathizing	260	-0.312	
		Using body language	260	-0.232	
Ezen et al., 2019	Türkiye	General communication skills	104	0.118	0.118
İliş and Gülbahçe, 2019	Türkiye	Basic communication skill	385	-0.305	-0.268
		To express yourself	385	-0.308	
		Active listening and non-verbal communication	385	-0.269	
		Willingness to communicate	385	-0.189	
Işık, 2022	Türkiye	General communication skills	534	-0.21	-0.21
Karaoglu et al., 2021	Türkiye	To express yourself	384	-0.01	-0.01

Oran, 2020	Türkiye	Interpersonal communication skills	202	-0.69	-0.405
		Empathizing	202	-0.12	
Sadoon, 2021	Türkiye	General communication skills	152	-0.251	-0.251
Thomas, 2018	Thailand	Interpersonal communication skills	98	0.36	0.36
Ulusoy and Atar, 2020	Türkiye	General communication skills	110	-0.497	-0.497
Yang et al., 2022	Taiwan	Interpersonal communication skills	998	-0.13	-0.13

The studies were published between 2015-2022. The total sample size included 5,497 participants. The lowest sample number among the studies is 98, and the highest sample number is 1060. The studies were conducted in 6 countries: Turkey (k=11), Taiwan (k=1), Thailand (k=1), India (k=1), United States of America (k=1), Turkish Republic of Northern Cyprus (k=1). 11 of the studies were research articles, and 5 were master's theses. These studies were conducted in 5 different disciplines: Education (k=4), Health (k=4), Psychology (k=6), Media and Communication (k=1), and Business (k=1). Sample groups of the studies: students (university (k=7), high school (k=2), mixed (F=1), adolescents (k=2), adults (k=3), and married (k=1).

3.2. Results on mean effect size

Table 2 displays the effect sizes (fixed-effects model and random-effects model) and the results of homogeneity/heterogeneity tests.

Table 2. Effect sizes and homogeneity/heterogeneity test results

Model	N	Mean ES	Z	SE	%95 CI		df	Q	P	I^2
					Low	**Up**				
Fixed	16	-0.404	-29,811	0.014	-0.430	-0.377	15	989.112	0.000	98.483
Random	16	-0.272	-2,402	0.113	-0.494	-0.050				

The random effects model calculated the effect size as -0.272 (SE = 0.113 and CI (95%) = lower bound -0.494 and upper bound -0.050). The fixed effects model calculated the effect size as -0.430 (SE=0.014 and CI (95%)= lower bound -0.430 and upper bound -0.377). Data homogeneity and heterogeneity should be determined (Borenstein et al., 2009). Accordingly, at a 95% confidence interval and 15 degrees of freedom, the Q statistic is 989.112. In the chi-square distribution table, at 15 degrees of freedom and a 95% confidence interval, this value is 24.996. The fact that the Q statistic exceeds this value indicates

that the data show heterogeneous distribution. To determine homogeneity or heterogeneity, the fraction of I2 is required. The I2 percentage is important for assessing homogeneity/heterogeneity. A percent I2 value greater than 25% indicates low heterogeneity, a value greater than 50% indicates moderate heterogeneity, and a value greater than 75% indicates high heterogeneity (Higgins et al., 2003). The I2 percentage calculated from the data is 98.48%. This value indicates high heterogeneity. Since it was assumed that the differences were beyond the sampling errors in the study, the random effects model was used to calculate the effect size. Field and Gillett (2010) recommend that the effect size of meta-analyses in the social sciences be computed using the random effects model. Thus, using the random effects model, the mean effect size was calculated to be -0.27. According to Cohen's (1988, p. 129) classification, dependency on social media impairs communication skills. Figure 2 depicts the forest plot impact size distribution according to the random effects model.

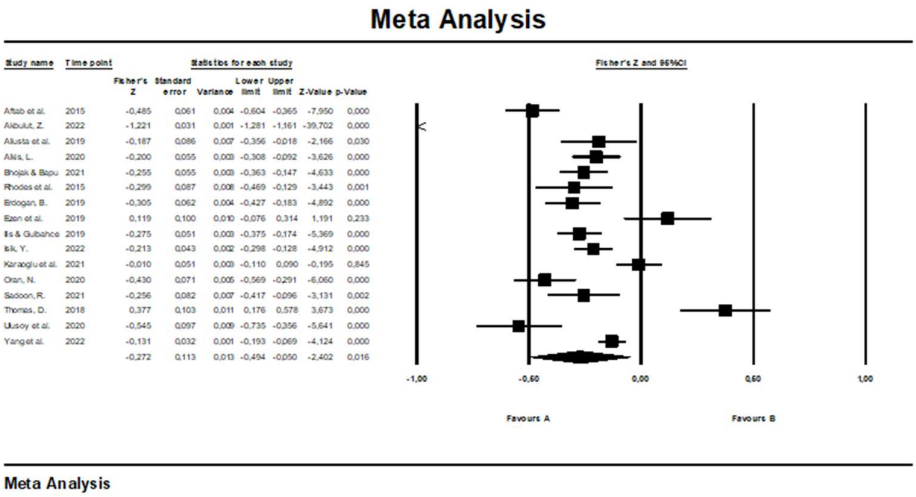

Figure 2. Forest plot showing the distribution of the effect sizes of the studies

The Forest Plot depicts the squares and the horizontal axis lines extending to each square's right and left. The squares reflect the effect sizes, while the horizontal lines represent the effect sizes' 95% confidence intervals. Examining the Forest plot reveals that Yang et al. (2022) conducted the study with the biggest effect on the mean effect size, whereas Thomas et al. (2018) conducted the study with the least effect. Hence, effect sizes were positive in two studies and negative in fourteen. This demonstrates that the result is negative.

3.3. Publication bias

The classic fail-safe N was determined to be 2139. For the 2-tailed p-value to reach 0.05, we must discover and incorporate 2139 "blank" studies. To neutralize the impact (Egger et al., 1997, pp. 629–630), 144 missing studies must exist for every empirical investigation. According to Rosenthal (1979, p. 640), since the value (90) obtained when calculated according to the NR>5k+10 criteria is less than the standard fail-safe N (2139), the effect size of the unpublished study does not affect the effect size of the meta-analysis. This demonstrates that publication bias does not exist. Moreover, the Kendall tau (τ) value was computed. The value of Kendall's τ illustrates the link between sample size and effect

magnitude. The double-tailed p-value is advised for determining the significance of the test statistic. If this number is more than 0.05, there is no publication bias (Şen&Yıldırım, 2020, p. 103) Using the Begg and Mazumdar rank correlation approach, the meta-analysis Kendall's tau (τ) value is negative (-0.117), and the z-statistic is 0.630. The double-tailed p statistic obtained from these values is 0.53. The p-value indicates that there is no publication bias. Figure 3 depicts the funnel plot frequently used to assess publication bias. As observed in the funnel graphic, the distribution of the mean effect sizes is uneven around the funnel. The asymmetric distribution indicates publication bias. As a result of the funnel plot's reliance on the researchers' visual interpretation, observers make diverse assessments. So, it is advised to examine the asymmetry of the funnel plot (Egger et al., 1997, pp. 629–630). Egger regression analysis (Egger test) is constructed for this purpose. According to the Egger test, the interceptor coefficient is 9.129 (intercept - b0). This value's t-statistic is 1.773, and its standard error value is 5.150. The p-value with one tail derived from these values was 0.05. The obtained significance value is greater than or equal to 0.05, showing the absence of publication bias

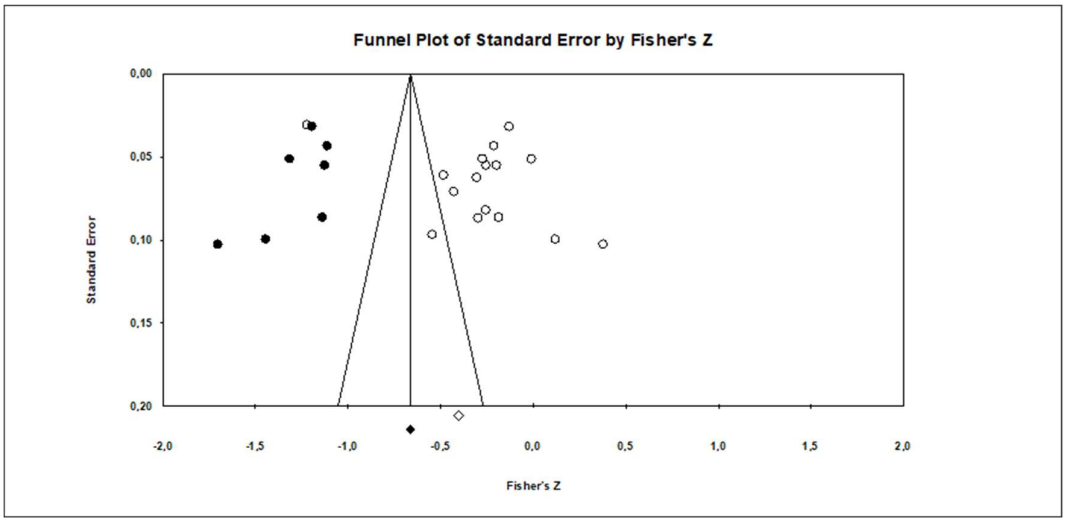

Figure 3. Funnel plot examining the relationship between ES and standard error in studies.

In the funnel diagram, the solid black circles reflect the fictitious research required to eliminate publication bias. In light of this research, a revised effect size calculation is performed (Duval & Tweedie, 2000). Table 3 displays the observed and corrected effect sizes according to the technique of Duval and Tweedie.

Table 3. Results of trim and fill method

	k	Point estimate	%95 CI		Q
			Low	**Up**	
Observed	16	-0.404	-0.430	-0.377	989,11
Corrected	16	-0.662	-0.685	-0.641	2171,60

Adres
RumeliDE Dil ve Edebiyat Araştırmaları Dergisi
Osmanağa Mahallesi, Mürver Çiçeği Sokak, No:14/8
Kadıköy - İSTANBUL / TÜRKİYE 34714
e-posta: editor@rumelide.com
tel: +90 505 7958124, +90 216 773 0 616

Address
RumeliDE Journal of Language and Literature Studies
Osmanağa Mahallesi, Mürver Çiçeği Sokak, No:14/8
Kadıköy - ISTANBUL / TURKEY 34714
e-mail: editor@rumelide.com,
phone: +90 505 7958124, +90 216 773 0 616

The results obtained using the trim-and-fill method developed by Duval and Tweedie show that the study had no publication bias.

3.4. Subgroup analysis

In addition to determining the mean effect size, moderator variables were identified and analyzed to determine the origins of heterogeneity. The countries and disciplines in which the research was conducted were considered the moderator variables for this study.

Hence, social sciences, education, and health sciences were identified as subsets of research fields. In this context, studies from the fields of psychology (k=6), economics (k=1), and media communication (k=1) were combined in the social sciences subgroup, while studies from the fields of education (k=4) and health sciences (k=4) were combined in the educational sciences and health sciences subgroups, respectively. The country where the studies were conducted was determined as the second moderator variable.

Table 4. Differences in effect sizes by discipline in the random effects model

Variable (Discipline)	N	Mean ES	SE	%95 CI		*df*	X^2	Q_B	*p*
				Low	**Up**				
Education Sciences	4	-0,163	0,124	-0,407	0,080				
Health Sciences	4	-0,085	0,065	-0,213	0,043				
Social Sciences	8	-0,426	0,188	-0,794	-0,058	**2**	**5,991**	**3,040**	**0,219**
Total	**16**	**-0,133**	**0,002**	**-0,228**	**-0,039**				

The discipline subgroup heterogeneity (QB=3,040, p > 0.05) is below the necessary chi-square value (5.99), indicating that there are no statistically significant differences across the groups. Hence, the subgroups of disciplines are not the cause of heterogeneity. The subgroups of disciplines have similar consequences.

The countries in the studies were determined to be the second subgroup. The analog ANOVA results for determining whether social media dependence differs by country subgroups are shown in Table 5.

Table 5. Differences in effect sizes by country in the random effects model

Variable (Sample group)	N	Mean ES	SE	%95 CI		*df*	X^2	Q_B	*p*
				Low	**Up**				
USA	1	-0,299	0,087	-0,469	0,129				
India	1	-0,255	0,055	-0,363	0,147	**5**	**11,070**	**35,279**	**0,0**

KKTC	1	-0,187	0,086	-0,356	-0,018
Thailand	1	-0,377	0,103	-0,176	0,578
Taiwan	1	-0,131	0,032	-0,193	-0,069
Türkiye	11	-0,349	0,150	-0,642	-0,055
Total	**16**	**-0,149**	**0,024**	**-0,274**	**-0,175**

The heterogeneity value (df=5, p<0.05) is 35.28. According to the chi-square table, this value (df=5, p<0.05) is 11.07. The heterogeneity value greater than the chi-square value indicates a statistically significant difference between the groups. Accordingly, the effect of social media addiction on communication skills differs according to the country moderator variables. Countries are, therefore, one of the sources of variation. Thailand (-0.377), Turkey (-0.349), and the United States (-0.299) are the nations in the subgroup where social media addiction hurts communication abilities.

4. Discussion and conclusion

In this study, a meta-analysis research was conducted to determine how social media addiction affects communication skills. Although research has examined the association between social media addiction and communication skills, no meta-analysis studies addressing the extent of the overall effect of social media addiction on communication skills were found during the research. In addition, we assessed whether the magnitude of the overall effect varied based on the moderator variables. This is a drawback, as the study is restricted to evaluating coded moderator factors. In the context of this study, the random effects model was used because it was assumed that the source of the discrepancy changes by country and field and is not solely attributable to sampling error. Hence, an effect size of -0.27 was obtained. According to Cohen's (1988) classification of effect size, this number suggests that social media dependency has an almost moderately unfavorable impact on communication abilities.

Nowadays, social media is used as a communication method and tool (Sponcil & Priscilla, 2013) and is changing the way of communication (Cortado & Chalmeta, 2016; Froment et al., 2017; Kot et al., 2017; You & Liu, 2022). Interest in social media is increasing daily, leading to its popularity. As a result, people spend more and more time in these environments (Rutsaert et al., 2013). Therefore, such intensive use leads to addiction and negatively affects many processes (Aslan & Yaşar, 2020; Choi, 2018; Dalvi-Esfahani et al., 2019; Hou et al., 2019). The use of social media to the extent of addiction also affects individuals' communication skills. According to research on the effects of social media addiction on communication skills, social media addiction, general communication skills (Akbulut, 2022; Aliusta et al., 2019; Rhodes et al., 2015), interpersonal communication (Oran, 2020; Yang et al., 2022), empathy (Bhojak & Bapu, 2021; Erdoğan, 2019; Oran, 2020), effective listening and self-expression (Erdoğan, 2019; İliş & Gülbahçe, 2019) have negative effects on communication skills. Some studies have positively affected interpersonal communication (Thomas, 2018) and general communication skills (Ezen et al., 2019). The results obtained are in parallel with the literature.

To determine the cause of the variation in the overall effect sizes, moderator variables (country and discipline) were determined within the scope of the study. The effect of these moderator variables on the

heterogeneity of the total effect sizes was studied. According to the data, subgroups of disciplines are similar to zero. Hence, it does not affect heterogeneity. However, there is a significant difference according to the country moderator variables. Therefore, country moderators are one of the sources of heterogeneity. It is prevalent in Thailand (ES=-0.377), Turkey (ES=-0.349), and the United States (ES=-0.299). According to estimates for 2022, there are 4.62 billion active social media users globally. Thailand (24th), Turkey (26th), and the United States (27th) are among the nations with the most social media users (Wearesocial, 2022). In addition, research indicates that social media addiction impacts communication abilities in these nations.

The research has certain limitations. Within the scope of the research, 16 studies were subjected to meta-analysis. It is seen that these studies are mostly carried out in Turkey. In addition, some studies in different languages may need to be considered, as Turkish and English studies were scanned in the literature review. In addition, studies that do not include these concepts may have been missed due to social media addiction, excessive social media use, and searches made on Facebook/Instagram/Twitter/TikTok/youtube addictions. In addition, acting mainly within the framework of social media addiction can be expressed as a limitation.

The findings of this meta-analysis suggest that social media addiction has a significant impact on communication skills, influenced by various factors. Notably, research indicates that the country factor is a key variable in the formation of this effect. Overall, it is evident that social media addiction has a moderate negative effect on communication skills. These results lead to the conclusion that social media addiction has detrimental effects on communication skills. It is suggested that awareness of this topic be raised. By widening the scope of the study, the influence of digital addiction (social media, the Internet, smartphones, etc.) on communication skills can also be examined. Also, combining meta-analysis studies with meta-synthesis research can produce a complete picture. In addition, considering the country distribution of the studies, it is suggested to research diverse sample groups in a different countries to create research findings.

Declaration of Conflicting Interests

The author declares no conflict of interest regarding the research process.

Funding

The author did not receive any financial support during the article process.

References

*Studies used in meta-analysis

Adams, W. L. (2011, August 8). *London riots: Organized via twitter and smart phones? - TIME*. https://content.time.com/time/world/article/0,8599,2087337,00.html

*Aftab, R., Celik, İ., & Sarıçam, H. (2015). Facebook addiction and social emotional learning skills. *Ozean Journal of Social Science*, *8*(2), 109–120. https://doi.org/10.13140/rg.2.2.21774.66887

Ajibade, S.S., Mejarito, C., Egere, O. M., Adediran, A. O., Gido, N. G., & Bassey, M. A. (2022). An analysis of impact of the social media addiction on academic engagement of student. *Journal of Pharmaceutical Negative Results*, *13*(4), 1390–1398. https://doi.org/10.47750/pnr.2022.13.S04.166

*Akbulut, Z. (2022). *14-18 yaş lise öğrencilerinin sosyal medya bağımlılığı ile iletişim becerileri arasındaki ilişkinin çeşitli değişkenler açısından incelenmesi (Bilecik ili örneği)*. Bilecik Şeyh Edebali Üniversitesi Lisansüstü Eğitim Enstitüsü.

*Aliusta, Z., Akmanlar, Z., & Gökkaya, F. (2019). Üniversite öğrencilerinin iletişim becerileri ve sosyal medya bağımlılığı arasındaki ilişkinin incelenmesi. *Anatolian Journal of Psychiatry*, *20*(1), 10–13. https://doi.org/10.5455/apd.302644847

*Alkış, L. (2020). *Ergenlerde sosyal medya bağımlılığıyla iletişim becerilerinin karşılaştırılması*. İstanbul Gelişim Üniversitesi Lisansüstü Eğitim Enstitüsü.

Allen, K. A., Ryan, T., Gray, D. L., Mcinerney, D. M., & Waters, L. (2014). The Australian educational and developmental psychologist social media use and social connectedness in adolescents: The positives and the potential pitfalls. *The Australian Educational and Developmental Psychologist*, *31*(1), 18–31. https://doi.org/10.1017/edp.2014.2

Al-Samarraie, H., Bello, K. A., Alzahrani, A. I., Smith, A. P., & Emele, C. (2021). Young users' social media addiction: causes, consequences and preventions. *Information Technology and People*, *35*(7), 2314–2343. https://doi.org/10.1108/ITP-11-2020-0753/FULL/PDF

Andreassen, C., & Pallesen, S. (2014). Social network site addiction: An overview. *Current Pharmaceutical Design*, *20*(25), 4053–4061. https://doi.org/10.2174/1381612811319999061 6

Andreassen, C., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors*, *64*, 287–293. https://doi.org/10.1016/J.ADDBEH.2016.03.006

Aslan, İ., & Yaşar, M. E. (2020). Measuring social media addiction among university students. *International Journal of Contemporary Economics and Administrative Sciences*, *10*(2), 468–492. https://doi.org/10.5281/ZENODO.4429749

Awobamise, A., Jarrar, Y., & Nweke, G. E. (2022). Social communication apprehension, self-esteem and Facebook addiction among university students in Uganda. *Contemporary Educational Technology*, *14*(2). https://doi.org/10.30935/cedtech/11542

*Bhojak, A. K., & Bapu, V. (2021). Social media addiction and empathy among emerging adults. *Indian Journal of Mental Health*, *8*(3), 247–253. https://doi.org/10.30877/IJMH.8.3.2021.247-253

Bilgin, M., Sahin, I., & Togay, A. (2020). Social media addiction in adolescents and parent-adolescent relationship. *Education and Science*, *45*(202), 263–281. https://doi.org/10.15390/EB.2020.8202

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H.R. (2009). *Introduction to Meta-Analysis*. John Wiley & Sons.

Chi, L. C., Tang, T. C., & Tang, E. (2022). The phubbing phenomenon: a cross-sectional study on the relationships among social media addiction, fear of missing out, personality traits, and phubbing behavior. *Current Psychology*, *41*(2), 1112–1123. https://doi.org/10.1007/S12144-021-02468-Y/TABLES/5

Choi, Y. (2018). Narcissism and social media addiction in workplace. *The Journal of Asian Finance, Economics and Business*, *5*(2), 95–104. https://doi.org/10.13106/JAFEB.2018.VOL5.NO2.95

Cohen, J. (1988). *Statical power analysis for the behavioral sciences*. Lawrence Erlbaum Associates .

Cortado, F. J., & Chalmeta, R. (2016). Use of social networks as a CSR communication tool. *Http://Www.Editorialmanager.Com/Cogentbusiness*, *3*(1), 1–18. https://doi.org/10.1080/23311975.2016.1187783

Dalvi-Esfahani, M., Niknafs, A., Kuss, D. J., Nilashi, M., & Afrough, S. (2019). Social media addiction: Applying the DEMATEL approach. *Telematics and Informatics*, *43*, 1–14. https://doi.org/https://doi.org/10.1016/j.tele.2019.101250

Dhir, A., Yossatorn, Y., Kaur, P., & Chen, S. (2018). Online social media fatigue and psychological wellbeing—A study of compulsive use, fear of missing out, fatigue, anxiety and depression.

International Journal of Information Management, *40*, 141–152. https://doi.org/10.1016/J.IJINFOMGT.2018.01.012

Duval, S., & Tweedie, R. (2000). A nonparametric "Trim and Fill" method of cccounting for publication bias in meta-analysis. *Journal of the American Statistical Association*, *95*(449), 89. https://doi.org/10.2307/2669529

Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Papers bias in meta-analysis detected by a simple, graphical test. *BMJ*, *315*, 629–634. https://doi.org/10.1136/bmj.315.7109.629

*Erdoğan, B. (2019). *Klinik olmayan örneklemde sosyal medya bağımlılığının sosyal görünüş kaygısı ve iletişim becerileri ile arasındaki ilişkinin incelenmesi*. Üsküdar Üniversitesi Sosyal Bilimler Enstitüsü.

*Ezen, M., Açıkgöz, A., Emir, B., & Özkaraman, A. (2019). Hemşirelik öğrencilerinin sosyal medya bağımlılıklarının iletişim becerilerine etkisi. *Kocaeli Tıp Dergisi*, *8*(1), 130–140.

Field, A. P., & Gillett, R. (2010). How to do a meta-analysis. *British Journal of Mathematical and Statistical Psychology*, *63*(3), 665–694. https://doi.org/10.1348/000711010X502733

Fox, J., Warber, K. M., & Makstaller, D. C. (2013). The role of Facebook in romantic relationship development: An exploration of Knapp's relational stage model. *Journal of Social and Personal Relationships*, *30*(6), 771–794. https://doi.org/10.1177/0265407512468370

Froment, F., González, G., & Bohórquez, R. (2017). The use of social networks as a communication tool between teachers and students: A literature review Facundo. *TOJET: The Turkish Online Journal of Educational Technology*, *16*(4), 126–144.

Global Web Index. (2022). *GWI' s flagship report on the latest trends in social media*. https://304927.fs1.hubspotusercontent-na1.net/hubfs/304927/Social%20-%20GWI%20Report%20-%20Website.pdf?utm_campaign=220203%20Social%20flagship%202022%20report%7C&utm_medium=email&_hsmi=202821734&_hsenc=p2ANqtz-_ctRVFOVrHNWntmC57lj8N16eD1qgL_vwn-Xwh2pNlvde1JXpsVaqqnndQwqHqYHvYJ807b3zCvC8PhE7T4fDTeE8jvw&utm_content=202821734&utm_source=hs_automation

Grover, A., Kamins, M., Martin, I., Davis, S., Haws, K., Mirabito, A., Mukherjee, S., Pirouz, D., & Rapp, J. (2013). From use to abuse: When everyday consumption behaviours morph into addictive consumptive behaviours. *Journal of Research for Consumers*, *19*, 1–19. https://doi.org/10.2139/ssrn.2207025

Higgins, J., Thompson, S., Deeks, J., & Altman, D. (2003). Measuring inconsistency in meta-analyses. *BMJ*, *327*, 557–560. https://doi.org/10.1136/bmj.327.7414.557

Hoşgör, H., Dörttepe, Z.Ü., & Memiş, K. (2021). Social media addiction and work engagement among nurses. *Perspectives in Psychiatric Care*, *57*(4), 1966–1973. https://doi.org/10.1111/PPC.12774

Hough, A. (2011, April 8). *Student "addiction" to technology "similar to drug cravings", study finds*. The Telegraph. https://www.telegraph.co.uk/technology/news/8436831/Student-addiction-to-technology-similar-to-drug-cravings-study-finds.html

Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. (2019). Social media addiction: Its impact, mediation, and intervention. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *13*(1), 4. https://doi.org/10.5817/CP2019-1-4

Ibrahim, M., Yusra, Y., & Shah, N. U. (2022). Impact of social media addicton on work engegament and job performance. *Polish Journal of Management Studies*, *25*(1), 179–192. https://doi.org/10.17512/PJMS.2022.25.1.11

*Işık, Y. (2022). Evli bireylerin evlilik uyumu, iletişim becerileri ve sosyal medya bağımlılık düzeyleri arasındaki ilişkinin incelenmesi. *Academic Platform Journal of Education and Change, 5*(2), 215-230. https://doi.org/10.55150/apjec.1052828

*İliş, A., & Gülbahçe, A. (2019). Sosyal medya bağımlılığı ile iletişim becerileri arasındaki yordayıcı ilişkinin incelenmesi. *Ekev Akademi Dergisi*, *23*(78), 45–60.

*Karaoğlu, N., Hatır, A.E., Çiftçi, S.E., Akça, Ö.F., & Kutlu, R. (2021). Ergenlerde mutluluk durumu, iyilik hali, kendini ifade edebilme ve sosyal medya bağımlılığı ilişkisi. *Genel Tıp Dergisi, 31*(3), 208-215. https://doi.org/10.54005/geneltip.996490

Kot, S., Tan, M., & Dragolea, L. (2017). The use of social media supporting studying. *Recent Issues in Sociological Research: Economics & Sociology*, *10*(1), 169–180. https://doi.org/10.14254/2071

Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction: A review of the psychological literature. *International Journal of Environmental Research and Public Health*, *8*(9), 3528. https://doi.org/10.3390/IJERPH8093528

Madison, K., & Kellermanns, F. (2013). Is the spiritual bond bound by blood? An exploratory study of spiritual leadership in family firms. *Journal of Management, Spirituality & Religion*, *10*(2), 159–182. https://doi.org/10.5465/AMBPP.2012.15252

Malak, M. Z., Shuhaiber, A. H., Al-amer, R. M., Abuadas, M. H., & Aburoomi, R. J. (2021). Correlation between psychological factors, academic performance and social media addiction: model-based testing. *Behaviour & Information Technology, 41*(8), 1583–1595. https://doi.org/10.1080/0144929X.2021.1891460

Mohammed-Issa, J. (2017). Do personality traits play a role in social media addiction? Key considerations for successful optimized model to avoid social networking sites addiction: A developing country perspective. *International Journal of Computer Science and Network Security*, *17*(8), 120–131.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., Altman, D., Antes, G., Atkins, D., Barbour, V., Barrowman, N., Berlin, J. A., Clark, J., Clarke, M., Cook, D., D'Amico, R., Deeks, J. J., Devereaux, P. J., Dickersin, K., Egger, M., Ernst, E., … Tugwell, P. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Medicine*, *6*(7). https://doi.org/10.1371/JOURNAL.PMED.1000097

*Oran, N. (2020). *Yetişkinlerde sosyal medya kullanımının sosyal kaygı belirtileri ve kişiler arası ilişki kurma ile ilişkisinin değerlendirilmesi.* İstanbul Gelişim Üniversitesi Lisansüstü Eğitim Enstitüsü.

Peker, A., & Yildiz, M. N. (2022). Examining the relationships between adolescents' emotion regulation strategies and social media addiction. *Clinical and Experimental Health Sciences*, *12*, 564–569. https://doi.org/10.33808/clinexphealthsci.869465

*Rhodes, D., Sniatecki, J., Rocco, M., & Todd, L. (2015). Interpersonal skills and Facebook® use among college students. *The Health Educator*, *47*(1), 9–15.

Rosenthal, R. (1979). The "file drawer problem" and tolerance for null results. *Psychological Bulletin*, *86*(3), 638–641. https://doi.org/10.1037/0033-2909.86.3.638

Rutsaert, P., Regan, Á., Pieniak, Z., McConnon, Á., Moss, A., Wall, P., & Verbeke, W. (2013). The use of social media in food risk and benefit communication. *Trends in Food Science & Technology*, *30*(1), 84–91. https://doi.org/10.1016/J.TIFS.2012.10.006

*Sadoon, R.S. (2021). *Üniversite öğrencilerinin iletişim becerileri ile sosyal medya bağımlılığı arasındaki ilişkinin incelenmesi.* İstanbul Gelişim Üniversitesi Lisansüstü Eğitim Enstitüsü.

Şen, S., & Yıldırım, İ. (2020). *CMA ile meta-analiz uygulamaları [Applications of meta-analysis with CMA].* Anı Yayıncılık.

Shin, J., & Shin, M. (2016). To be connected or not to be connected? Mobile messenger overload, fatigue, and mobile shunning. *Cyberpsychol Behaviour Social Network*, *19*(10), 579–586. https://doi.org/10.1089/CYBER.2016.0236

Smith, A., & Anderson, M. (2018, March 1). *Social media use 2018: Demographics and statistics*. Pew Research Center. https://www.pewresearch.org/internet/2018/03/01/social-media-use-in-2018/

Sponcil, M., & Priscilla, G. (2013). Use of social media by college students: Relationship to communication and self-concept. *Journal of Technology Research*, *4*(1), 37–49.

Stone, C. B., & Wang, Q. (2019). From conversations to digital communication: The mnemonic consequences of consuming and producing ınformation via social media. *Topics in Cognitive Science*, *11*(4), 774–793. https://doi.org/10.1111/TOPS.12369

Tekin, O. A., & Turhan, A. A. (2021). Does social media addiction differ by personality traits? A study on undergraduate tourism students. *Journal of Tourism and Services*, *12*(22), 23–41. https://doi.org/10.29036/JOTS.V12I22.220

*Thomas, D. (2018). Motivational beliefs, social media addiction, and interpersonal communication skill among international students in Thailand. *International Forum Journal*, *21*(2), 153–169.

Topal, A. D., & Çolak, S. (2021). Investigation of digital addiction levels, digital games playing status and interpersonal problem solving skills of university students. *Pamukkale University Journal of Education*, *52*, 326–359. https://doi.org/10.9779/pauefd.743418

*Ulusoy, Ş. G., & Gürsoy, A. Ö. (2020). Reflection of social media addiction on family communication processes. *ADAM AKADEMİ Sosyal Bilimler Dergisi*, *10*(2), 425–455. https://doi.org/10.31679/adamakademi.701858

Van Deursen, A. J. A. M., Bolle, C. L., Hegner, S. M., & Kommers, P. A. M. (2015). Modeling habitual and addictive smartphone behavior: The role of smartphone usage types, emotional intelligence, social stress, self-regulation, age, and gender. *Computers in Human Behavior*, *45*, 411–420. https://doi.org/10.1016/J.CHB.2014.12.039

Wang, Q., Fink, E. L., & Cai, D. A. (2008). Loneliness, gender, and parasocial interaction: A uses and gratifications approach. *Communication Quarterly*, *56*(1), 87–109. https://doi.org/10.1080/01463370701839057

Wearesocial. (2022). *Digital 2022: Global Overview Report*. https://www.slideshare.net/DataReportal/digital-2022-global-overview-report-january-2022-v05

White-Gosselin, C. É., & Poulin, F. (2022). Associations between young adults' social media addiction, relationship quality with parents, and ınternalizing problems: A path analysis model. *Canadian Journal of Behavioural Science*. https://doi.org/10.1037/CBS0000326

*Yang, S. Y., Wang, Y. C., Lee, Y. C., Lin, Y. L., Hsieh, P. L., & Lin, P. H. (2022). Does smartphone addiction, social media addiction, and/or internet game addiction affect adolescents' interpersonal interactions? *Healthcare*, *10*(5). https://doi.org/10.3390/HEALTHCARE10050963

You, C., & Liu, Y. (2022). The effect of mindfulness on online self-presentation, pressure, and addiction on social media. *Frontiers in Psychology*, *13*, 1–14. https://doi.org/10.3389/FPSYG.2022.1034495/BIBTEX

Zhao, L. (2021). Social media addiction and its impact on college students' academic performance: The mediating role of stress. *Asia-Pacific Education Researcher*, 1–10. https://doi.org/10.1007/S40299-021-00635-0/TABLES/6

Zivnuska, S., Carlson, J. R., Carlson, D. S., Harris, R. B., & Harris, K. J. (2019). Social media addiction and social media reactions: The implications for job performance. *The Journal of Social Psychology, 159*(6), 746–760. https://doi.org/10.1080/00224545.2019.1578725

Adres
RumeliDE Dil ve Edebiyat Araştırmaları Dergisi
Osmanağa Mahallesi, Mürver Çiçeği Sokak, No:14/8
Kadıköy - İSTANBUL / TÜRKİYE 34714
e-posta: editor@rumelide.com
tel: +90 505 7958124, +90 216 773 0 616

Address
RumeliDE Journal of Language and Literature Studies
Osmanağa Mahallesi, Mürver Çiçeği Sokak, No:14/8
Kadıköy - ISTANBUL / TURKEY 34714
e-mail: editor@rumelide.com,
phone: +90 505 7958124, +90 216 773 0 616