



Examining The Impact of Social Media Addiction on Social Anxiety Among University Students *

Sosyal Medya Bağımlılığının Üniversite Öğrencilerinin Sosyal Kaygısı Üzerindeki Etkisinin İncelenmesi

ABSTRACT

This study aims to investigate the impact of social media addiction on social anxiety levels among university students. Designed as a correlational survey using quantitative data, the study involved 386 students from Harran University during the 2018–2019 academic year. Data were collected through a questionnaire, that included three instruments: a 9-item “Personal Information Form,” a 20-item “Social Media Addiction Scale–Adult Form,” and a 21-item “Social Anxiety Scale for Social Media Users.”

The analysis revealed significant positive relationships between students' social media addiction and their corresponding dimensions of social anxiety. It was determined that social media addiction positively influences students' levels of social anxiety. Multiple linear regression analyses indicated that social media addiction affects specific types of anxiety: content anxiety ($R^2 = 0.121$), privacy anxiety ($R^2 = 0.020$), interaction anxiety ($R^2 = 0.039$), and self-evaluation anxiety ($R^2 = 0.039$).

Keywords: Social Media, Addiction, Social Anxiety, University Students

ÖZET

Bu çalışmada üniversite öğrencilerinin sosyal medya bağımlılıklarının sosyal kaygı düzeyleri üzerindeki etkisinin araştırılması amaçlanmıştır. Nicel verilere dayalı ilişkisel tarama modelinde tasarlanan bu çalışmanın Araştırma örneklemini, 2018-2019 eğitim öğretim yılında Harran Üniversitesi'nde eğitim gören 386 öğrenci oluşturmaktadır. Araştırmada veriler anket yöntemi ile toplanmış ve veri toplama aracı olarak; 9 maddelik “kişisel bilgi formu”, 20 maddelik “Sosyal Medya Bağımlılığı Ölçeği-Yetişkin Formu” ve 21 maddelik “Sosyal Medya Kullanıcıları İçin Sosyal Kaygı Ölçeği” kullanılmıştır.

Yapılan analizler sonucunda; öğrencilerin sosyal medya bağımlılıkları ve alt boyutları ile sosyal medya kaygıları ve alt boyutları arasında anlamlı pozitif ilişkiler olduğu ve sosyal medya bağımlılığının öğrencilerin sosyal kaygı düzeylerini pozitif yönde etkilediği saptanmıştır. Yapılan çoklu doğrusal regresyon analizleri sonucunda; sosyal medya bağımlılığının sosyal medyada içerik kaygısı ($R^2=0,121$), gizlilik kaygısı ($R^2=0,020$), etkileşim kaygısı ($R^2=0,039$) ve öz değerlendirme kaygısı ($R^2=0,039$) üzerinde etkisinin olduğu bulgulanmıştır.

Anahtar Kelimeler: Sosyal Medya, Bağımlılık, Sosyal Kaygı, Üniversite Öğrencileri

INTRODUCTION

The Internet has become one of the most essential components of the 21st century. Originally developed for military purposes in the 1960s, the Internet quickly expanded after it was opened to commercial use in 1989 (Yeşim, 2017). The introduction of Web 2.0 technologies in 2005 transformed the Internet from a tool for information access into an interactive platform where users can create, share, and socialize (Kaplan & Haenlein, 2009; Erkul, 2009). Today, approximately 5.5 billion people worldwide use the Internet, which accounts for 68% of the global population (ITU, 2024). In Türkiye, the Internet usage rate among individuals aged 16–74 is 88.8%, with 92.2% for men and 85.4% for women (TURKSTAT, 2024). These statistics highlight the Internet's integral role in daily life at both global and national levels.

The rapid advancement of computer and Internet technologies has led to the rise of interaction-based communication forms and the concept of new media (Mişçi, 2006). During the Web 1.0 period, users were passive consumers of information; however, with the advent of Web 2.0 technologies, they have become active participants who create, share, and comment on content (Kara & Kokoç, 2010). This transformation has made social media an important tool for individuals to share information, communicate, and form communities online (Shirky, 2011).

* This study is based on a portion of Tulay Sahin (née Aslan)'s Master's thesis, conducted under the supervision of Erdinç Ballı. It received ethical approval from the Çağ University Institute of Social Sciences Ethics Committee (Decision No. SOBE 792, April 25, 2019).

¹ Master of Science Graduate, Çağ University, Institute of Social Sciences, Department of Psychology, Mersin, Türkiye. ORCID: 0000-0002-2585-2483.

² Assoc. Prof. Dr., Çukurova University, Faculty of Fine Arts, Department of Gastronomy and Culinary Arts, Adana, Türkiye. ORCID: 0000-0001-5111-1868

Tülay Şahin¹
Erdinç Ballı²

How to Cite This Article

Şahin, T. & Ballı, E. (2025).
“Examining The Impact of Social
Media Addiction on Social
Anxiety Among University
Students” International Social
Sciences Studies Journal, (e-
ISSN:2587-1587) Vol:11,
Issue:11; pp:1966-1978. DOI:
<https://doi.org/10.5281/zenodo.17754254>

Arrival: 24 August 2025

Published: 28 November 2025

Social Sciences Studies Journal is
licensed under a Creative
Commons Attribution-
NonCommercial 4.0 International
License.

Social media refers to Internet-based platforms that allow users to create online profiles, communicate, and build communities around shared interests (Kaplan & Haenlein, 2010; Boyd, 2003; Vural & Bat, 2010). Unlike traditional media, social media facilitates a two-way interactive communication process, enabling users to share information and provide instant feedback (Akar, 2010).

Social media offers various opportunities for individuals, such as communication, sharing, entertainment, and socialization, making it an indispensable part of daily life, especially for young people (Lenhart et al., 2015; Ahn, 2011). However, this intensive use also has negative consequences. Research indicates that excessive social media use can lead to addictive behaviors and adversely affect psychological, social, and academic functioning (Echeburua & de Corral, 2010; Taş, 2017; Hazar, 2011). Among young people, social media addiction is linked to issues such as distraction (Kiisel, 2012), cognitive decline (Chen & Yan, 2016), and increased levels of depression and anxiety (Becker, Alzahabi & Hopwood, 2012). The widespread availability of smart devices has made Internet access constant, further increasing the risk of problematic use and behavioral addiction (Ayas, Çakır & Horzum, 2011).

Increased social media usage not only contributes to addiction but also leads to psychological problems such as social anxiety (Vannucci, Flannery & Ohannessian, 2017). Research shows that young people who are heavy social media users often experience low self-esteem, sleep disorders, and high levels of anxiety (Woods & Scott, 2016). Social anxiety refers to the feeling of worry experienced by individuals due to the fear of negative evaluation in social situations (Beck & Emery, 1985; Heimberg et al., 2000). With technological developments, social anxiety has begun to manifest not only in real-life settings but also in virtual environments (Aktan, 2018). Although significant relationships have been found between social media addiction and levels of depression and anxiety (Aslanbay, 2006; Kelleci, 2008), there is a limited number of studies exploring the relationship between social media addiction and social anxiety (Vannucci, 2017; McCord, Rodebaugh & Levinson, 2014). This study aims to examine the relationship between university students' levels of social media addiction and their levels of social anxiety. Investigating this relationship is crucial, given the central role social media plays in the lives of young people, as it will contribute to academic literature and help develop preventive strategies for university students.

CONCEPTUAL FRAMEWORK

Social Media Addiction

Addiction is a complex issue that encompasses physical, emotional, and cognitive dimensions, arising from an uncontrollable relationship an individual develops with a specific object or behavior (Babaoğlu, 1997). Initially, addiction was associated only with substance use; however, the concept now includes non-substance behavioral addictions as well (Holden, 2001; Byun et al., 2009). Griffiths (1995) outlines addiction using six core components: salience, mood modification, tolerance, withdrawal, conflict, and relapse. This framework indicates that individuals place the addictive activity at the center of their lives; when deprived of it, they experience negative emotions and struggle to control their behavior (Griffiths, Pontes & Kuss, 2016; Turel, Serenko & Giles, 2011). Addictions are generally classified into two main categories: substance addictions (e.g., alcohol, tobacco, heroin) and behavioral addictions (Altuner et al., 2009; Ögel, 2001). Behavioral addictions are characterized by the inability to control specific activities such as gambling, shopping, gaming, or social media use (Grant, Potenza, Weinstein & Gorelick, 2010).

Social media addiction is a type of behavioral addiction that mirrors substance addiction in its manifestations, including the development of tolerance, withdrawal symptoms, and repetitive behaviors (Griffiths, 2005; Echeburua & de Corral, 2010). This addiction results in excessive social media use as individuals attempt to escape negative emotions or seek relaxation (Koc & Gülyagcı, 2013; Griffiths, Kuss & Demetrovics, 2014). While social media addiction is not explicitly included as a diagnostic category in the DSM-5, Internet addiction is discussed under “substance-related disorders” and “impulse control disorders” (American Psychiatric Association, 2013). Internet addiction is defined as an excessive attachment to the Internet that causes discomfort when access is restricted and negatively impacts social, academic, or occupational functioning (Arisoy, 2009; Young, 1998). Similarly, social media addiction is characterized by an inability to control social media use and the resulting impairments in various aspects of life (Tutkun-Ünal, 2015; Savcı & Aysan, 2017).

Research shows that social media addiction can lead to anxiety, depression, loneliness, and communication problems, particularly among young people (Christakis & Fowler, 2012; Hazar, 2011). Excessive social media use has been found to reduce attention spans (Kiisel, 2012), weaken cognitive functions (Chen & Yan, 2016), and decrease sleep quality (Wolniczak et al., 2013). Furthermore, as social media use increases, levels of social anxiety and depression also rise (Vannucci et al., 2017; Barry et al., 2017; Primack et al., 2017). Intensive social media use negatively affects academic performance (Kirschner & Karpinski, 2010), lowers work productivity (Andreassen et

al., 2014), and deteriorates social relationships. Thus, social media addiction is considered a contemporary form of behavioral addiction that leads to functional impairments in individuals' psychological, social, and academic lives (Kırık, Arslan, Çetinkaya & Gül, 2015; Hwang, 2017).

Social media addiction has a multifaceted nature that influences individuals' behavioral, emotional, and cognitive processes (Griffiths, 2005; Kuss & Griffiths, 2017). In existing literature, this addiction is frequently examined in terms of its tolerance and virtual communication dimensions. Tolerance refers to individuals becoming habituated to social media use, leading to an increased need to spend more time online to achieve the same level of emotional satisfaction (Griffiths, 1995; Turel, Serenko & Giles, 2011). This phenomenon is akin to the "dose escalation" observed in substance addictions, where individuals increase their usage time to attain the same effect (Griffiths, 2005). Interactions on social media provide feedback in the form of "likes" and "notifications," which trigger dopamine release and create a sense of reward. However, as this rewarding effect diminishes over time, individuals require stronger stimuli (Andreassen, 2012; Kuss & Griffiths, 2017). Consequently, social media use can spiral out of control, leading individuals to derive less pleasure from offline activities and to experience discomfort when access is restricted (Caplan, 2002).

The virtual communication dimension pertains to individuals' preference for social interaction through social media rather than face-to-face communication, as well as their tendency to engage excessively in digital socialization (Caplan, 2003; Sheldon, 2008). In this context, individuals often feel more comfortable expressing themselves online, distancing themselves from real-life relationships. Those with high levels of social anxiety or low self-esteem may find digital communication less threatening than face-to-face interaction because it allows them more control over when and how they respond and over their self-presentation (Caplan, 2003).

Social Media Anxiety

Anxiety is a state of worry and uneasiness that individuals experience in situations perceived as threatening. It can make it difficult for a person to concentrate and negatively affect their behavior (Işık, 1996; Çakmak, 2018). Physically, anxiety can manifest through symptoms such as heart palpitations, sweating, headaches, and stomach discomfort. When these symptoms occur persistently without a concrete danger, an anxiety disorder may be present (Türkçapar, 2004).

Social anxiety arises when an individual feels intense fear in environments where they may be evaluated by others, and it is generally more common among younger individuals (APA, 2013; Bozkurt, 2004). A person may avoid social situations, such as speaking in public, eating in front of others, or being introduced to new people, due to fear of negative judgment (Erkan, 2002). Individuals with social anxiety often shy away from face-to-face communication out of fear of criticism and may prefer indirect forms of communication, such as the Internet and social media. However, this tendency can reinforce, rather than alleviate, their anxiety (Leary & Kowalski, 1995; Caplan, 2002). The DSM-5 defines social anxiety disorder as a persistent fear of being evaluated in social situations, leading to avoidance or intense discomfort that lasts for at least six months. This disorder can negatively impact daily life, academic or occupational performance, and may result in social withdrawal and weakened communication skills (APA, 2013; Koyuncu, 2012).

Social media anxiety refers to the psychological tension that individuals experience on social networking platforms due to fears of negative evaluation, exclusion, or insufficient social approval. This anxiety significantly influences how individuals express themselves, how often they share content, and their level of online engagement (Vannucci, Flannery & Ohannessian, 2017). Social media anxiety is considered a multidimensional concept and is explored through four main sub-dimensions: content anxiety, privacy concern anxiety, interaction anxiety, and self-evaluation anxiety (Alkis, Kadirhan, & Sat, 2017).

Content anxiety is the fear that the content one shares on social media (e.g., photos, texts, videos) will be negatively evaluated, not appreciated, or misunderstood by others. Users often worry about how their posts will be perceived, which can limit their sharing behavior. Studies have shown that content anxiety is positively associated with both social media addiction and social anxiety, influencing individuals' sharing frequency and self-confidence levels (Alkis et al., 2017; Wang et al., 2024).

Privacy concern anxiety involves the fear that one's personal information on social media might be viewed, shared without permission, or misused by others. Individuals experiencing privacy concern anxiety often feel stressed about their ability to protect personal data and may exhibit avoidance behavior regarding social media use (Alkis et al., 2017; Üztemur et al., 2025). Research has revealed that concerns about online privacy increase fears related to social interaction and play a significant role in individuals' communication preferences (Carruthers, 2019; Shaughnessy et al.).

Interaction anxiety refers to the feelings of shyness and apprehension that individuals experience when directly communicating with others on social media (e.g., sending messages, commenting, or participating in discussions). This type of anxiety is especially prevalent among individuals with high levels of social anxiety. Interaction anxiety can reduce both the frequency and quality of online communication, leading individuals to adopt a passive observer role (Alkis et al., 2017; Üztemur et al., 2025).

Self-evaluation anxiety is the anxiety that arises from being preoccupied with how others perceive oneself on social media, how one's posts are judged, and the fear of receiving negative perceptions. This anxiety can strengthen the tendency toward constant comparison with other users and excessive reliance on external validation, such as likes and comments. Research has shown that self-evaluation anxiety is associated with low self-esteem, a high tendency for social comparison, and increased social media addiction (Alkis et al., 2017; Üztemur et al., 2025).

The Relationship Between Social Media Addiction and Social Anxiety

In recent years, the Internet and social media have significantly transformed how people communicate. Social media platforms are often preferred by individuals with high levels of social anxiety because they are less socially risky than face-to-face interactions. This preference can lead to increased usage and a higher risk of addiction (Prizant-Passal, 2016). However, excessive use of social media can result in social isolation, restlessness, and increased anxiety levels (Vannucci, 2017; Wakefield & Wakefield, 2018). Individuals with social anxiety typically feel more comfortable in online settings where they can communicate without physical contact, which encourages them to spend more time on social media (Lin, Li & Qu, 2017; Zorbaz, 2013). Nonetheless, these online interactions can weaken face-to-face communication skills and create difficulties in establishing boundaries within interpersonal relationships (Yıldız, 2012).

Research indicates a significant positive relationship between social media addiction and social anxiety. Caplan (2002, 2005) noted that individuals with high social anxiety tend to favor social media over face-to-face communication, which can lead to increased addiction. Studies by Shepherd and Edelman (2005) and Yang and Tung (2007) have shown that social anxiety is associated with problematic Internet use. Ceyhan (2011) and Baltacı, İşleyen, and Özdemir (2012) found that as time spent on social media increases, both problematic use and interaction anxiety also rise. Zorbaz and Dost (2014) reported that Internet addiction is more prevalent among those with higher levels of social anxiety. Furthermore, Savcı and Aysan (2015) discovered that social anxiety has a direct effect on addiction, and Woods and Scott (2016) as well as Vannucci et al. (2017) demonstrated that intensive use of social media is linked to higher anxiety and lower self-esteem. Similarly, Barry and colleagues (2017) reported that young people with multiple social media accounts experience heightened levels of anxiety and depression. Fayazi and Hasani (2017) and Kılıç and Durat (2017) found that Internet addiction exacerbates social anxiety, while Elhai et al. (2018) highlighted a significant relationship between social media use, emotional regulation, and anxiety.

In this context, it is anticipated that there is a reciprocal and dynamic interaction between social media addiction and social anxiety. To explore the effects of social media addiction and its sub-dimensions on social media anxiety and its sub-dimensions, the following hypotheses have been developed.

H₁. The level of social media addiction among university students affects their level of content anxiety.

H_{1a}. The level of virtual tolerance among university students affects their level of content anxiety.

H_{1b}. The level of virtual communication among university students affects their level of content anxiety.

H₂. The level of social media addiction among university students affects their level of privacy concern and anxiety.

H_{2a}. The level of virtual tolerance among university students affects their level of privacy concern anxiety.

H_{2b}. The level of virtual communication among university students affects their level of privacy concern anxiety.

H₃. The level of social media addiction among university students affects their level of interaction anxiety.

H_{3a}. The level of virtual tolerance among university students affects their level of interaction anxiety.

H_{3b}. The level of virtual communication among university students affects their level of social anxiety.

H₄. The level of social media addiction among university students affects their level of self-evaluation anxiety.

H_{4a}. The level of virtual tolerance among university students affects their level of self-evaluation anxiety.

H_{4b}. The level of virtual communication among university students affects their level of self-evaluation anxiety.

METHOD

The purpose of this research is to examine the relationship between university students' social media addiction and the levels of social anxiety they experience in social media environments. Additionally, the study aims to determine whether social media addiction acts as a predictor of social media anxiety and to evaluate the potential relationships of both variables with demographic characteristics. The research employed a relational screening model to reveal the relationships among variables. In this model, the existing situation is examined as it is, and the researcher does not manipulate the variables (Karasar, 2007). The independent variable in this study is social media addiction and its sub-dimensions (virtual tolerance and virtual communication), while the dependent variable is social media anxiety and its sub-dimensions (content anxiety, privacy concern anxiety, interaction anxiety, and self-evaluation anxiety).

The study's population consists of students enrolled at Harran University during the spring semester of the 2018–2019 academic year, across the Faculties of Medicine, Fine Arts, Education, Economics and Administrative Sciences, Arts and Sciences, and the School of Tourism and Hotel Management, who are also active social media users. According to the faculty registration offices, the total number of students was 13,153. Given that the vast majority of today's youth are social media users, all of these students were included within the research population. Due to time and cost constraints, a non-probability sampling method, specifically convenience sampling, was utilized (İslamoğlu & Almacık, 2016). Cohen, Manion, and Morrison (2000) indicated that for populations between 10,000 and 20,000 individuals, a sample size of 370 is sufficient at a 95% confidence level. Therefore, data obtained from 386 students were deemed suitable for analysis and constituted the study's sample. Data were collected face-to-face through questionnaires between May 20 and May 31, 2019, at the specified faculties and schools. The purpose of the study was explained to the participants, and data were collected on a voluntary basis.

The questionnaire used in this study consisted of three sections:

- ✓ **Personal Information Form:** This section aimed to determine the demographic characteristics of the students and contained nine questions related to age, gender, faculty, class level, living arrangements, duration of social media use, daily usage frequency, and the devices used for access.
- ✓ **Social Media Addiction Scale – Adult Form:** Developed by Şahin and Yağcı (2017), this scale measures the students' levels of social media addiction and consists of 20 items with two sub-dimensions: virtual tolerance and virtual communication. It is a 5-point Likert-type scale (1 = not suitable for me at all, 5 = very suitable for me), with the 5th and 11th items reverse-scored.
- ✓ **Social Anxiety Scale for Social Media Users:** Developed by Alkış, Kadirhan, and Sat (2017), this scale measures the levels of social anxiety students experience in social media environments. It comprises 21 items with four sub-dimensions: content anxiety, privacy concern anxiety, interaction anxiety, and self-evaluation anxiety. It is also a 5-point Likert-type scale (1 = never, 5 = always). The Turkish adaptation of the scale has been validated and found reliable in previous studies (Aktan, 2018; Karaoğlu Yılmaz & Sürer, 2018).

The data obtained within the scope of the study were analyzed using the SPSS 22.0 software package. Before proceeding to analysis, the distribution characteristics of the data were examined, and a normality analysis was conducted (see Table 1). For this purpose, skewness and kurtosis values of the variables were evaluated. The results showed that the skewness and kurtosis coefficients of both scales and their sub-dimensions were within the range of -1 to +1. Tabachnick and Fidell (2013) stated that for data to be considered normally distributed, these values should fall between -1.5 and +1.5. Accordingly, it was accepted that the research data exhibited a normal distribution, and parametric test methods were employed in the analyses.

Table 1: Reliability and Normality Analysis

Scale	Sub-dimension	Cronbach's Alpha	Skewness	Kurtosis
Social Media Addiction	Virtual Tolerance	,784	-,082	-,291
	Virtual Communication	,779	,111	-,111
Social Media Anxiety	Communication Anxiety	,836	,365	-,472
	Privacy Anxiety	,858	-,055	-,807
	Interaction Anxiety	,872	,188	-,723
	Self-Evaluation Anxiety	,813	,175	-,670

After determining the normality of the data, a reliability analysis was conducted to determine the internal consistency of the measurement instruments, and the results are presented in Table 1. The Cronbach's Alpha (α) coefficient method, which is widely used in social sciences, was employed. According to the findings, the Cronbach's alpha value for the Social Media Addiction Scale was found to be 0.828. For the sub-dimensions of the

scale, the coefficient was 0.784 for Virtual Tolerance and 0.779 for Virtual Communication. These results indicate that the scale has a reliability level above the moderate threshold. For the Social Media Anxiety Scale, the overall Cronbach's alpha value was determined as 0.887. The internal consistency coefficients for the sub-dimensions were calculated as 0.836 for Content Anxiety, 0.858 for Privacy Concern Anxiety, 0.872 for Interaction Anxiety, and 0.813 for Self-Evaluation Anxiety. These values demonstrate that the scale is highly reliable. According to Kalaycı (2009), a Cronbach's alpha coefficient in the range of 0.70–0.89 indicates that the reliability of the scale is sufficient.

FINDINGS

Demographic Characteristics

The frequency and percentage distributions of the demographic information of the 386 students who participated in the study—such as gender, age, faculty and department of study, class level, and place of residence—are presented in Table 2.

Table 2: Demographic Characteristics

Variable		f	%	Variable		f	%
Gender	Female	206	53,4	Class	1st Year	105	27,2
	Male	180	46,6		2nd Year	164	42,5
Age	18–19 years	64	16,6		3rd Year	71	18,4
	20–21 years	180	46,6		4th Year	46	11,9
	22–23 years	92	23,8	Accommodation	Dormitory	135	35,0
	23+ years	50	13,0		With friends at home	55	14,2
Faculty/School	Medicine	60	15,5		With family	180	46,6
	Fine Arts	52	13,5		Living alone	16	4,1
	Education	76	19,7	Daily Social Media Usage Time	Less than 1 hour	76	19,7
	Economics and Administrative Sciences	72	18,7		1–3 hours	127	32,9
	Arts and Sciences	57	14,8		3–5 hours	106	27,5
	Tourism and Hotel Management	69	17,9		5–7 hours	53	13,7
					More than 7 hours	24	6,2

Among the 386 students who participated in the study, 53.4% were female and 46.6% were male. The majority of participants were aged 20 to 21 years, comprising 46.6% of the group. An analysis of faculty distribution revealed that the highest participation came from the Faculty of Education, which accounted for 19.7%, followed closely by the Faculty of Economics and Administrative Sciences at 18.7%.

In terms of class levels, 27.2% of the participants were first-year students, 42.5% were second-year, 18.4% were third-year, and 11.9% were fourth-year students. Regarding living situations, 46.6% of the students lived with their families, 35% resided in dormitories, 14.2% lived with friends, and 4.1% lived alone.

A significant portion of the participants reported using social media for 1 to 6 years: 32.4% had been using it for 1 to 3 years, 32.9% for 4 to 6 years, and 29.8% for more than 7 years. With respect to daily usage, 32.9% of the students spent 1 to 3 hours per day on social media, while 27.5% spent 3 to 5 hours. This indicates that university students generally use social media actively for between 1 and 5 hours each day.

Correlation Analysis

To reveal the relationships between the sub-dimensions of students' social media addiction and social media anxiety, correlation analyses were conducted.

Table 3. The Relationship Between Social Media Addiction and Social Media Anxiety

Variable	1	2	3	4	5	6
Virtual Tolerance (1)	1	,587**	,274**	,084	,128*	,106*
Virtual Communication (2)		1	,334**	,140**	,196**	197**
Communication Anxiety (3)			1	,312**	,385**	,434**

Privacy Anxiety (4)				1	,543**	,386**
Interaction Anxiety (5)					1	,419**
Self-Evaluation Anxiety (6)						1

Note: ** $p < 0.05$, * $p < 0.01$

When Table 3 is examined, it was determined that there was a low to moderate positive and significant relationship between communication anxiety and virtual tolerance addiction ($r = .274$; $p < 0.01$) and between communication anxiety and virtual communication addiction ($r = .334$; $p < 0.01$). It was also found that there was no significant relationship between privacy anxiety and virtual tolerance addiction ($r = .084$; $p > 0.05$), whereas there was a low positive and significant relationship between privacy anxiety and virtual communication addiction ($r = .140$; $p < 0.01$). Similarly, there was a low positive and significant relationship between interaction anxiety and virtual tolerance addiction ($r = .128$; $p < 0.01$) and between interaction anxiety and virtual communication addiction ($r = .196$; $p < 0.01$). Finally, there was a low positive and significant relationship between self-evaluation anxiety and virtual tolerance addiction ($r = .106$; $p < 0.05$) and between self-evaluation anxiety and virtual communication addiction ($r = .197$; $p < 0.01$).

Regression Analyses

The correlation analysis revealed that there were significant relationships between the sub-dimensions of the social media addiction scale and the sub-dimensions of the social media anxiety scale. Based on these findings, multiple regression analyses were conducted to examine the effects of the sub-dimensions of the social media addiction scale on the sub-dimensions of the social media anxiety scale.

The Effect of Social Media Addiction on Content Anxiety

The sub-dimensions of the social media addiction scale, namely virtual tolerance and virtual communication, were treated as independent variables, while the content anxiety sub-dimension was considered the dependent variable. Within this context, hypotheses H1, H1a, and H1b were tested. The findings obtained from the analysis are summarized in Table 4. The results of the multiple linear regression analysis indicated that the model was significant ($F=26.371$; $p=0.0001$). The VIF value was found to be 1.527, suggesting that there was no multicollinearity problem ($VIF < 10$). In addition, the Durbin–Watson (D–W) value was 1.796, indicating that there was no autocorrelation in the model.

Table 4. The Effect of Social Media Addiction on Content Anxiety

	Unstandardized Coefficients		Standardized Coefficients Beta	t	p	Tolerans	VIF
	B	Std. Error					
Constant	1,106	,177		6,235	,000		
Virtual tolerance	,139	,069	,119	2,005	,046	,655	1,527
Virtual communication	,308	,069	,265	4,471	,000	,655	1,527

Dependent Variable: Content Anxiety; $R=0.348$ $R^2=0.121$ Adj. $R^2=0.116$ $F=26.371$, $p=0.0001$ D–W=1.796

When the model was examined, it was determined that social media addiction had a significant effect on content anxiety. There was a positive relationship between social media addiction and content anxiety ($R=0.348$). The explanatory power of social media addiction for the dependent variable content anxiety was found to be $R^2=0.121$, indicating that 12.1% of the variance in content anxiety can be explained by social media addiction. Accordingly, the results of the multiple regression analysis confirm that hypothesis H1 is accepted. Furthermore, when the model was examined in detail, the sub-dimensions of social media addiction, virtual tolerance ($\beta=0.119$; $p=0.046$) and virtual communication ($\beta=0.265$; $p<0.001$), were found to be statistically significant. This finding suggests that both sub-dimensions have a significant and positive effect on content anxiety. Therefore, based on the results of the multiple regression analysis, hypotheses H1a and H1b were accepted.

The Effect of Social Media Addiction on Privacy Anxiety

The sub-dimensions of the social media addiction scale, virtual tolerance and virtual communication, were used as independent variables, while the privacy anxiety sub-dimension was considered the dependent variable. In this context, hypotheses H2, H2a, and H2b were tested. The findings obtained from the analysis are summarized in Table 5. The results of the multiple regression analysis indicated that the model was significant ($F=3.818$; $p=0.023$). The VIF value was 1.527, showing that there was no multicollinearity problem ($VIF < 10$). In addition, the Durbin–Watson value was 1.892, indicating the absence of autocorrelation.

Table 5. The Effect of Social Media Addiction on Privacy Anxiety

	Unstandardized Coefficients		Standardized Coefficients	t	p	Tolerans	VIF
	B	Std. Error	Beta				
Constant	2,637	,236		11,170	,000		
Virtual tolerance	,005	,092	,003	,054	,957	,655	1,527
Virtual communication	,202	,092	,138	2,205	,028	,655	1,527

Dependent Variable: Privacy Anxiety; $R=0.140$ $R^2=0.020$ $Adj. R^2=0.014$ $F=3.818$, $p=0.023$ $D-W=1.892$

When the model was examined, it was found that social media addiction had a significant effect on privacy anxiety. There was a positive relationship between social media addiction and privacy anxiety ($R=0.140$). The explanatory power of social media addiction for privacy anxiety was $R^2=0.020$, meaning that 2% of the variance in privacy anxiety can be explained by social media addiction. Accordingly, the results of the multiple regression analysis support the acceptance of hypothesis H2. Moreover, when the sub-dimensions were examined, it was found that the effect of virtual tolerance was not significant ($p=0.957$), while the effect of virtual communication was statistically significant ($\beta=0.138$; $p=0.028$). This indicates that the virtual communication sub-dimension has a significant effect on privacy anxiety. Therefore, based on the multiple regression analysis results, hypothesis H2b was accepted, whereas hypothesis H2a was rejected.

The Effect of Social Media Addiction on Interaction Anxiety

The sub-dimensions of the social media addiction scale, virtual tolerance and virtual communication, were used as independent variables, and the interaction anxiety sub-dimension was treated as the dependent variable. In this context, hypotheses H3, H3a, and H3b were tested. The results obtained are summarized in Table 6. The findings from the multiple regression analysis revealed that the model was significant ($F=7.773$; $p=0.001$). The VIF value was found to be 1.527, indicating no multicollinearity problem ($VIF<10$). The Durbin–Watson value was 1.823, showing that there was no autocorrelation in the model.

Table 6. The Effect of Social Media Addiction on Interaction Anxiety

	Unstandardized Coefficients		Standardized Coefficients	t	p	Tolerans	VIF
	B	Std. Error	Beta				
Constant	1,820	,214		8,500	,000		
Virtual tolerance	,026	,084	,020	,317	,752	,655	1,527
Virtual communication	,247	,083	,184	2,977	,003	,655	1,527

Dependent Variable: Interaction Anxiety; $R=0.196$ $R^2=0.039$ $Adj. R^2=0.034$ $F=7.687$, $p=0.001$ $D-W=1.823$

The analysis indicated that social media addiction had a significant effect on interaction anxiety. There was a positive relationship between social media addiction and interaction anxiety ($R=0.196$). The explanatory power of social media addiction for the dependent variable interaction anxiety was found to be $R^2=0.039$, suggesting that 3.9% of the variance in interaction anxiety can be explained by social media addiction. Accordingly, hypothesis H3 was accepted. In addition, when the model was examined, the effect of virtual tolerance was found to be insignificant ($p=0.752$), while the effect of virtual communication was statistically significant ($\beta=0.184$; $p=0.003$). This indicates that the virtual communication sub-dimension has a significant effect on interaction anxiety. Therefore, based on the results of the multiple regression analysis, hypothesis H3b was accepted, whereas hypothesis H3a was rejected.

The Effect of Social Media Addiction on Self-Evaluation Anxiety

The sub-dimensions of the social media addiction scale, virtual tolerance and virtual communication, were considered independent variables, while the self-evaluation anxiety sub-dimension was treated as the dependent variable. Hypotheses H4, H4a, and H4b were tested. The results obtained are summarized in Table 7. The multiple regression analysis showed that the model was significant ($F=7.687$; $p=0.0001$). The VIF value was 1.527, indicating no multicollinearity problem ($VIF<10$). The Durbin–Watson value was 1.989, demonstrating the absence of autocorrelation in the model.

Table 7. The Effect of Social Media Addiction on Self-Evaluation Anxiety

	Unstandardized Coefficients		Standardized Coefficients	t	p	Tolerans	VIF
	B	Std. Error	Beta				
Constant	1.910	,229		8.352	,000		

Virtual tolerance	-.022	.089	-.015	-.250	.803	.655	1.527
Virtual communication	.296	.089	.206	3.331	.001	.655	1.527

Dependent Variable: Self-Evaluation Anxiety, R=0.198 R²=0.039 Adj. R²=0.034 F=7.773, p=0.0001 D-W=1.989

When the model was examined, it was found that social media addiction had a significant effect on self-evaluation anxiety. There was a positive relationship between social media addiction and self-evaluation anxiety ($R=0.198$). The explanatory power of social media addiction for the dependent variable self-evaluation anxiety was found to be $R^2=0.039$, indicating that 3.9% of the variance in self-evaluation anxiety can be explained by social media addiction. Therefore, hypothesis H4 was accepted. Moreover, when the model was examined in detail, the effect of virtual tolerance was found to be insignificant ($p=0.803$), while the effect of virtual communication was statistically significant ($\beta=0.206$; $p=0.001$). This finding suggests that the virtual communication sub-dimension significantly influences self-evaluation anxiety and that approximately 20.6% of the variation in self-evaluation anxiety can be explained by this variable. Accordingly, based on the multiple regression analysis results, hypothesis H4b was accepted, whereas hypothesis H4a was rejected.

CONCLUSION

This study was conducted to examine the relationship between university students' social media addiction and the social anxiety they experience in social media environments. Analyses based on data obtained from 386 students at Harran University revealed significant and positive relationships between students' levels of social media addiction and their levels of social media anxiety.

Correlation analyses showed that there were low to moderate positive relationships between the sub-dimensions of social media addiction — namely, virtual tolerance and virtual communication — and the sub-dimensions of social media anxiety (content, privacy, interaction, and self-evaluation anxiety). Multiple regression analyses further indicated that social media addiction had significant effects on all sub-dimensions of social media anxiety.

According to the findings, social media addiction explained 12.1% of content anxiety, 2% of privacy anxiety, 3.9% of interaction anxiety, and 3.9% of self-evaluation anxiety. In particular, the “virtual communication” sub-dimension was found to have statistically significant effects on all types of social media anxiety. This result suggests that online communication activities reinforce both addiction and social anxiety symptoms among students.

The findings of this study are consistent with previous research. As noted by researchers such as Caplan (2002, 2005) and Vannucci et al. (2017), individuals with high social anxiety tend to prefer social media over face-to-face interaction; this preference not only increases addiction but also deepens social anxiety. Similarly, in the present study, a strong inclination toward virtual communication was found to intensify the fear of negative evaluation and the tendency to compare oneself with others in social media environments constantly.

The high frequency of social media use among students increases their pursuit of “social approval” in online environments, thereby reinforcing the anxiety cycle. The finding that the virtual communication sub-dimension had significant effects on content, privacy, interaction, and self-evaluation anxiety indicates that continuous interaction within social media environments elevates students' anxiety levels.

These results suggest that social media addiction should be regarded not only as a form of “behavioral addiction” but also as a psychological problem. Spending excessive time on social media platforms can lead to issues such as shyness, low self-confidence, and weakened communication skills in offline social interactions.

Based on the research findings and relevant literature, several recommendations can be made. Universities should organize seminars, workshops, and educational programs themed around “digital balance” to raise students' awareness of social media use. Such activities would help young people use social media not merely as a tool for entertainment or socialization, but in a conscious, ethical, and safe manner. The inclusion of social media literacy courses in the curriculum could help students develop awareness regarding digital privacy, self-presentation, and digital identity.

University counselling centres should design group therapies, individual counselling sessions, and support programs focused on social media addiction and social anxiety, while also encouraging cultural, artistic, and sports activities that strengthen students' offline communication skills. Educational institutions should develop policies on social media use that are not prohibitive but rather awareness-raising and guiding. Course content should include topics such as “digital privacy,” “online self-presentation,” “coping with cyberbullying,” and “digital ethics.” In this way, students can develop safer, more responsible, and ethical behaviours in digital environments.

It is also of great importance for students to review their social media habits regularly and to develop digital self-regulation skills. Setting limits on daily social media usage, disabling unnecessary notifications, taking regular “digital breaks,” and allocating more time to offline social activities can help maintain both mental and emotional balance. It is recommended that social media be used consciously and purposefully — as a tool for gaining information, communicating, or self-expression. Moreover, individuals should avoid constructing their self-identity based on likes, followers, or approval, and should refrain from defining their self-worth through external validation in the digital world. The emotional effects of social media use should be recognized, and individuals should not hesitate to seek psychological counselling or professional support in cases where anxiety, stress, or loneliness become overwhelming.

Although this study identified the positive effect of social media addiction on social anxiety, it is important to consider that the direction of this relationship may also be reversed. Some studies in the literature suggest that social anxiety may lead individuals to use social media more frequently (Caplan, 2007; Prizant-Passal, Shechner, & Aderka, 2016; Aslan, 2019). Individuals with high social anxiety often feel more comfortable expressing themselves online due to fear of negative evaluation in face-to-face communication; over time, this may increase social media use and strengthen the risk of addiction. From this perspective, social media addiction can be seen not only as a cause but also as a consequence of social anxiety. In other words, individuals with high levels of anxiety may use social media as a form of avoidance or compensation. Therefore, the relationship between these two variables is bidirectional and dynamic. Future research employing longitudinal or experimental designs would provide clearer insight into the causal direction between social media addiction and social anxiety.

Moreover, future studies should examine the relationship between social media addiction and social anxiety across different samples. Research involving high school students, young adults, pre-service teachers, healthcare professionals, or other occupational groups would allow for a broader assessment of the psychological effects of social media. Additionally, cross-cultural and socio-economic comparative studies could provide deeper insights into how social media use interacts with cultural norms and societal values.

REFERENCES

- Ahn, J. (2011). The effect of social network sites on adolescents' social and academic development: Current theories and controversies. *Journal of the American Society for Information Science and Technology*, 62(8), 1435–1445.
- Akar, E. (2010). *Social media marketing: Marketing strategies on the social web*. İstanbul, Turkey: Elif Publishing.
- Aktan, E. (2018). Social media and social anxiety: A study on social media users. *Selçuk Communication Journal*, 11(2), 35–53.
- Alkış, Y., Kadirhan, Z., & Sat, M. (2017). Development and validation of the Social Anxiety Scale for Social Media Users. *Computers in Human Behavior*, 72, 296–303.
- Altuner, D. T., Engin, N. T., Gürer, C. T., Akyay, İ. T., & Akgül, A. T. (2009). The relationship between substance use and crime: A cross-sectional study. *Journal of Medical Research*, 7(2), 87–94.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: American Psychiatric Association.
- Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook addiction scale. *Psychological Reports*, 110(2), 501–517.
- Andreassen, C. S., Torsheim, T., & Pallesen, S. (2014). Use of online social network sites for personal purposes at work: Does it impair self-reported performance? *Comprehensive Psychology*, 3, 1–11.
- Arısoy, Ö. (2009). Internet addiction and its treatment. *Current Approaches in Psychiatry*, 1(1), 55–67.
- Aslan, T. (2019). *An examination of the relationship between university students' social media addiction and social anxiety: The case of Harran University* (Unpublished master's thesis). Çağ University, Institute of Social Sciences, Department of Psychology, Mersin, Turkey.
- Aslanbay, M. (2006). *A compulsive consumption: Internet use addiction tendency* (Unpublished master's thesis). Marmara University, İstanbul, Turkey.
- Ayas, T., Çakır, Ö., & Horzum, H. B. (2011). The Computer Addiction Scale for adolescents. *Kastamonu Education Journal*, 19(2), 439–448.
- Babaoğlu, A. N. (1997). *Uyuşturucu tarihi*. Ankara, Turkey: Kaynak Publishing.

- Baltacı, H. Ş., İşleyen, F., & Özdemir, S. (2012). Examination of interaction anxiety and perceived social support of education faculty students according to their romantic relationship status and social network usage. *Mersin University Faculty of Education Journal*, 8(2), 25–36.
- Barry, C. T., Sidot, C., Briggs, S., Reiter, S., & Lindsey, R. (2017). Adolescent social media use and mental health from adolescent and parent perspectives. *Journal of Adolescence*, 61, 1–11.
- Beck, A. T., Emery, G., & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York, NY: Basic Books.
- Becker, M. W., Alzahabi, R., & Hopwood, C. J. (2012). Media multitasking is associated with symptoms of depression and social anxiety. *Cyberpsychology, Behavior, and Social Networking*, 16(2), 132–135.
- Bozkurt, N. (2004). The relationship between depression and anxiety levels of a group of university students and various variables. *Education and Science*, 29(133).
- Byun, S., Ruffini, C., Mills, J. E., Douglas, A. C., Niang, M., Stepchenkova, S., & Blanton, M. (2009). Internet addiction: Metasynthesis of 1996–2006 quantitative research. *CyberPsychology & Behavior*, 12(2), 203–207.
- Caplan, S. E. (2002). Problematic internet use and psychological well-being. *Computers in Human Behavior*, 18(5), 553–575.
- Caplan, S. E. (2005). A social skill account of problematic internet use. *Journal of Communication*, 55(4), 721–736.
- Caplan, S. E. (2007). Relations among loneliness, social anxiety, and problematic internet use. *CyberPsychology & Behavior*, 10(2), 234–242.
- Christakis, N. A., & Fowler, J. H. (2012). *Connected: The surprising power of social networks and how they shape our lives*. İstanbul, Turkey: Varlık Publishing.
- Echeburua, E., & de Corral, P. (2010). Addiction to new technologies and to online social networking in young people: A new challenge. *Adicciones*, 22(2), 91–96.
- Elhai, J. D., Hall, B., & Erwin, M. (2018). Emotion regulation's relationships with depression, anxiety and stress due to imagined smartphone and social media loss. *Psychiatry Research*, 261, 28–34.
- Erkul, R. E. (2009). The usability of social media tools (Web 2.0) in public services and applications. *Turkish Informatics Association Journal*, 11(6), 96–101.
- Fayazi, M., & Hasani, J. (2017). Structural relations between brain-behavioral systems, social anxiety, depression and internet addiction. *Computers in Human Behavior*, 72, 441–448.
- Griffiths, M. D. (1995). Technological addictions. *Clinical Psychology Forum*, 76, 14–19.
- Griffiths, M. D. (2005). A “components” model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10(4), 191–197.
- Griffiths, M. D., Kuss, D. J., & Demetrovics, Z. (2014). Social networking addiction: An overview of preliminary findings. In *Behavioral addictions: Criteria, evidence, and treatment* (pp. 119–141).
- Hazar, M. (2011). Social media addiction: A field study. *Selçuk Communication Journal*, 7(2), 151–175.
- Heimberg, R. G., Stein, M. B., Hiripi, E. A., & Kessler, R. C. (2000). Trends in the prevalence of social phobia in the United States. *European Psychiatry*, 15, 29–37.
- Holden, C. (2001). Behavioral addictions: Do they exist? *Science*, 294(5544), 980–982.
- Işık, E. (1996). *Nevrozlar*. Ankara, Turkey: Kent Printing House.
- Karal, H., & Kokoç, M. (2010). A scale development study to determine the purposes of university students' social network site usage. *Turkish Journal of Computer and Mathematics Education*, 1(3), 251–263.
- Kelleci, M. (2008). The effects of Internet, mobile phones, and computer games on the mental health of children and adolescents. *TAF Preventive Medicine Bulletin*, 7(3), 253–256.
- Küisel, T. (2012, January 25). Is social media shortening our attention span? *Forbes*. <https://www.forbes.com/sites/tykiisel/2012/01/25/is-social-media-shortening-our-attention-span/>

- Koc, M., & Gülyagcı, S. (2013). Facebook addiction among Turkish college students. *Cyberpsychology, Behavior and Social Networking*, 16(4), 279–284.
- Koyuncu, A. (2012). *Sosyal fobi*. İstanbul, Turkey: Liman Publishing.
- Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. *International Journal of Environmental Research and Public Health*, 14(3), 311.
- Leary, M. R., & Kowalski, N. L. (1995). *Social anxiety*. New York, NY: Guilford Press.
- Lee, B. W., & Stapinski, L. A. (2012). Seeking safety on the Internet: Relationship between social anxiety and problematic Internet use. *Journal of Anxiety Disorders*, 26(1), 197–205. <https://doi.org/10.1016/j.janxdis.2011.11.001>
- Lenhart, A., Duggan, M., Perrin, A., Stepler, R., Rainie, H., & Parker, K. (2015). *Teens, social media and technology overview*. Pew Research Center. <https://www.pewresearch.org/internet/2015/04/09/teens-social-media-technology-2015/>
- Lin, X., Li, S., & Qu, C. (2017). Social network sites influence recovery from social exclusion. *Computers in Human Behavior*, 75, 538–546.
- McCord, B., Rodebaugh, T. L., & Levinson, C. A. (2014). Facebook: Social uses and anxiety. *Computers in Human Behavior*, 34, 23–27.
- Mişçi, S. (2006). The impact of new media use on organizational structure. In *Proceedings of the International Conference on New Communication Environments and Interaction* (pp. 128–137).
- Ögel, G. (2001). *Preventing addiction: A guide for parents and teachers*. İstanbul, Turkey: IQ Culture and Art Publishing.
- Primack, B. A., Shensa, A., Escobar-Viera, C., Barrett, E., Sidani, J., Colditz, J., & James, A. (2017). Use of multiple social media platforms and symptoms of depression and anxiety. *Computers in Human Behavior*, 69, 1–9.
- Prizant-Passal, S., Shechner, T., & Aderka, I. M. (2016). Social anxiety and Internet use – A meta-analysis: What do we know? What are we missing? *Computers in Human Behavior*, 62, 221–229. <https://doi.org/10.1016/j.chb.2016.04.003>
- Savcı, M., & Aysan, F. (2017). Technological addictions and social connectedness: Predictive effects of Internet, social media, digital game and smartphone addiction. *Düşünen Adam: The Journal of Psychiatry and Neurological Sciences*, 30, 202–216.
- Taş, İ. (2017). Validity and reliability study of the short form of the Social Media Addiction Scale for adolescents. *Online Journal of Technology Addiction & Cyberbullying*, 4(1), 27–40.
- Tenille, T. (2023). *The socialization of social media: Examining the impact of social media use on interpersonal skills during face-to-face interaction* (Master's thesis). Masters Theses & Specialist Projects, Paper 3693. <https://digitalcommons.wku.edu/theses/3693>
- Turel, O., Serenko, A., & Giles, P. (2011). Integrating technology addiction and use: An empirical investigation of online auction users. *MIS Quarterly*, 35(4), 1043–1061.
- Turkish Statistical Institute. (2019). *Household information technologies usage survey*. Retrieved from <http://www.tuik.gov.tr>
- Vannucci, A., Flannery, M. K., & Ohannessian, C. (2017). Social media use and anxiety in emerging adults. *Journal of Affective Disorders*, 207, 163–166.
- Vural, Z. B., & Bat, M. (2010). Social media as a new communication environment. *Journal of Yaşar University*, 5(20), 3348–3382.
- Wakefield, L. T., & Wakefield, R. (2018). Anxiety and ephemeral social media use in negative eWOM creation. *Journal of Interactive Marketing*, 41, 44–59.
- Wolniczak, I., Cáceres-DelAguila, J., Palma-Ardiles, G., Arroyo, K., & Solís-Visscher, R. (2013). Association between Facebook dependence and poor sleep quality. *PLoS ONE*, 8(3).
- Woods, H. C., & Scott, H. (2016). Sleepy teens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence*, 51, 41–49.

Yang, S. C., & Tung, C. J. (2007). Comparison of Internet addicts and non-addicts in Taiwanese high school students. *Computers in Human Behavior*, 23, 79–96.

Yeşim, G. (2017). *Sosyal Medya: Halkla İlişkiler, Reklam ve Pazarlama*. İstanbul, Turkey: Derin Publishing.

Young, K. S. (1998). *Caught in the net: How to recognize the signs of Internet addiction—and a winning strategy for recovery*. New York, NY: Wiley.

Zorbaz, O. (2013). Examination of problematic Internet use among high school students in terms of social anxiety and peer relations. (Unpublished master's thesis). Hacettepe University, Ankara, Turkey.

Zorbaz, O., & Dost, M. (2014). Examination of problematic Internet use among high school students in terms of gender, social anxiety, and peer relations. *Hacettepe University Journal of Education*, 29(1), 298–310.