

**Research Article**

# The Relationship between Social Media Addiction and Self-Esteem among Turkish University Students

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## Abstract

Social media occupies more and more space in the daily lives of contemporary young adults. As online interactions have become more common than face-to-face interactions, social media has started to majorly impact individuals' ways of living, communication, language, interests, and psychology. Even though social media and internet addiction are not defined as behavioral addictions among the DSM diagnostic criteria due to lack of scientific proof, its stages (conflict, relapse, etc.) reveal themselves as behavioral addictions like shopping or gambling addictions. The aim of this study is to indicate the psychological dimensions of social media addiction in young adults, to point out their significance, and to produce scientific proofs for the literature, which are needed. In processing the data, normality tests have been applied. Women are more addicted to social media for the purposes of mood modification and being occupied. Social media addiction levels increase alongside increases in the number of Instagram followers. In addition, fake account owners and stalkers are more addicted to social media than others. Meanwhile, a moderate, negative correlation exists between self-esteem levels and social media addiction. The correlation coefficient increases for users who have more than 500 followers in the categories of relapse and conflict.

## Keywords

Social media • Social media addiction • Self-esteem • Identity • Social networks

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Social media has been occupying more and more space in contemporary young adults' daily lives. Because social interactions have become more common than face-to-face interactions, social media has begun making a major impact on individual's way of life, communication, language, and interests, as well as on their health and well-being.

Social media is a concept that refers to the combination of platforms whose content are generated by their members. At first, the internet consisted of web sites on which only the site developer could generate content. With the need for contributing to the content, blog sites have become the ancestor of social media sites. Wikipedia, online dictionary websites, and dating sites followed blogs. With the invention of Facebook, the entire concept and penetration of social media started to change. Nowadays, quite a few of social media sites exist. In this study, we have only taken Facebook, Twitter, Instagram, Swarm, and Snapchat into consideration as social media platforms. Here are some brief descriptions of these.

Facebook is a user-generated site whose members can share comments, photos, videos, and articles and can interact with other platform members using "like," "comment," and "share." Facebook has more than 42 million users in Turkey, of which 83% were mobile users in August 2016 ([Gemius Turkey Research, 2016](#)).

Twitter is a platform that allows its registered users to share short comments called "tweets." Users also can share photos and videos with their followers. Thirteen million Twitter accounts exist in Turkey; 91% of these users use Twitter on mobile devices.

Instagram is photo-sharing platform that allows registered users to take, share, and comment on photos. Instagram has 22 million users in Turkey, all of whom are mobile users ([Gemius Turkey Research, 2016](#)).

Swarm is a mobile app whose users can indicate where they currently are, such as in a cafe, restaurant, store, and so on. This process is to "check-in," according to Publik, the exclusive sales representative of Swarm. Swarm has 7.2 million users in Turkey ([Publik Turkey, 2015](#)).

Snapchat is a mobile app where users can share/post "self-destructing" photos and videos that are automatically deleted in 24 hours. When compared to other social media platforms, this platform is relatively new. It has three million users in Turkey, mostly used by those between the ages of 13 and 34. Snapchat has led the new trend that all other main social media platforms have integrated into their original designs, which is the feature of "self-destructing" media.

These mediums are familiar to most people, as their subscribers are constantly increasing. In today's world, the fact that billions of people visit social mediums on a regular basis is normal behavior. However, researchers have recognized that the use

of social media can transform these normal behaviors into behavioral patterns that are pathological and compulsive.

Addiction is described as a mental disorder caused by substances or other factors due to their effects on the brain's reward system. Kelly and Berridge (2002) indicated that the brain has evolved in a way where it is only able to respond to natural rewards. Nevertheless, people have discovered how to stimulate the brain's reward system artificially (such as social media), which can act as a behavioral addiction. In addition to substance-related disorders, the *Diagnostic and Statistical Manual of Mental Disorders V (DSM-5)* also accepts behavioral addictions such as internet addiction and shopping addiction; however social media addiction has not yet been included in the DSM because of insufficient evidence for establishing its diagnostic criteria (American Psychiatric Association, 2013). Griffiths (2005) operationally defined addictive behavior through six components: salience, tolerance, mood modification, conflict, withdrawal problems, and relapse. As Griffiths argued, any behavior fulfilling these criteria can be defined as an addiction. Chemical and behavioral addictions have these same core symptoms. Thus, excessive and compulsive usage of social media can be considered a behavioral addition (Andreassen, 2015). Salience occurs if social media dominates one's life and becomes a significant part of it. Mood modification occurs if social media is used as a strategy for coping with anxiety and stress. Tolerance develops if a social media user gradually increases the time of usage in order to modify his/her mood. Withdrawal problems occur if a person becomes stressed and has unpleasant feelings when one cannot access social media. If one prefers using social media over face-to-face interactions, a hobby, or activity, conflicts occur. Finally, relapse occurs when a person wants to reduce social media usage but cannot manage to do so (Rosenberg & Feder, 2014). In this research, we assess social media addiction using the Social Media Addiction Scale, a 41-item questionnaire developed by Tutgun-Ünal and Deniz (2015). It consists of four parts: occupation, mood modification, conflict, and relapse, which mostly correspond with Griffiths' definition of addictive behavior.

In parallel, Andreassen and Pallesen (2014, p. 4054) defined social media addiction as "being overly concerned about social network sites (SNSs), to be driven by a strong motivation to log on to or use SNSs, and to devote so much time and effort to SNSs that it impairs other social activities, studies/job, interpersonal relationships, and/or psychological health and well-being." Many factors can contribute to social media addiction, such as neurobiology, self-determination theory (the need for competence, autonomy, and relatedness), personality traits (neuroticism, conscientiousness, narcissism, etc.), cognition (automatic thoughts, self-esteem), learning (reinforcements, social learning), culture, and such (Andreassen, 2015). In this study, we will empirically examine the relation between social media addiction and self-esteem.

Different researchers and psychologists have come up with various definitions for self-esteem, usually defined through more than one aspect. Branden has claimed self-esteem to have two interrelated aspects: sense of personal efficiency and sense of personal worth. These refer to the integral summation of self-confidence and self-respect (Branden, 2001). On the other hand, Taylor, Peplau, and Sears (2007) defined self-esteem as the summation of beliefs regarding the individual's self. These beliefs are obtained through socialization, feedback, the looking-glass self, and self-perception. Kağıtçıbaşı (2016) also has supported this statement. The ways one perceives and judges one's abilities and capabilities determine one's self-esteem. Self-worth can be positively or negatively assessed. While a negative self-picture generates low self-esteem, positive judgments about the individual's self generates high self-esteem (Rosenberg, 1965). As defined by Erikson (1963), self-esteem is the feeling of assurance that is established through the comparison of self-recognition and societal confirmation. The motivation for elevating self-esteem manifests itself in societal interactions. With the recent rise of social media usage, people have found another point of interaction for elevating their self-esteem. In this manner, people with low self-esteem might depend on society more than is necessary (Wallace, 2012).

As we have mentioned before, social media addiction does not depend on any single factor. It also depends on gender, personality traits, psychological needs, socialization, and self-esteem. Some studies in the literature have been reviewed in accordance with these factors.

No precise evidence is found for social media addiction being more prevalent in a certain gender. Some studies have shown men to be more addicted to social media than women (Balci & Gölcü, 2013; Çam & İşbulan, 2012; Esen, 2010). Other studies have reported higher estimates for females (Andreassen, Torsheim, Brunborg, & Pallasen, 2012). Tutgun-Ünal and Deniz (2016) found women to use social media just for mood-modifications significantly more than men.

Studies regarding personality traits are based on the five-factor model of personality, which consists of agreeableness (friendly vs. detached), openness to experience (curious vs. cautious), neuroticism (nervous vs. secure), extroversion (outgoing vs. solitary), and conscientiousness (efficient vs. easy going). Agreeableness negatively correlates with social media addiction (Sahraian, Hedeyati, Mani, & Hedeyati, 2016). Lower scores for conscientiousness have been linked with social media addiction (Andreassen et al., 2012; Andreassen et al., 2013; Sahraian et al., 2016; Wilson, Fornasier, & White, 2010). Neuroticism positively correlates with social media addiction (Andreassen et al., 2012; Andreassen et al., 2013; Sahraian et al., 2016). Correa, Hinsley, and De Zinuga (2010) concluded openness to experience to positively relate to social media use. Finally, higher scores for extroversion have

mostly been linked with addiction in social media users (Andreassen et al., 2012; Andreassen et al., 2013; Correa et al. 2010; Wilson et al., 2010).

Other subjects that have been examined in the literature on social media addiction include loneliness, perceived social support, belongingness, and bridging social capital. According to these studies, loneliness positively predicts internet addiction (Balci & Gölcü, 2013; Błachnio, Przepiorka, Boruch, & Balakier, 2016; Esen, 2010; Korkut, 2016). Some studies have concluded internet and social media use to reduce loneliness (Balakrishnan & Shamim, 2013; Shaw & Gant, 2002; Steinfield, Ellison, & Lampe, 2008; Teppers, Luyckx, Klimstra, & Goossens, 2014) and to increase social support significantly (Esen, 2010; Shaw & Gant, 2002). The aspects of usage, whether standard or excessive, should be taken into consideration. In parallel with these studies, social media addiction relates to belongingness (Pelling & White, 2009) and social contact (Lee, Cheung, & Thadani, 2012).

Studies regarding social media addiction and self-esteem have indicated addictive usage to be empirically linked to a negative self-concept, and therefore to low self-esteem. On the other hand, social media has been used to bridge a social capital for feeling less lonely and more connected. Steinfield et al. (2008) found the intensity of Facebook usage and bridging of social capital to be higher for groups with lower self-esteem. They guessed that fears of rejection might explain why students with lower self-esteem prefer Facebook usage over face-to-face interactions. This study supports Shaw and Gant's (2002) findings that suggest people with low self-esteem tend to use social media in order to modify their mood, meet new people, decrease loneliness, and seek social support. Faraon and Kaipainen (2014) also have found that participants with a high intensity of Facebook usage reported lower self-esteem on average. Likewise, several other scholars have reached the conclusion that addictive social media usage relates to lower self-esteem (Andreassen, Pallesen, & Griffiths, 2017; Baturay & Toker, 2017; Hong, Huang, Lin, & Chiu, 2014; Wilson et al., 2010).

As social media has begun to majorly impact individuals' way of living, communication, language, interests, and psychology, we aim to analyze the relations between social media addiction and self-esteem level in this study, as well as other relational variables. Previous studies have examined gender, personality, social support, sociability, self-esteem, and social media addiction. Studies in Turkey regarding social media addiction are quite limited and insufficient in terms of social media addiction's relationship with self-esteem, surveillance behavior, and the effects of the number of friends/followers. This paper aims to indicate the psychological factors that mold social media addiction onto young adults in Turkey, point out their importance, and produce scientific proofs for the literature.

## Methodology

### Study Design and Study Group

The descriptive survey model has been applied in this study. Data has been collected from three universities in the province of Istanbul (Nişantaşı University, Istanbul University, and Istanbul Aydın University) during the 2016-2017 academic year. After removing those who had not correctly filled out the survey forms, 325 respondents were included in the study. Regarding the descriptive model (see. Fig. 1), the study has evaluated the following hypotheses:

H<sub>1</sub>: There is a significant difference between men and women's addiction scores.

H<sub>2</sub>: Social media addiction increases as the number of followers/friends on social media increases.

H<sub>3</sub>: Stalkers are more addicted to social media than non-stalkers.

H<sub>4</sub>: A correlation exists between social media addiction and self-esteem levels.

H<sub>5</sub>: Groups with lower self-esteem are more addicted to social media than those with higher self-esteem.

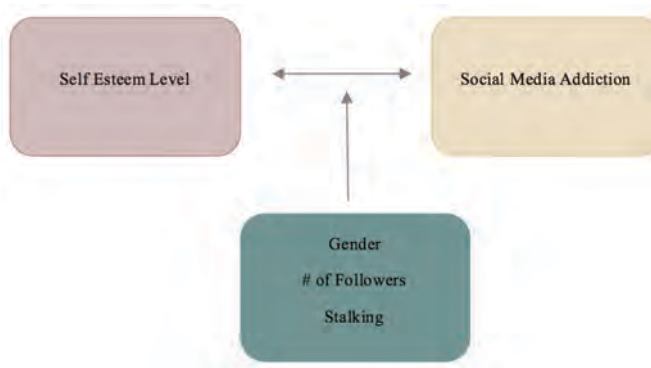


Figure 1. The relationship between self-esteem and social media addiction and its influencing factors.

### Data Collection Tools

Social media addiction is measured using the Social Media Addiction Scale and self-esteem using Rosenberg's Self-esteem Scale. Participants had not been informed of the literary content of the Self-Esteem Scale to avoid errors related to social desirability. Instead, the scale was declared to assess information about their current mood. Demographic information and social media usage habits were collected using a questionnaire. Surveys were distributed to the participants and collected upon completion. The questionnaires were distributed to voluntary students after receiving their verbal consent.

**Personal Information Survey.** This part consists of seven questions. These questions relate to participants’ demographic information, such as age and gender, and information about their social media usage, such as which social media accounts they have, how many followers they have, and whether or not they have fake accounts.

**Rosenberg’s Self-Esteem Scale.** Rosenberg (1965) developed his Self-Esteem Scale with 5,024 students in New York. This 10-item scale assesses an individual’s feelings of self-worth when comparing one’s self to other people. The scale is an attempt to achieve a one-dimensional measure for global self-esteem. The scale has been adapted to Turkish by Çuhadaroğlu (1986). Cronbach’s alpha has been found as .71 and the test-retest reliability co-efficient as 0.75.

**Social Media Addiction Scale.** The Social Media Addiction Scale was developed by Tutgun-Ünal and Deniz (2015) for determining university students’ addiction levels. The Social Media Addiction Scale, consisting of 41 questions, occurs as a 5-point Likert-type scale with four sub-dimensions: occupation (12 items), mood modification (5 items), relapse (5 items), and conflict (19 items). Higher scores indicate the occurrence of higher addiction levels. Cronbach’s alpha coefficients for the sub-dimensions have been found as .932 for occupation, .892 for mood modification, .914 for relapse, and .958 for conflict, and as .967 for the overall scale. The test-retest reliability co-efficient has been found as 0.84. Regarding the sub-dimensions, mood modification measures how much social media influences users’ emotions, occupation measures the effect of social media’s occupation in daily life, relapse measures how much users lose self-control on social media and continue to reuse it and conflict measures the adverse effects that social media can cause on the user’s life.

**Data Analysis**

Data has been analyzed in the program, SPSS 23.0. Socio-demographic characteristics and behaviors towards using social media have been evaluated with descriptive statistics.

Table 1  
*Classification and Normality Assumption of Self-Esteem and Social Media Addiction Levels*

Variable		Factor	Normality Assumption	
			Shapiro Wilk	
<i>Mean</i>	<i>SD</i>	<i>Social Media Addiction</i>	<i>df</i>	<i>p</i>
11.64	4.91	Mood Modification	325	.000**
32.74	10.80	Occupation	325	.027*
8.82	4.31	Relapse	325	.000**
29.85	12.47	Conflict	325	.000**
83.06	27.18	Overall Addiction	325	.000**
			Shapiro Wilk	
<i>Mean</i>	<i>SD</i>	<i>Self Esteem</i>	<i>df</i>	<i>p</i>
31.61	5.17	Self Esteem Overall	325	.000**

\* $p < .05$ , \*\*  $p < .001$ .

In order to evaluate the relationship between level of self-esteem and social media addiction, Spearman correlation coefficients have been calculated. Other related variables that affect social media addiction have been evaluated with the Mann Whitney-U Test and Kruskal-Wallis Test because none of these variables are distributed normally.

According to Table 1, the self-esteem score and social media addiction score and its sub-dimensions are not normally distributed. Due to this distribution, non-parametric tests will be used to evaluate the relations and compare the means for all subsequent analyses.

### Findings and Results

In this study, 60.9% of students are female. Females are overly represented in the study because of the campus distribution (see Table 2). Of the students, 18% indicated having fake accounts, and 64% indicated secretly checking someone else’s account, such as a crush, ex-boy/girlfriend, their ex’s new girl/boyfriend, and others (see Table 2).

Table 2  
*Demographics of the Sample Group*

		<i>n</i>	%
Gender		<b>325</b>	
	Female	198	60.9%
	Male	127	37.1%
Fake Account**		<b>325</b>	
	Yes	59	18.2%
	No	265	81.5%
Stalking* Often		222	15.2%
	Sometimes	490	33.4%
	Never	761	51.9%

\*Sum of the different choices (lover, ex-lover, etc.) Stalking: How often do you secretly follow (stalk) other people (lover, ex-lover, etc.) on social media?

\*\*Fake account: Do you have fake accounts on social media?

Table 3  
*Numbers of Followers / Friends on Social Media*

# of Followers / Friends	Facebook		Instagram		Twitter		Snapchat		Swarm	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
50 or less	12	3.7%	8	2.5%	19	5.8%	80	24.6%	21	6.5%
51-100	17	5.2%	25	7.7%	51	15.7%	94	28.9%	50	15.4%
101-250	80	24.6%	101	31.1%	65	20.0%	37	11.4%	53	16.3%
251-500	93	28.6%	105	32.3%	36	11.1%	8	2.5%	25	7.7%
501-1,000	45	13.8%	30	9.2%	12	3.7%	3	0.9%	6	1.8%
1,001 or more	19	5.8%	11	3.4%	9	2.8%	2	0.6%	3	0.9%

81% of participants are registered users of Facebook; 86% are Instagram users. The other three social media networks followed are Snapchat (69%), Twitter (60%), and Swarm (48%); 62% of the participants have more than 250 friends on at least one of the social media accounts (see Table 3).



### Hypothesis 1: A significant difference exists between men's and women's addiction scores.

Table 4  
Relation of Gender with Social Media Addiction

	Gender	n	Median	z	p
Mood Modification	Female	198	173.48	-2.52	0.012*
	Male	127	146.66		
Occupation	Female	198	174.40	-2.73	0.006**
	Male	127	145.23		
Relapse	Female	198	158.83	-1.02	0.31
	Male	127	169.51		
Conflict	Female	198	160.95	-0.49	0.623
	Male	127	166.19		
Social Media Addiction	Female	198	167.77	-1.14	0.253
	Male	127	155.56		

\* $p < .05$ , \*\* $p < .01$ .

According to Table 4, the total social media addiction score does not differ significantly by gender. However, women have significantly higher scores than men for using social media as a mood modifier and occupation tool. Similarly, Tutgun-Ünal (2016) did not find any difference according to gender in total scores in their research conducted among 1,034 university students. On the other hand, they found women to be more addicted in the sub-dimensions of mood modification and occupation. Similarly, Deniz and Gürültü (2016) found a significant difference to exist between men and women in terms of overall social media addiction scores, with high school females having significantly higher scores for the sub-dimension of occupation. As a result of these findings, Hypothesis H<sub>1</sub> (a significant difference exists between men's and women's addiction scores) has been rejected.

### Hypothesis 2: Social media addiction increases as the number of followers/friends on social media increases.

According to Table 5, when the number of Instagram followers increases, the scores for social media addiction ( $p < .01$ ) and its sub-dimensions (mood modification [ $p < .05$ ]; occupation [ $p < .01$ ]; relapse [ $p < .05$ ]) increase significantly. The sub-dimension of conflict is not affected by the numbers of followers on Instagram. On the other hand, number of followers on other social media have no statistically significant relationship. No research is found regarding the relationship between addiction and number of followers. However, Andreassen (2015) claimed users with a negative self-concept to be able to assess the number of followers or likes on social media as success; therefore, social media addiction can be triggered with this cognition.

Table 5  
*Relation of Number of Followers with Social Media Addiction*

Instagram	# of Followers	n	Median	Chi-square	p
<b>Mood Modification</b>	50 or less	8	80.56	11.121	<b>.049*</b>
	Between 51-100	25	123.78		
	Between 101-250	101	135.42		
	Between 251-500	105	148.95		
	Between 501-1,000	30	139.87		
	1,001 or more	11	189.82		
<b>Occupation</b>	50 or less	8	65.75	23.870	<b>.000**</b>
	Between 51-100	25	98.92		
	Between 101-250	101	133.97		
	Between 251-500	105	152.07		
	Between 501-1,000	30	153.07		
	1,001 or more	11	204.68		
<b>Relapse</b>	50 or less	8	82.31	14.105	<b>.015*</b>
	Between 51-100	25	116.06		
	Between 101-250	101	134.29		
	Between 251-500	105	149.30		
	Between 501-1,000	30	145.67		
	1,001 or more	11	197.23		
<b>Conflict</b>	50 or less	8	122.94	5.799	.326
	Between 51-100	25	119.74		
	Between 101-250	101	134.37		
	Between 251-500	105	149.84		
	Between 501-1000	30	138.55		
	1,001 or more	11	172.91		
<b>Social Media Addiction</b>	50 or less	8	80.25	19.122	<b>.002**</b>
	Between 51-100	25	105.30		
	Between 101-250	101	132.29		
	Between 251-500	105	153.61		
	Between 501-1,000	30	145.63		
	1,001 or more	11	200.55		

\* $p < .05$ , \*\* $p < .01$ .

**Hypothesis 3: Stalkers are more addicted to social media than non-stalkers.**

According to Table 6, fake account owners have statistically significant higher scores for social media addiction and all its sub-dimensions. Our hypothesis is supported by the finding that fake account owners are more addicted to social media than non-fake account owners. Similarly, social media stalkers are also more addicted to social media ( $p < .01$ ). However, the sub-dimensions of relapse and conflict show no significant differences compared to non-stalkers; this shows them to have more control over their addiction. Studies have not examined the direct relationship between addiction and surveillance behaviors. However, [Elphinston and Noller \(2011\)](#) have reported that excessive use of social media may harm relationships through surveillance behaviors and jealousy.

Table 6  
Relation among Fake Account Owners, Stalking, and Social Media Addiction

		Fake Account Owner				Stalker			
		n	Median	z	p	n	Median	z	p
<b>Mood Modification</b>	Yes	59	194.51	5,929.0	<b>.004**</b>	77	133.71	7,292.5	<b>.002**</b>
	No	265	155.37			248	172.09		
<b>Occupation</b>	Yes	59	198.64	5,685.5	<b>.001**</b>	77	121.86	6,380.5	<b>.000**</b>
	No	265	154.45			248	175.77		
<b>Relapse</b>	Yes	59	185.53	6,459.0	<b>.034*</b>	77	158.20	9,178.5	.602
	No	265	157.37			248	164.49		
<b>Conflict</b>	Yes	59	193.70	5,976.5	<b>.005**</b>	77	145.53	8,202.5	.061
	No	265	155.55			248	168.43		
<b>Social Media Addiction</b>	Yes	59	198.58	5,689.0	<b>.001**</b>	77	134.07	7,320.5	<b>.002**</b>
	No	265	154.47			248	171.98		

\* $p < .05$ , \*\* $p < .01$ .

**Hypotheses 4 & 5: A correlation exists between social media addiction and self-esteem levels. Groups with lower self-esteem are more addicted to social media than those with higher self-esteem.**

Table 7  
Correlations between Social Media Addiction and Self-Esteem

	Self Esteem (Women)			Self Esteem (Men)			Self Esteem (with 500+ followers)		
	n	r	p	n	r	p	n	r	p
Social Media Addiction	198	-0.09	.197	127	-.247**	<b>.005</b>	95	-0.20	.054
Mood Modification	198	-0.04	.568	127	-.250**	<b>.005</b>	95	-0.17	.098
Occupation	198	-0.03	.634	127	-0.04	.621	95	-0.03	.751
Relapse	198	-0.06	.408	127	-.257**	<b>.003</b>	95	-.318**	<b>.002</b>
Conflict	198	-.159*	.026	127	-.281**	<b>.001</b>	95	-.226*	<b>.028</b>

\* $p < .05$ , \*\* $p < .01$ .

According to Table 7, a moderate, negative correlation exists between self-esteem levels and social media addiction. Women only show a weak, negative correlation in the category of conflict ( $p < .05$ ). Men’s self-esteem levels show a moderate, negative correlation with social media addiction overall ( $p < .01$ ) and all its sub-dimensions ( $p < .01$ ) except for the category of occupation. Similarly, a moderate, negative correlation exists for self-esteem levels with the categories of relapse ( $p < .01$ ) and conflict ( $p < .05$ ) for social media users with 500 or more followers. This shows that people with many friends on social media more easily lose control over their social media usage, which adversely affects their lives. In addition, they comparatively have lower self-esteem levels. [Armstrong, Philips, and Saling \(2000\)](#) found people with low self-esteem to be more addicted to the Internet. A study conducted in Korea with 800 people showed depression to increase and self-esteem levels to decrease when internet usage increases ([Jeon, 2005](#)). Another study conducted with 23,532 Norwegian participants also supports this result, with the finding of addictive social media usage to relate with lower self-esteem ([Adreassen, Pallasen, & Griffiths, 2017](#)).

## Discussion and Conclusion

As a result of this study, a relation has been found to exist for social media addiction and its sub-dimensions with self-esteem levels. In addition, is a significant difference has also been detected for social media addiction according to demographic criteria such as gender or number of followers on social media.

Our study has not found addictive behavior to differ by gender, as has been found in many other studies (Koç & Gülyağcı, 2013; Korkut, 2016; Turel & Serenko, 2012; Tutgun-Ünal & Deniz, 2016; Wu, Cheung, Ku, & Hung, 2013). The etiology of social media addiction is complicated and consists of biological, sociological, cultural, and psychological factors. Even though some researchers have found differences between the genders, especially for younger generations that have been born into this Internet Era and whose personalities have thus been molded in this new society. Gender is not a factor in the Internet and social media use. On the other hand, females use social media as an occupation tool and mood modifier more than males. Evidently, females use social media to gain emotional support, reduce loneliness, and connect with their friends to get information about their lives. These findings are also supported by other research (Andreassen et al., 2012; Balcı & Gölcü, 2013; Tutgun-Ünal & Deniz, 2016).

Another result we have concluded is that those with fake social media accounts have higher scores for each sub-dimension of addiction. Self-determination theory suggests autonomy, relatedness, and competence to be the basic human motivators (Deci & Ryan, 2000). People like to make their own decisions without someone else interfering, and they need to have control over their lives. The ability to create fake identities in social media may give young adults the opportunity to gain control without the judgments of peers or authority. It is also a way to monitor other people covertly. Our findings regarding its association with addiction also support this opinion. The respondents who had secretly spied (stalk) on others (boy/girlfriend, ex-lovers, others) show significantly more addictive behavior than those who had not. On the other hand, mood modification and occupation are the only categories where stalkers have higher scores for addiction. This result may suggest that users stalk others to better spend time, regulate their mood accordingly, and/or maybe to compare themselves with others. Even though we know surveillance behaviors may cause impaired romantic relationships due to jealousy (Elphinston & Noller, 2011), we have not encountered any study regarding the association between stalking behavior and addiction, nor regarding the presence of fake accounts and addiction.

The number of friends/followers is another factor linked to addictive behavior. The misconception where users believe that the number of friends/followers or *likes* means a social achievement or popularity may trigger excessive social media usage. However, being faced with reality may impair one's self-esteem. Studies that have stated social

media addiction to relate to higher levels of narcissism (Andreassen, Pallesen, & Griffiths, 2017) also support this opinion. Increasing the number of friends or *likes* on social media is an investment wherein the self-object manages one's impressions. Mirroring the self-object sees the self as an achiever and a loved person. This may lead to excessive and compulsive social media usage. Social media is also a way of bridging social capital. Those who fear to be rejected in face-to-face interactions may also prefer using social media as a point of interaction to facilitate dealing with rejection. Either way, these types of behaviors are indicators of impaired self-esteem. In searches for competence, connectedness, belongingness, and fame, social media can be used as an alternative universe where anybody can glorify themselves. Much research in the international literature and some in the local literature have indicated social media addiction to relate to lower self-esteem (Andreassen, Pallesen, & Griffiths, 2017; Baturay & Toker, 2017; Hong et al., 2014; Wilson et al., 2010).

In future research, designing longitudinal and cross-cultural studies may draw a broader picture for understanding the evolution of social media addiction. Also, empirical studies on the treatment or prevention of this kind of addiction would be an asset for the literature. Other social media behaviors (posting selfies or private moments online, using make-up apps or filters before posting a photo, etc.) and their psychological effects should also be examined.

In summary, even though social media and internet addiction have not yet been formally recognized as types of addiction, they appear to share similar symptoms with other addictions, such as mood modification, relapse, and conflict. Social media is also seen in the literature to have positive effects on self-presentation and self-esteem regulation. However and as in every behavioral process, excessive use and lack of self-control can lead to serious consequences such as relational, emotional, health, and performance problems. These results may dramatically change the daily rituals of the individual, thus creating a catalyzing effect on problems such as depression, disruptions in self-perceptions, narcissism, and impairments in relationships with others, as well as performance problems such as disruptions in school or achievements, sleep deprivation, impaired sleep, or their related health problems.

Creating awareness in college students and adolescents whose personalities are still in a stage of development is especially important. Before recommending any inhibiting interventions, social media addiction needs to be accepted as an issue of concern by authorities and users. Social media users should assess whether their behaviors are excessive or addictive. Several interventions exist that can be recommended after assessment. They may choose to cope with their addictive usage with self-help interventions such as preventing apps, relaxation techniques, and more. Therapeutic methods (cognitive behavioral therapy, mindfulness exercises, etc.) or pharmacological methods are also applicable for intervening in their behaviors.

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