The Role of Social Comparison and Rumination in Predicting Social Media Addiction

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Article Info	Abstract
	The aim of this study is to determine the social media addiction levels of university students and examine whether their social comparison orientations and ruminative responses significantly predict social media addiction. The study group consists of 261 university students. "Social Media Addiction Scale", "Iowa-Netherlands Social Comparison Orientation Measure" and "Ruminative Response Scale, Short Form" were applied to the participants. Frequency, percentage and multiple regression analysis were used to analyse the obtained data. As a result of the study, it was found out that university students were less addicted on social media. As a result of the regression analysis, it was determined that obsessive thinking, deep thinking and social comparison had significant effects in predicting social media addiction. It was concluded that obsessive thinking and social comparison predicted positively, whereas deep thinking alone was not a significant predictor. The obtained findings were discussed in the context of the relevant literature and suggestions were made for further research.

Introduction

Social media refers to a variety of internet or online applications where individuals can share information and communicate with others easily (Primack et al., 2017). It is known that individuals primarily use social media for social interaction, searching and sharing information, spending time, relaxing, having fun and sharing their thoughts (Whiting & Williams, 2013). Platforms such as Snapchat, Twitter, Instagram and Facebook offer opportunities to participate in positive social interactions between family, friends and other sources of social support (Bessière, Pressman, Kiesler, & Kraut, 2010). In the study conducted by Burke and Kraut (2016), it was emphasized that it is possible to benefit from social media use as long as it consists of actively interacting with people who are important and it was stated that when individuals communicate with their close friends, there is an improvement in their well-being. In another study examining the effects of social media use (Oh, Ozkaya, & LaRose, 2014), similarly, the importance of being in supportive interaction on social networking sites was emphasized. It is concluded that there is a positive relationship between the number of friends on social networking sites, supportive interaction, perceived social support, sense of society and life satisfaction. In another study (Nabi, Prestin & So, 2013), it was stated that having more Facebook friends is associated with stronger perceptions of social support, the number of Facebook friends increases the perception of social

support; it also reduces stress, minimizes physical illness and increases life satisfaction.

However, in other studies discussing the effects of social media use (Verduyn et al., 2017; Augner & Hacker, 2012; Kross et al., 2013; Huang, 2017; Shakya & Christakis, 2017; Tromholt, 2016), it was emphasized that social media use was associated with chronic stress, low emotional stability, depression, decreased life satisfaction and low psychological well-being. Excessive and problematic use of social media is defined as an addiction problem because it causes problems such as daily life, personal care, family relationships, disruption in professional, academic and social life, internal conflict and deterioration in emotional state with its effect on the cognitive, emotional and behavioral areas of the individual (Tutgun-Ünal, 2015). Especially in studies about the use of social media tools addictively (Balcı & Baloğlu, 2018; Demirci, 2019) it was stated that it may cause anxiety, communication problems and depression. In addition, there are studies examining the relationship between social media addiction and various variables such as self-esteem and life satisfaction (Hawi & Samaha, 2017), extraversion, neuroticism, attachment style, and fear of missing out on developments (Blackwell, Leaman, Tramposch, Osborne & Liss, 2017). In the study by Appel, Gerlach and Crusius (2016), it was stated that there is a positive relationship between excessive Facebook use and depression, and it was emphasized that these negative psychological results were caused by social comparison. Similarly, the study by Steers, Wickham, and Acitelli (2014) focused on the social comparison variable that mediates the relationship between time spent on Facebook and depressive symptoms.

It is stated that social comparison has an effect on social media users in adapting a certain behavior pattern and thus, the use of social media triggers jealousy, anxiety and other negative emotions (Fox & Moreland 2015). Because social media can reflect "ideal" images that lead people to compare them with others in an unhealthy way (Vogel et al., 2014). It is stated that these images may cause unrealistic expectations of people about what they should look like (Halliwell, Easun & Harcourt, 2011). For example, studies on the effect of media on body image (Ferguson, Muñoz, Garza & Galindo, 2014; Halliwell et al., 2011) show that individuals experience body dissatisfaction through upward social comparison. Social comparison can negatively affect the subjective well-being of the individual through these images depicted by the media (Lindner, Tantleff-Dunn & Jentsch, 2012). Festinger (et al. 2013) assumes that people tend to use upward social comparison, which means comparing themselves to someone who is somewhat superior to them. Upward social comparison is defined as regarding oneself inferior to others and can lead to characteristics such as low self-esteem and negative self-evaluations associated with depression. Downward comparison involves seeing yourself as superior to others, which can lead to lower anxiety and depressive symptoms. However, no matter it is upwards or downwards, Steers, Wickham, and Acitelli, (2014) assert that any kinds of social comparison is linked to lower subjective well-being. In a study by Haferkamp and Krämer (2011), it is stated that individuals start to compare themselves socially via Facebook. In other words, it is stated that the more time people spend on social media sites that can be used for social comparison (Facebook, Twitter), the more likely they have tendency to these comparison behaviors. In addition, it is emphasized that the more frequently users compare themselves with others, the more likely they experience negative emotions (Lee, 2014; Chrisler, Fung, Lopez & Gorman, 2013; Chou & Edge, 2012; Vogel et al., 2014).

As a result of social comparison, it is stated that rumination can have negative consequences such as depression and anxiety (Aldao, Nolen-Hoeksema & Schweizer, 2010). Rumination can occur when the individual directs most of his/her attention to something that causes distress (Feinstein et al., 2013) or is obsessed with perceived deficiencies, and negative thoughts cause individuals not to be able to regulate their emotions by consuming the individual (Aldao et al., 2010). The negative consequences of rumination have been discussed in many studies (Aldao et al., 2010; Chung, 2014; Feinstein et al., 2013). In a study on Facebook, one of the social media platforms, it was stated that rumination mediates the relationship between negative Facebook status updates and depressive symptoms (Locatelli, Kluwe, & Bryant, 2012). In another study (Feinstein et al. 2013), it was stated that negative social comparison on Facebook, rumination and depressive symptoms were positively related to each other. It was pointed that negative social comparison leads to rumination and this increases the risk of depression (Feinstein et al., 2013). In a study conducted with nurses, it was emphasized that social networking site addiction can lead to social anxiety and rumination, which may create fear of facing people in real life. (Majid, Yasir, Javed, & Ali, 2019). However, there is no study conducted with university students in which social media addiction level, social comparison orientation and ruminative response variables were considered together. Therefore, it is thought that it will be important to define the relationship between the variables covered by this study.

It is stated that the increase in the number of social media platforms and easy accessibility may cause university students to use social media increasingly (Primack et al., 2017). Also, it is emphasized (Aparicio-Martínez et al., 2020) that social media addiction rates among young adults are increasing. The aim of this study is to determine the social media addiction levels of university students and to examine the relationships between social media addiction and social comparison orientation and ruminative response scores. For this purpose, answers to the following questions were sought:

1. What is the social media addiction level of university students?
2. Is there a significant relationship between university students' social media addiction and their social comparison orientation and ruminative response scores?
3. Do university students' social comparison orientations and ruminative responses predict significantly social media addiction scores?

Method

Research Model

In this study, relational screening model was used to examine the relationships between university students' social media addiction, social comparison orientations and ruminative response variables. The relational screening model is used to determine the relationship between two or more variables, whether they affect each other, and the variation of variables and the degree of this (Creswell & Poth, 2016).

Participants

The target population of the study consists of university students who voluntarily participate in the study and

use at least one social media tool actively. In this study (Creswell & Poth, 2016), convenient sampling method was used in order to make the sample easily accessible and applicable. Participants of this study consist of 261 university students determined by the convenient sampling method. The mean age of participants is 21.22 (ss = 1.26). 72% (188) of the participants are male and 28% (73) are female. 6.1% (16) of the study group are 19 years old, 23.4% (61) 20 years old, 34.5% (90) 21 years old, 21.1% (55) 22 years old, 7.7% (20) 23 years old and 7.3% (19) of them are 24 years old. While 23.8% (62) of the participants use 1 social media tool, 33.3% (87) use 2 social media tools, 27.6% (72) of them use 3 social media tools, 9.6% (25) 4 social media tools and 5.7% (15) use 5 different social media tools.

Data Collection Tools

Personal information form was used to collect the personal data about the participants' socio-demographic characteristics and social media use.

Social Media Addiction Scale (SMAS)

Developed by Tutgun-Ünal and Deniz (2015), Social Media Addiction Scale (SMAS) was used in this study aiming to measure the social media addiction of university students. Consisting of 41 items and 5-point Likert Type, the scale has 4 factors and all factors explains 59% of total variance. These sub-scales are Occupation, Mood Modification, Relapse and Conflict. In order to use the points obtained from the Social Media Addiction Scale to determine the level of addiction, range calculations were made and range coefficients were calculated in accordance with the 5-point Likert scale. Accordingly, from 41 to 73 means "No Addiction", from 74 to 106 means "Less Addicted", from 107 to 139 means "Moderate Addicted", 140 to 172 means "High Addicted" and from 173 to 205 means "Very High Addicted". Besides, Cronbach alpha value that is the internal consistency coefficient of the scale was found to be .967. (Tutgun-Ünal, 2015). In this study, reliability coefficient of the scale was found to be .965.

Iowa-Netherlands Comparison Orientation Measure (INCOM)

The scale developed by Gibbons and Buunk (1999) in order to measure individuals' orientations for social comparison was adapted into Turkish by Teközel (2000). Consisting 11 items in 5-Likert type, each item of the Social Comparison Orientation Scale is scored between 1- 5, and high scores indicate high social comparison orientation. Comprising two sub-dimensions, comparison of ability and comparison of opinion, a general comparison orientation score is obtained from the scale due to the high correlation of the dimension between each other (.79) and the high fit index for the single factor solution (GFI> .92). As a result of the study conducted with American and Dutch samples, the Cronbach alpha coefficient of the scale was found to be respectively .78 and .85 for these two samples (Gibbons & Buunk, 1999). Within the scope of the adaptation to Turkish, it was determined that the item total correlations of the scale were between .26 and .65 and the Cronbach's alpha coefficient, which is the internal consistency coefficient, was found to be .82 (Teközel, 2000). In this study, the reliability coefficient of the scale was found as .806.

Ruminative Responses Scale-Short Form (RRS-SF)

Treynor, Gonzalez, and Nolen-Hoeksema (2003) created the RRS short form by removing items related to depressive symptoms of the long form of the 21-item ruminative responses scale developed by Nolen-Hoeksema and Morrow (1991), which evaluates to what extent individuals use ruminative coping style. RRS-SF consists of 4-Likert type 10 items. The scale has two sub-dimensions as "obsessive thinking" and "deep thinking". The original RRS-SF was found to be highly correlated with the long form of the scale (r = 0.90), and the internal consistency coefficients for the total RRS-SF, deep thinking, and obsessive thinking sub-dimensions were reported as 0.85, 0.72 and 0.77, respectively. Erdur-Baker and Bugay (2010) adapted the scale into Turkish. Acceptable reliability of the total scale and its sub-dimensions (internal consistency coefficient 0.85 for the total scale, 0.77 for the deep-thinking factor and 0.75 for the obsessive thinking factor) and good validity (r = 0,60 for the total score with BDI; r = 0.59 for obsessive thinking and r = 0.50 for deep thinking) (Erdur-Baker & Bugay, 2010). In this study, the reliability coefficients of the scale were found as .839 for the total scale, .745 for obsessive thinking and .779 for deep thinking.

Procedure

Data collection tools were applied to 279 people. Before data analysis, the scales were reviewed and it was found that there was no missing or incorrectly filled answer. After that, the responses of 15 people were removed from the data set which was out of z value ± 3.29 in the one-way extreme value analysis. Mahalanobis' distance value was used in multivariate outlier analysis, and accordingly three cases were excluded from the analysis. Multicollinearity was calculated by examining Variance Inflation Factors (VIF) and it was determined that all values were below 10 and there was no tolerance value close to zero. Whether there was autocorrelation among the observed values was examined with Durbin-Watson values and it was seen that this was among the reference parameters (1.95). As a result, the data obtained from 261 individuals were included in the analyses and assumptions required for the analyses were met. Frequency distribution, percentage and multiple regression analysis were used to analyse the data. Before performing the regression analysis, the skewness (between .987 and -.120) and kurtosis values (between .364 and -1.033) were examined and it was seen that no variables needed to be transformed since the values were between +1.5 and -1.5 (Tabachnick & Fidell, 2013).

Results

In this study, in order to determine the level of social media addiction of university students, the average scores obtained from the total social media addiction scale and its subscales are presented in Table 1. When the average scores in Table 1 were analyzed according to addiction ranges, university students were moderate addicted on social media according to the subscale of occupation ($\bar{x}$ =35.97); less addicted according to the subscales of mood modification ($\bar{x}$ =12.74) and relapse ($\bar{x}$ =10.28), and they had no addiction according to conflict subscale ($\bar{x}$ =31.82). However, according to the social media addiction scale ($\bar{x}$ =90.80), it can be said that they are less addicted to social media.

Table 1. Social Media Addiction Levels

Scale/ Subscale	N	$\bar{X}$	ss
Occupation	261	35.97	9.64
Mood Modification	261	12.74	4.91
Relapse	261	10.28	4.65
Conflict	261	31.82	11.59
Social Media Addiction	261	90.80	25.17

In addition, correlation analysis was performed to see the relationships between dependent and independent variables in this study. Correlation values between variables, averages related to variables and standard deviation values were presented in Table 2.

Table 2. Descriptive Statistics on Social Media Addiction, Obsessive Thinking, Deep Thinking, and Social Comparison and Correlation Values between These Variables

Variables	$\bar{X}$	ss	r			
			1	2	3	4
1. Social Media Addiction	2.21	.61	-			
2. Obsessive Thinking	2.31	.58	.35***	-		
3. Deep Thinking	2.37	.62	.14**	.54***	-	
4. Social Comparison	3.30	.55	.33***	.38***	.20***	-

*** $p<.001$, ** $p<.01$

As seen in Table 2, there was a statistically positive significant relationship between social media addiction and obsessive thinking (r = .35, p <.001), deep thinking (r = .14, p <.01) and social comparison (r = .33, p <. 001). As obsessive thinking, deep thinking and social comparison orientations of university students increase, their social media addiction levels also increase.

Table 3. Results of Multiple Regression Analysis on Predicting Social Media Addiction Levels

Predictive Variables	B	SH_B	B	t	R	R^2	F
Fixed Variable	.78	.23	-	3.35***			
Obsessive Thinking	.32	.08	.30	4.18***	.42	.17	17.92
Deep Thinking	-.06	.07	-.06	-.95			
Social Comparison	.26	.07	.23	3.81***			

*** $p <.001$.

As seen in Table 3, as a result of Multiple Regression Analysis for the social media addiction score of university students, Obsessive Thinking, Deep Thinking and Social Comparison variables together predicted the social media addiction scores of the participants at a statistically significant level [F (3.257) = 17.92. p <.001]. It was

seen that these variables together explained 17% of the total variance of social media addiction level scores. When Standardized Beta coefficients were examined, it was found that at the level of social media addiction, obsessive thinking (β=.30, p <.001) and social comparison (β = .23, p <.001) had positive and significant predictive effects; on the other hand, it was determined that the deep thinking (β=-.08, p> .05) variable was not a significant predictor of social media addiction scores.

Discussion and Conclusion

In this study, social media addiction levels of university students were examined and it was found that they were less addicted on social media according to the findings. It is possible to come across similar findings in other studies on social media addiction of university students, supporting the findings of this study. Studies have emphasized that university students are at risk in terms of addiction (Balcı & Gölcü, 2013; Tutgun-Ünal & Deniz, 2016). The increase in the number of social media platforms and their widespread use may cause university students to use more social media tools (Primack et al., 2017). This situation can harm students at this age rather than benefit from social media, and overuse of such platforms can increase the risk of addiction over time. The fact that university students are at risk of social media addiction shows that this group may need support on how to use social media in a conscious and beneficial way. It is stated that social media addicts exhibit obsessive behavior and cannot control the use of these tools (Hwang, 2017). For this reason, trainings can be organized for this age group to use social media consciously. At the same time, students who have problems with addiction can be given information about the support centers.

In addition, in this study, it was examined that in what extent ruminative responses and social comparison orientations of university students predicted social media addiction. According to the findings, it was found that obsessive thinking, deep thinking and social comparison had a significant effect in predicting social media addiction. These three variables explained 17% of social media addiction.

It is an expected finding that obsessive thinking positively predicts social media addiction. Because in the obsessive thinking dimension, the individual focuses more on negativities and constantly thinks about the feelings and thoughts associated with the negative events he/she experiences. This can hinder individuals' effective problem-solving skills (Nolen-Hoeksema, 2000). In this ruminative response, the individual criticizes and compares himself/herself with other people in an anxious and pessimistic way (Treynor et al., 2003). As a matter of fact, studies on the effects of social media use (Verduyn et al., 2017; Huang, 2017; Shakya & Christakis, 2017; Tromholt, 2016) highlighted the chronic stress, depression and decreased life satisfaction experienced by individuals. In an experimental study by Tromholt (2016), it was emphasized that there was a relationship between leaving Facebook and higher subjective well-being and life satisfaction. Between the control group (participants who continued to use Facebook) and the experimental group (participants who left Facebook for a week), it was stated that there was a significant difference in favor of the experimental group. Especially in studies investigating the relationship between depression and use of Facebook, one of the widely used social media tools (Appel, Gerlach & Crusius, 2016; Steers, Wickham & Acitelli, 2014), the negative effect of social comparison was emphasized. Therefore, in this study, it was an expected finding that social

comparison positively predicted social media addiction. It is stated that even if individuals do not use social media for social comparison purpose, they started to compare themselves with other individuals by using social media (Haferkamp & Krämer, 2011). It is asserted that individuals can make comparisons such as in interpersonal issues, career, physical appearance and body image, and as a result, they are likely to experience rumination (Simonson, Mezulis & Davis, 2011). Haferkamp and Krämer (2011) emphasized that after viewing attractive people's profiles on Facebook, women have more negative body images by making a comparison. Similarly, men who viewed the profiles of successful men experienced more differences between their current careers and their ideal careers than those who viewed the profiles of less successful men. Based on these results, it can be said that social comparison is upward and individuals experience dissatisfaction by comparing themselves with superior ones (Festinger et al., 2013; Ferguson, Muñoz, Garza & Galindo, 2014). In other studies (Kross et al., 2013; Smith & Kim, 2007; Chou & Edge 2012), individuals showed positive sides in their lives and ignored the negative ones, namely, being tended to present themselves in a positive way in social media caused sense of jealousness in perceiving the lives of others, using social media in a passive way and decreasing in subjective well-being. In the study conducted by Wood, Giordano-Beech, Taylor, Michela and Gaus (1994), it was emphasized that people with high self-esteem direct their attention to their abilities and what they can do in social comparison, while those with low self-esteem prefer to protect themselves and hide their weaknesses. Individuals with high self-esteem lose interest in social comparison when they are successful. That is, they are less interested in comparing themselves with individuals who are inferior. However, when individuals with low self-esteem are successful, they like to compare themselves with those who are inferior them because it is seen as an opportunity to enjoy their success. Positive social comparisons are associated with self-esteem as well as having a strong influence on the development of social behaviors and values (Wood, Giordano-Beech, Taylor, Michela & Gaus, 1994). Therefore, in order to prevent university students from being negatively affected by social media, practices aimed at developing positive self-perception and increasing their self-esteem can be included.

In addition, in this study, it was concluded that one of the sub-dimension of rumination, deep thinking alone was not a significant predictor of social media addiction. In this sub-dimension of rumination, individuals have thoughts that they try to find out what they can do to cope with the problems and difficulties they encounter. Although it is stated that its effects may be different in the long and short terms, it is emphasized that especially in the long term, deep thinking is beneficial in solving the problems faced by individuals and its effect may be positive (Treynor, Gonzalez & Nolen-Hoeksema, 2003). In a study (Marroquin, Fontes, Scilletta & Miranda, 2010) it is emphasized that deep thinking can become functional depending on whether individuals use active or passive coping skills. Therefore, university students may need to improve their coping skills in order not to be negatively affected by social media. In this case, it may be beneficial to train university students to improve their mood modification skills.

Recommendations

Among the limitations of this research, it can be stated that it was conducted only with university students. In future studies, the same variables can be tested on different age groups. In addition, this research was designed

and carried out in quantitative design. Conducting qualitative or mixed pattern research on this subject can provide a more detailed discussion of the subject. This study is limited to the variables dealt with in social media addiction. Conducting different studies with other variables to explain this subject may be beneficial in terms of preventing university students from being negatively affected by social media and even their use of social media from becoming addictive.

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