

# The Relationship between Narcissism and Problematic Social Networking Sites (SNS) Use: Mediating Role of Attachment Instability

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**ABSTRACT:** *Social Networking Sites (SNS) are used by more and more people and have many positive aspects of human life, but they are also causing addiction enough to interfere with everyday life. Especially in Korea, more and more children and adolescents are indulged in SNS, and adults also have many side effects of SNS such as neglect of work, relationship problems, and attention seeking behavior. The purpose of this study was to investigate the relationship between implicit narcissism and social networking services addiction, mediated by attachment instability. The study comprised 185 cyber university students (69 males and 116 females) and the mean age was  $40.13 \pm 10.66$  years. The instruments of collecting data are comprised of Covert Narcissism Scale, Experience of Close Relationship, and Social Networking Service Addiction Tendency. Simple correlation showed that implicit narcissism and attachment instability were highly correlated with SNS addiction. Also, the regression analysis showed that attachment anxiety mediated between implicit narcissism and SNS addiction. The implications and limitations of this study were discussed.*

**Keywords:** *Implicit narcissism, Attachment instability, Social Networking Services (SNS) addiction, Attachment anxiety*

## KEY POINTS

### What is known about this topic

- In addition to the positive aspects, SNSs are also causing negative problems
- Implicit narcissism is associated with Internet addiction, smartphone addiction, and problematic SNS use.
- Attachment correlates with implicit narcissism and is associated with Internet addiction, smartphone addiction, and problematic SNS use.

### What the paper adds

- Vulnerable narcissists who have anxiety attachment type are easy to fall into problematic SNS use.
- Anxious attachment mediated the relationship between implicit narcissism and SNS addiction
- Avoidant attachment did not mediate the relationship between implicit narcissism and problematic SNS use.

## INTRODUCTION

The desire to communicate with others can be seen as a basic desire of humans to express themselves from birth. In contrast to face-to-face communication channels, the number of people who communicate through social networking sites (SNS) has increased owing to the advancement of communication technology. Due to the development of social networks, the scope, speed, and place of communication among people has changed drastically.

In recent years, the use of SNS has been steadily expanding. In particular, after the increase in the number of SNS users in their 20s, the average time spent on social networks by people in their 50s and above has increased drastically. As a result, the percentage of people aged 20-59 years who are at risk for smartphone addiction increased from 8.9% in 2013 to 11.3% in 2014, and to 17.8% in 2016 (Korean Internet and Security Agency, 2015).

Online interaction has helped shape and maintain social relationships without having to meet people personally to share information (Caplan, 2003), but the side effects are increasing. As the use of SNS increases, the problem of losing the privacy of the

user arises (Ksian & Vazsonyi, 2016). Since recently, the negative aspects of the excessive use of SNS are being exposed (Fox & Moreland, 2015). Since the diagnosis of SNS addiction is not present in the DSM-5 (APA, 2013), we use the term of problematic SNS use. Problematic SNS use is different from alcohol or drug addiction, but it can be classified as a category of behavior addiction, such as gambling (Karaiskos et al., 2010).

Excessive use to interfere with social and occupational functioning leads to an addiction, whether it is a substance, or an action. Recently Facebook has been actively researched to the extent that the term "iDisorder" has been created (Rosen et al., 2012). The side effects of the overuse of SNS are relatively common in Korea. In some studies, the term "addiction tendency" is used rather than the term "addiction" (Kim et al., 2017). This means that "immersion in online relationships is excessive, and interferes with everyday life." However, SNS users do not concentrate on interpersonal relationships. Recently, there have been a lot of people engaging in taking self-portraits or pictures of themselves. Many people are uploading these pictures or information about themselves rather than focusing on interpersonal relationships. Psychological variables of these people are attracting the attention of researchers. Loneliness, depression, attachment (Ryan & Xenos, 2011), and implicit narcissism (Liu & Baumeister, 2016) are frequently studied psychological variables related to SNS addiction tendency.

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Many researchers have argued that communication through SNS is particularly relevant to certain personality trait (Zhang et al., 2017). The most frequently studied personality type is narcissism. Narcissism creates an exaggerated sense of value to oneself and makes an individual over-obsessed with himself/herself (Campbell & Miller, 2011). A person with severe narcissism thinks of himself/herself as the center of the world and claims superiority when compared with others. People with a narcissistic personality tend to be self-centered, dominate others, and seek special treatment as if they were privileged (Miller & Campbell, 2008).

Narcissism can be classified into explicit narcissism and implicit narcissism. Explicit narcissism is characterized by constantly seeking positive evaluation from others by revealing narcissistic traits on the surface, having exaggerated self-confidence, and privileged consciousness with an illusion of achievement and success (APA, 2013). Contrary to commonly known explicit narcissism, implicit narcissism is characterized by low self-esteem and negative self-concept. To compensate for a weak self-concept, a person with a high implicit narcissism tries to protect himself or herself by reacting sensitively to the criticism, or negatively evaluating others (Kernberg, 1975). It is highly likely that people with high implicit narcissism will try to look good in situations where they do not have to reveal themselves directly, like on SNS, because of the fear of criticism and negative evaluation. There are several studies on the relationship between narcissism and SNS addiction. Narcissistic people upload their own photographs to attract attention on social networks (DeWall et al., 2011). They share information easily with others; and choose easy content, timing, words, etc. that help reveal themselves online.

Attachment is an emotional tie between an infant and the caregiver, and it is known that attachment in infancy is the basis of interpersonal relationships throughout life (Bowlby, 1979). The attachment type of an individual changes with time, and the attachment object expands from the parent-child relationship of early childhood to peers and lovers (Brennan et al., 1998). Adult attachment also originates from the attachment relationship between infants and caregivers, and appears as a stable tendency to maintain proximity with the attachment object (Mikulincer & Shaver, 2007).

A study also found that adult attachment styles were classified into three categories: stable attachment, anxiety/ambivalence attachment, and avoidance attachment (Brennan et al., 1998). According to this viewpoint, a person can be classified as a specific type of attachment according to their position in terms of avoidance and anxiety. If both anxiety and avoidance are low, they can be classified under "secure attachment." However, if both anxiety or avoidance is high, they can be classified as "attachment anxiety" or "attachment avoidance" type.

Attachment theorists (Bowlby, 1979; Mikulincer & Shaver, 2007) found that a secure attachment in early childhood to caregivers improved a child's ability to recognize and express his/her emotions, others' emotions, and enable mature and effective emotional control. On the other hand, children who grew up in a non-responsive parenting environment developed an insecure type of attachment with an impaired ability to understand and name emotions. This emotional instability makes a child vulnerable to various psychopathologies in terms of cognition, emotion, and behavior (Mikulincer & Shaver, 2007).

In recent years, studies on attachment types and various addictions have increased (Schimmenti et al., 2014). In Korea, studies on the relationship between attachment type, internet addiction, and smartphone addiction were conducted on adolescents and college students. According to these studies, people with anxiety attachment tend to be more immersed in smartphones or the Internet to meet their attachment needs (Choi & Seo, 2015; Billieux, 2012; Drouin & Landgraff, 2012; Ge, 2014).

Adults are less likely to be addicted if they have healthy and stable relationships with their friends, lovers, etc. than adults in insecure attachment relationships (Mikulincer & Shaver, 2007). Studies on unstable attachment and behavioral addiction include relationship addiction and internet addiction (Flores, 2004). In recent years, there has been interest in early adult instability attachment and problematic SNS use (Oldmeadow et al., 2013).

People with implicit narcissism are addicted to fulfilling their desires on the internet and through the use of smartphones because they cannot find objects to satisfy their narcissistic desires in the real world (Ksinan & Vazsonyi, 2016; Liu & Baumeister, 2016). People with high narcissism are self-centered and sensitive, and find it difficult to obtain satisfaction in real relationships (Ksinan & Vazsonyi, 2016). In addition, people with attachment instability cannot get along well with others because they experience confrontational conflict and anxiety conflict in actual relationships (Mikulincer & Shaver, 2007). Because of this, people who show attachment instability such as attachment anxiety become addicted to an object that lacks interpersonal relationships (Hart et al., 2015). A sensitivity to SNS such as Facebook of anxiously attached individuals can predict more expressive and attention seeking behavior (Hart et al., 2015). In a study on peer attachment and SNS addiction, it was found that children and adolescents with poor peer attachment tend to depend on artificial objects, like the mobile (Schimmenti et al., 2014).

People with implicit narcissism can show insecure attachment (avoidance and anxiety) in close interpersonal relationships and this can make them vulnerable to addiction problems (Benett, 2006). Based on previous research, it is suggested that people with high narcissism try to fulfill their desire not to be satisfied in interpersonal relationships due to sensitivity and vulnerability through SNS. Although there is a direct influence on addiction tendency, the hypothesis of this study states that attachment instability will mediate the relationship between implicit narcissism and SNS addiction tendency.

## MATERIAL AND METHODS

### Research Subjects and Procedures

Research participants were 200 cyber university students who were taking mental health as a liberal arts course. Participants who voluntarily agreed to participate in the study completed self-reported questionnaire for 15-20 minutes individually via online and the responses were automatically stored in Excel. A total of 185 data (69 males, 116 females) were analyzed except for those who answered unfaithfully.

### Instruments

#### 1) *Covert narcissism scale*

In order to measure implicit narcissism, this study used the one developed by Gang & Chung (2002). The scale consisted of 24 items of external narcissism and 18 items of internal narcissism. Only 18 items of implicit narcissism were used in this study and 5 points Likert scale from "Not at all" (1 point) to "very much" (5 point). The higher the score, the higher the implicit narcissism tendency. The internal reliability coefficient of implicit narcissism in the original scale was 0.84 and the reliability coefficient was 0.87 in this study.

#### 2) *Experience of Close Relationship-Revised (ECR-R)*

In this study, ECR-R, well known as the adult attachment measure, was used. This scale was developed by Fraley, Waller, & Brennan (2000). In Korea, Kim (2004) used a modified and validated study. This scale is to assess the adult attachment style in two dimensions: anxiety attachment and avoidance attachment. Anxiety attachment indicates fear of being abandoned

## RESULTS

### Demographic Characteristics

The demographic characteristics of the study participants are shown in Table 1. There were 69 men (37.3%) and 116 women (62.7%) with a mean age of 40.13 years ( $\pm$  10.66).

### Correlation Analysis Of Major Variables

The sociodemographic characteristics of the participants are not correlated with main variable. Therefore the correlation analysis results of the main variables are presented in Table 2. Implicit narcissism showed a positive correlation with SNS addiction tendency ( $r=0.452$ ,  $p<.01$ ). Problematic SNS use was positively correlated with Attachment avoidance ( $r=0.219$ ,  $p<.01$ ), and attachment anxiety ( $r=0.484$ ,  $p<0.01$ ).

### Mediating Effect of Attachment Instability

First, in order to examine whether attachment avoidance plays a mediating role in relationship between implicit narcissism and problematic SNS use, regression analysis was performed as shown in Table 3. Regression analysis showed that mediating effect of attachment avoidance was not significant. The implicit narcissism had a significant effect on attachment avoidance ( $\beta =0.31$ ,  $p<0.01$ ). The implicit narcissism had a significant effect on the problematic SNS use ( $\beta=0.45$ ,  $p <0.01$ ). In the third stage, attachment avoidance had no significant effect on the problematic SNS use ( $\beta=0.09$ , ns) when implicit narcissism and attachment avoidance were simultaneously entered. Attachment avoidance did not mediate internal narcissism and problematic SNS use.

Second, in order to examine whether attachment anxiety plays a mediating role in relationship between inner narcissism and problematic SNS use, regression analysis is performed as shown in Table 4. Regression analysis showed that mediating effects of attachment anxiety were significant. The Sobel test showed that attachment anxiety significantly mediated the relationship between implicit narcissism and problematic SNS use ( $z=6.68$ ,  $p<0.001$ ). These results indicated that attachment anxiety partially mediated the relationship between implicit narcissism and problematic SNS use.

or rejected, while avoidance attachment indicates rejection of dependency and intimacy in interpersonal relationships.

The scale consisted of 36 items, and there were 18 items of anxiety attachment and 18 items of avoidance attachment, and 7 points Likert scale from "Not at all" (1 point) to "very much"(7 point). The higher the score of each subscale, the higher the attachment type can be. In the study of Fraely et al (2000), Cronbach's  $\alpha$  of attachment anxiety was 0.93 and the Cronbach's  $\alpha$  of attachment avoidance was 0.95. In the study of Kim (2004), Cronbach's  $\alpha$  of attachment anxiety was 0.89 and Cronbach's  $\alpha$  of attachment avoidance was 0.85. In this study, reliability coefficients were 0.92 and 0.94, respectively.

### 3) Social Networking Service Addiction Tendency (SNS)

In this study, the scale developed by Cho & Seo (2013) was used. This scale consists of SNS overuse, withdrawal symptoms, and excessive time consumption for SNS. It consists of a total of 20 questions and is designed to mark the 4-point Likert scale from 'not at all (1 point)' to 'very much (4 points)'. The higher the score, the higher the overuse of SNS. In this study, the reliability coefficient was 0.88.

### 4) Statistical Analysis

Data analysis was performed using IBM SPSS STATISTICS Version 22. Statistical analysis was performed to examine the demographic characteristics of the collected data and internal consistency was analyzed to determine the reliability of the measurement tools.

Pearson correlation analysis was performed to examine the relationship between the main variables. To analyze the mediating effect, hierarchical regression analysis was performed on three variables of implicit narcissism, attachment instability, and SNS addiction tendency. Sobel test was performed to confirm the significance of the mediation effect.

**Table 1.**  
Sociodemographic characteristics of the participants (N=185)

Characteristics	Category	N	(%)
Sex	Man	69	37.3
	Women	116	62.7
Age (year)	20~29	70	38
	30~39	45	24
	40~49	35	19
	50~	35	19
Job	clerical work	47	25.5
	sales	9	4.7
	self-business	18	9.5
	professional	31	16.8
	others	80	43.5
Education	Under High school	52	28.1
	College	120	67.6
	Graduate School	8	4.3

**Table 3.**  
Attachment avoidance as a mediator in the relationship between implicit narcissism and problematic SNS use.

Step		B	$\beta$	Se	R2	F
1	Implicit narcissism $\rightarrow$ attachment avoidance	0.02	0.31	0.08	0.04	4.46**
2	Implicit narcissism $\rightarrow$ SNS addiction	0.51	0.45	0.07	0.2	6.85***
3	Implicit narcissism $\rightarrow$ SNS addiction	0.48	0.43	0.08	0.2	1.87
	attachment avoidance $\rightarrow$ SNS addiction	1.51	0.09*	0.07		

N=185, \* $p<.05$ , \*\* $p<.01$ , \*\*\* $p<.001$

**Table 4.**  
Attachment anxiety as a mediator in the relationship between implicit narcissism and problematic SNS use

Step		B	$\beta$	R2	F
1	Implicit narcissism $\rightarrow$ attachment anxiety	0.06	0.71	0.5	13.23***
2	Implicit narcissism $\rightarrow$ SNS addiction	0.51	0.45	0.2	6.85***
3	Implicit narcissism $\rightarrow$ SNS addiction	0.24	0.21	0.25	31.55***
	attachment anxiety $\rightarrow$ SNS addiction	4.42	0.32		

N=185, \* $p<0.05$ , \*\* $p<0.01$ , \*\*\* $p<0.001$

**Table 2.**  
Correlation among related variables

Step		1	2	3	4
1	Implicit Narcissism	1			
2	Attachment avoidance	0.313**	1		
3	Attachment anxiety	0.712**	0.385**	1	
4	Problematic SNS use	0.452**	0.219**	0.484**	1
	Mean	41.38	3.69	2.98	5.34
	SD	11.58	0.74	0.97	34.31
	a	0.91	0.91	0.9	0.89

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

## DISCUSSION

The purpose of this study was to examine whether attachment instability plays a mediating role on the structural relationship between implicit narcissism and problematic SNS use in adults.

A correlation analysis revealed that implicit narcissism was related to problematic SNS use. This is consistent with previous research that examined implicit narcissism as a factor affecting media addiction, including SNS (DeWall et al., 2011). In addition, a correlational analysis showed that implicit narcissism had a significant correlation with attachment instability, that is, avoidance attachment and anxiety attachment. These results showed a negative correlation between secure attachment and narcissism, and the avoidance/ambivalent attachment style had high positive correlation with narcissism. The results of this study are consistent with the results of other studies (Baek et al., 2014; Zhang et al., 2017).

Attachment instability was also significantly associated with problematic SNS use. Previous study showed that persons with insecure attachment feel anxious in interpersonal interaction (Danet & Miljkovitch, 2016). Therefore self-disclosure is easier on-line than off-line, it may lead to problematic use of the SNS. In addition, it is likely that behavioral problems of the people with insecure attachment may be due to interpersonal problems such as depression, dependence, and fear of rejection.

Through a multiple regression analysis, it was found that the partial mediating effects of attachment anxiety were verified, and the mediating effects of attachment avoidance were not significant in the relationship between implicit narcissism and problematic SNS use. Attachment anxiety and attachment avoidance were both positively correlated with problematic SNS use, but there may be other reasons for role of attachment instability in the relationship between narcissistic personality and problematic SNS use. According to previous studies (Hart et al., 2015), those who experience attachment anxiety want an intimate relationship, but are anxious that they will be rejected; so they are either obsessed with the attachment or become very sensitive to others. Therefore, to get the attention of others, they open up at the beginning of their relationships.

Why attachment anxiety only mediated the relationship between implicit narcissism and SNS overuse? People with covert narcissistic personality trait manage the impression of others through excessive positive feedback in SNS (Oldmeadow et al. 2013). For example, excessive users of Facebook are sensitive to the "likes" they receive and behave in an overly-interesting way. In particular, people with implicit narcissism are more anxious about their evaluation by others, and it can be deduced that they are overly immersed in SNS through anxiety attachment (Zhang et al., 2017; Blackwell et al., 2017). On the other hand, people with avoidant attachment tend to be uncomfortable with intimate relationships, maintain safe distances from others, and avoid intentional interactions. Therefore, those who show avoidance attachment do not pay much attention to the feedback or response of others (Danet & Miljkovitch, 2016). This is consistent with previous research (Ahmadi et al., 2013) that anxious attachment is associated with covert narcissism (e.g. hypersensitive and shyness) and avoidant attachment is associated with overt narcissism (e.g. exploitation). People who have covert narcissism feel anxious in face-to-face interaction and feel more comfortable in on-line, it may lead to problematic SNS use. Whereas, those who have avoidant attachment do not feel the need to make a relationship with other people, whether online or offline (Danet & Miljkovitch, 2016).

## CONCLUSION

Based on the results of this study, limitations of the study and implications for future research are as follows. First, the research data used in this study were obtained using self-report questionnaires, so

there may be a bias owing to social desirability. Second, this study has problems in the objectivity and generalization of the research results because the questionnaires were collected only from cyber university students attending specific cyber universities in Seoul. Therefore, it is difficult to generalize the results of this study to all ages, general population, and clinical groups, and it is necessary to repeatedly verify the results of research through nationwide sampling. Third, we did not examine other variables such as stress factors and psychological characteristics. It is necessary to examine a more comprehensive causal model including other parameters contributing to SNS addiction tendency.

People who engage in problematic SNS use tend to prefer online interactions rather than actual face-to-face encounters because of loneliness (Ryan & Xenos, 2011), lack of social skills and social anxiety (Orr et al., 2009). In many cases, psychological and social problems lead to excessive usage of SNS. In addition, there is a possibility that problematic SNS use itself adds to psychological and social problems. Recently, in Korea, excessive attention getting behavior on SNS has been associated with personal (e.g. addiction, depression) and social problems (e.g. stalking, aversion). A comprehensive analysis is needed to identify the most dangerous psychosocial factors and protective factors, including these variables. In addition, middle-aged and elderly people are also using SNS, which was initially recognized only in teens and people in their 20s.

Despite these limitations, this study supports the understanding of problematic SNS use in college students. The results of this study suggest that anxiety attachment partially mediates between narcissism and problematic SNS use, highlighting the need to concentrate on individual traits such as adult attachment problems and narcissism in the prevention or intervention of SNS addiction.

In this study, we examined narcissistic personality tendency as a main personality trait. Narcissism can be regarded as a personality trait or personality disorder as seen from two viewpoints. Apart from people with narcissistic personality traits, it is also important to look at people with various types of self-image pursuits and self-disclosure, and with vulnerable self-esteem, as it could lead to problematic SNS use. People with vulnerable narcissism are uncomfortable in everyday life, and so they prefer indirect interaction through SNS. People with excessive self-esteem tend to engage in social networking through self-introspection in SNS. People with narcissistic personality tendencies may appear differently based on the SNS activities they engage in. Finally, interpersonal interactions are likely to be involved in these pathways, and the basis of this interpersonal interaction may be affected by an attachment problem.

Recently, researchers reported that the process and response of psychotherapy to treat attachment instability are different. Moreover, people with high narcissism have problems forming therapeutic relationships and limit the effectiveness of treatment because of their inability to describe and express their feelings to the therapist. In addition, it is suggested that short-term dynamic psychotherapy that focuses on experiencing, describing, and expressing emotions in a short period of time is an efficient intervention method for people with strong narcissism and attachment problems (Wallin, 2007). It will be necessary to investigate the effective intervention to reduce an influence of attachment instability due to narcissism on problematic SNS use.

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