Investigating Antecedents of Instagram Attachment and Intention to Post Photos on Instagram

Racheal Zara Wallace ¹, Soo-Hyun Jun ²

This study examined effects of the social-psychological motivations to use Instagram (i.e., identity seeking, social interaction) and narcissistic personality on personal attachment to Instagram and intention to post photos on Instagram. Identity seeking, social interaction and narcissistic personality (i.e., grandiose/exhibition) had significant positive effects on personal attachment to Instagram. Identity seeking and social interaction had significant positive effects on intention to post photos on Instagram. However, narcissistic personality had no effect on the intention to post photos on Instagram. The study results support the theory of the extended-self in the digital context. This study also provides useful information to help organizations understand why people use Instagram as well as how to take advantage of Instagram to enhance their services and consumer experiences.

Keywords: Identity Seeking, Social Interaction, Narcissistic Personality, Instagram

Introduction

Social networking sites (SNSs) are virtual communities that enhance users’ self-expression in online social relationships (Ellison, Heino, & Gibbs, 2006; Kapidzić, 2013; Mehdizadeh, 2010; Stefanone, Lackaff, & Rosen, 2011). Image-sharing SNSs such as Instagram have gained enormous popularity and adoption in digital environments (Kim, Lee, Sung, & Choi, 2016; Kim, Seely, & Jung, 2017). Lee et al. (2015, p. 552) used the adage, “pictures speak louder than words,” to describe the growing phenomenon of the use of photos for visual communication. On Instagram, the number of photos uploaded daily was estimated to be over 60 million in 2018 and the majority of these photos were selfies (Statista, 2018). SNSs have become an integral

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extension of people’s daily life (Ellison, Steinfield, & Lamp, 2007). Users post content to share and document both important and mundane events and experiences (Kim et al., 2016).

There has been an increase in research to examine individuals’ motivations (i.e., needs, dispositions) underlying SNS use. Several researchers have suggested that in order to predict consumers’ SNS use behaviors, motivations (i.e., needs) and personality traits (i.e., disposition) should be investigated (Jun & Noh, 2015; Kim et al., 2016). However, Ajzen (1991) argues that motivations are a more important determinant of human behavior than personality traits because motivations are more ‘proximal causes’ than personality traits. Furthermore, some studies have revealed that social psychological motivations (i.e., social interaction, identity seeking) are significant predictors in understanding personal attachment and intention to post photos on SNSs (Jun & Noh, 2015; Kim et al., 2016). However, in the context of Instagram use, these motivations have not been extensively examined. In addition, an increasing body of research on narcissistic personality has revealed that narcissists have unique behaviors and usage patterns on SNSs (Kim et al., 2016; Sorokowski et al., 2015; Weiser, 2015). Through image-sharing virtual platforms, narcissists can easily express their desires for the display of vanity, attention, and self-promotion (Bergman et al., 2011; Buffardi & Campbell, 2008; Capenter, 2012; Devenport et al., 2014; Fox & Rooney, 2015; Parambouskis et al., 2016). But there have been very few studies that examined the effects of narcissistic personality on users’ personal attachment to Instagram and intention to post photos on Instagram.

Given that motivations and personality traits are related to Instagram use, this study aims to fill in the gap in research on Instagram by investigating the influence of social psychological motivations (i.e., social interaction, identity seeking) and narcissistic personality on personal attachment to Instagram and intention to post photos on Instagram.

**Theoretical Background**

According to Belk (1988), “the extended self” refers to the people, things, and places individuals consider as part of themselves. Self-extension is essential to people’s ability to articulate who they are, who they want to be, and what is important to them (Jun & Noh, 2015). The advent of Web 2.0 offered an alternative for expressing the extended self through digital media. Individuals can now instantly communicate and represent themselves via digital devices (e.g., smartphones) and digital media (Belk, 2014). People also consider digital objects (e.g., photos, videos, music, digital social networks) as part of the extended self in the same way as tangible possessions and other people (Belk, 2014).

The extended self via online media is dependent on the concepts of presence and co-presence (Belk, 2014). Presence is the illusion of being there in the virtual world (Biocca, 1997). Co-presence pertains to the perception of being in a “shared virtual setting with remote others” (Schultze, 2010, p. 438). People express their presence on digital social networks via their identities and personality traits (Belk, 2013, 2014). The co-presence of others involves the individual’s interaction with similar others who can respond to shared content (Belk, 2014).
Self-extension on Instagram is a collaborative experience. As Belk (2013) indicated, digital social networks are important virtual places where users can find self-value by sharing digital contents. For example, people share their selfies manipulated by the photo editing software and get feedback and reactions from other users. All these behaviors (e.g., self-presentation, engagement and interaction with others) contribute to shaping users’ self-concept (Belk, 2016; Daer et al., 2014; Smith & Smith, 2012; Yang et al., 2012). Oldenburg (1999) suggests that people have a “third place” which provides an alternative to home, school or work. In the third place, people are able to socialize, express themselves, get relaxed, feel accepted and create and maintain relationships (Craig et al., 2009; Kim, Sohn, & Choi, 2011; Seidman, 2013, Sheldon & Bryant, 2016). People develop attachments to other people, places and things they consider as self-extensions (Belk, 2014; Kim et al., 2016). Thus, by interacting with others and presenting identity, Instagram users form personal attachment to Instagram because they consider the platform as the third place (Belk, 2013). Digital self-extension on SNSs includes posting photos to share pictorial information for self-representation, self-narratives, self-disclosure, and display of competence, expertise and artistic abilities (Belk, 2012). The desire for self-extension through expression and presentation of identity and personality will enhance people to post more content, especially photos, on Instagram for affirmation from others (Belk, 2013).

Social Interaction

Social interaction is one of the fundamental human needs that drive people to seek out interpersonal relationships with other people (Ellison et al., 2007; Geurin-Eagleman & Burch, 2016; Lee et al., 2015; Pittman & Reich, 2016). Some people consider social interactions in the online context as a preferred form of relating to others rather than face-to-face interactions (Caplan, 2003; Ksinan & Vazsonyi, 2016). People can easily feel disinhibited because they feel free to articulate personal aspects of themselves in contrast to face-to-face interactions (Cortès, 2017). The SNSs help users to interact with other users who are similar to them and to seek social support from those users (Nadkarni & Hofmann, 2012; Stefanone et al., 2011). In addition, by maintaining already established social ties and developing new ones through SNSs, users can connect to a wider network of SNS users without barriers of time and physical distance (Ellison et al., 2007). Social interactions on SNSs also mitigate feelings of loneliness (Skues, Williams, & Wise, 2012).

Instagram enables users to contact and interact with others (Huang & Su, 2018). The social function of Instagram is to facilitate users’ ability to see visual updates of friends and followers (Sheldon & Bryant, 2016). When people use Instagram, they get to interact with others by seeing what others share (Sheldon & Bryant, 2016). People who engage in social activities (e.g., traveling, eating at popular restaurants, going to music concerts) are likely to post photos of these activities to keep their SNS friends and followers up to date with their lives. To communicate with others, users post photos as a way of keeping in touch with other users (Whiting & Williams, 2013). Sharing photos about one’s self is also an avenue to connect and meet people who share the same interest (Lee et al., 2015).
Identity Seeking

Oyserman, Elmore, and Smith (2012) defined identity as “traits and characteristics, social relations, roles, and social group memberships that define who one is” (p. 69). A person’s identity is defined in terms of the specific roles the individual occupies within a social structure (Cheng & Guo, 2015; Stryker, 1980; Oyserman et al., 2012). An individual’s self-identity is related to constructing a set of identity standards to serve as a guide to identity-relevant behaviors (Stets & Burke, 2000). Identity seeking is referred to as using Instagram to express traits and characteristics that define who one is or aspires to be with the aim of enhancing self-concept (Oyserman et al., 2012; Vignoles et al., 2002).

People share content on SNSs which forms part of who they are, remind them of who they, or represent who they are (Jun & Noh, 2015). Recently, digital photographs have been often used for identity seeking (Chua & Chang, 2016; Mascheroni et al., 2015). On Instagram, users share photos that demonstrate their individuality or their desirable self-image (Rui & Stefanone, 2013). Marcus (2015) observed that photos, specifically selfies, posted on Instagram were intended to present a person’s unique identity. Users rely on Instagram as an outlet to communicate their identity and post photos on Instagram that form part of users’ need for continuous modification of the self and instant communication (van Djick, 2008).

Narcissistic Personality

Narcissistic personality is characterized as highly positive or inflated self-view and needs for admiration and attention (Buffardi & Campbell, 2008; Morf & Rhodewalt, 2001). Several researchers have suggested that narcissists have an exaggerated sense of self-importance and invest a lot of time and effort into their physical appearance, status and popularity (Brown, Budzek, & Tamborski, 2009; Campbell, Rudich, & Seidikides, 2002). Interestingly a narcissist’s view of self often contradicts how others actually perceive them (Ackerman et al., 2011; Weiser, 2015). Although narcissistic individuals lack the ability to develop or maintain emotional connections with others in face-to-face interactions, they yearn to be the center of attention (Bergman et al., 2011).

The SNSs are an ideal virtual place for narcissists because they can easily satisfy their needs (e.g., attracting attention) with superficial relationships (Parambouski et al., 2016). Narcissists share photos on Instagram to obtaining feedback from their followers. The Instagram features (i.e., liking, commenting) do not require much effort to use and followers easily and intuitively use these features without developing deeper relationships (Parambouski et al., 2016). Positive feedbacks from followers support narcissists’ self-regulatory strategies such as seeking veneration (Kapidzic, 2013; McCain et al., 2016). Weiser (2015) even described selfies as symptoms of social media narcissism. Some studies have also indicated that people with elevated levels of narcissism frequently share photos to followers on their activities (Weiser, 2015). Numerous studies have shown a positive relationship between narcissism and frequency of SNSs
use (Carpenter, 2012; DeWall, Buffardi, Bonser, & Campbell, 2011; Mehdizah, 2010; Panek, Nardis, & Konrath, 2013).

Ackerman et al. (2011) suggested three dimensions of narcissistic personality, leadership/authority, grandiose/exhibition, and entitlement/exploitative. Leadership/authority refers to a desire for superiority over others and the capacity for social agency (Weiser, 2015). Leadership/authority reflects an adaptive type of narcissistic personality with attributes like social boldness, optimism, and values for interpersonal relationships (Brown et al., 2009; Emmons, 1984; Hickman, Watson, & Morris, 1996). Weiser (2015) found that leadership/authority was associated with the selfies-posting frequency on SNSs. Another study also revealed that college students showing the leadership/authority trait were more likely to use Twitter to assert their superiority over others (Panek et al., 2013).

Grandiose/exhibition is characterized by elevated self-importance and a tendency to show off (Weiser, 2015). Grandiose/exhibition is regarded as a maladaptive form of narcissism and individuals with this trait have a desire for attention and seek as many friends as possible on SNSs (Ackerman et al., 2011; Brown et al., 2009; Carpenter, 2012). Such individuals have a more inflated self-image and tendency to express themselves on SNSs in order to offset their low self-esteem (Wright, 2012). Carpenter (2012) discovered that grandiose/exhibition was related to self-promoting behaviors. Several studies have suggested that grandiose/exhibition is a significant factor in predicting the number of selfies posted and frequency in posting selfies on Instagram (Moon et al., 2016).

Entitlement/exploitative is defined as the sense of deserving acknowledgment with a willingness to manipulate and take advantage of others (Weiser, 2015). Entitlement/exploitative is related to anti-social behaviors implying that narcissists expect others to pay attention to their needs without reciprocity (Ackerman et al., 2011). Individuals who are high on entitlement/exploitative demand social support, but they are unwilling to do it for others and are most likely to retaliate to negative comments (Twenge & Campbell, 2003). Carpenter (2012) discovered that entitlement/exploitative was indeed associated with retaliating against mean comments, seeking social support without reciprocation, and checking to discover whether others were talking about them.

**Personal Attachment to Instagram**

Attachment to SNSs is defined as an emotional connection to SNSs to the extent that SNSs form an important part of the users’ daily activities (Ellison et al., 2007). Personal attachment to Instagram pertains to the strength of involvement in the use of Instagram to such an extent that Instagram is integrated into the users’ way of life (Orosz et al., 2015). Studies about attachment to SNSs are based on the place attachment theory. Place attachment theory is concerned with “a part of a person’s overall identity, consisting of the memories, feelings, beliefs, and meanings
associated with their physical surroundings” (Jack, 2010, p. 757). According to Qi and Fu (2011), the roles of SNS attachment replace the roles of physical place attachment.

Research has indicated that the more people use SNSs the greater the chances of forming an attachment to the SNS (Papacharissi & Mendelson, 2011). Several studies have found that socially excluded people are drawn to SNSs for interaction with others and attention-getting; therefore, those people are more likely to form strong attachments to SNSs (Andreassen et al., 2012; Kuss & Griffiths, 2011). Another study indicates that social connectivity results in SNSs attachment (Wirtz et al., 2017). Kim, Lee, Chung, and Preis (2016) discovered that attachment was an important mediator between motivations and behavioral outcomes. Some studies on Instagram have suggested that identity seeking is related to personal attachment to Instagram (Alhabash & Ma, 2017). Several studies have also revealed narcissism is associated with attachment to SNSs (Blanchino et al., 2018; Lee et al., 2017). Based on the previous research, this study suggests the following hypotheses:

**H1**: Social interaction is positively associated with personal attachment to Instagram.

**H2**: Identity seeking is positively associated with personal attachment to Instagram.

**H3**: Narcissistic personality is positively associated with personal attachment to Instagram.

**Intention to Post Photos on Instagram**

Intention refers to the amount of effort a person is willing to exert in performing a behavior (Ajzen, 1991). According to Ajzen (1991), if a person has a stronger intention, he/she is more likely to behave as intended. Therefore, the single best predictor of behavior is a person’s intention to perform the behavior (e.g., Amin et al., 2007; Hung et al., 2003).

People use Instagram to establish and maintain social relationships with other users. Several studies have indicated that the desire for social interaction will predict users’ intention to post photos on Instagram (Lee et al., 2015; Kim et al., 2016). According to Marwick (2015), photos are a preferable choice for making statements about users’ identity on SNSs. Cheng and Guo (2015) reported identity seeking was associated with users’ intention to post photos on Instagram. The rationale behind posting photos on Instagram is that by manipulating photos narcissists can appear more favorably (Sheldon & Bryant, 2016). Kim et al. (2016) suggest that narcissism increased Instagram users’ intention to post selfies. Based on the previous research, this study suggests the following hypotheses:

**H4**: Social interaction is positively associated with intention to post photos on Instagram.

**H5**: Identity seeking is positively associated with intention to post photos on Instagram.
H6: Narcissistic personality is positively associated with intention to post photos on Instagram.

Methods

A survey research method was applied in this study. The study population was undergraduate students at a university in South Korea. By using a non-probability convenient sampling method, students were asked to visit the online survey webpage to participate in the study during their class. The survey included five parts: social psychological motivations for using Instagram (i.e., social interaction, identity seeking), narcissistic personality, personal attachment to Instagram, intention to post photos on Instagram and respondents’ personal information.

Five items to measure social interaction were adopted from Sheldon and Bryant (2016). To measure identity seeking, four items were adopted from Jun and Noh (2015). The narcissistic personality inventory was measured with 13 items which were originally developed by Gentile et al. (2013). The authors initially suggested three factors of the narcissism personality inventory. Five items were to measure leadership/authority, four items were to measure grandiose/exhibition, and four items were to measure entitlement/exploitative. Six items to measure the personal attachment to Instagram were adopted from Ellison et al. (2007). Three items to measure intention to post photos on Instagram were adopted and modified from Ajzen (1991). All items were measured using a 7-point Likert-type scale, in which “1” represents “strongly disagree” and “7” represents “strongly agree.” Respondents were also asked to provide information about their demographic profiles and general SNS use.

A total of 383 undergraduate students participated in this study. Incomplete responses, responses from the same internet protocol (IP) addresses and responses from the respondents who had never used Instagram were excluded. After data cleaning, 257 were usable data for the statistical analyses. Six out of ten respondents were female (64.6%) (Table 1). One-third of the respondents aged 18-19 (28.8%) and another one-third of them aged 22-23 (27.2%). Half of the respondents (51.0%) responded that Instagram was the most often used SNS.

Table 2 presents the results of factor analyses and reliability analyses. In terms of the social psychological motivations, two factors (i.e., social interaction, identity seeking) were suggested. The Kaiser-Meyer-Olkin (KMO) value was 0.820, Bartlett’s test was significant at \( p < 0.001 \) and the total variance extracted by the factors was 78.93%. The factor loading scores of the items were 0.803 to 0.920. The Cronbach’s alpha score of the identity seeking was 0.924 and the score of the social interaction was 0.831.
Table 1
Demographic Profiles and SNS Use of Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>%</th>
<th>Most often used SNS</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>91</td>
<td>35.4</td>
<td>Instagram</td>
<td>131</td>
<td>51.0</td>
</tr>
<tr>
<td>Female</td>
<td>166</td>
<td>64.6</td>
<td>Facebook</td>
<td>117</td>
<td>45.5</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td>Blog</td>
<td>6</td>
<td>2.3</td>
</tr>
<tr>
<td>18-19</td>
<td>74</td>
<td>28.8</td>
<td>Kakaostory</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>20-21</td>
<td>65</td>
<td>25.3</td>
<td>Band</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>22-23</td>
<td>70</td>
<td>27.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24-25</td>
<td>40</td>
<td>15.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 and older</td>
<td>8</td>
<td>3.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Two factors were suggested for the narcissistic personality. Items to measure the leadership/authority and the entitlement/exploitative were merged into a single factor and in this study, this factor was named as the leadership/entitlement. The KMO value was 0.899, Bartlett’s test was significant at $p < 0.001$, and the total variance extracted by the factors was 58.00%. The factor loading scores were 0.507 to 0.812. The Cronbach’s alpha score for leadership/entitlement was 0.895 and for grandiose/exhibition was 0.800.

In terms of personal attachment to Instagram, the KMO value was 0.846, Bartlett’s test was significant at $p < 0.001$, and the total variance extracted by the factor was 64.81%. The factor loading scores were between 0.667 and 0.875. The Cronbach’s alpha score was 0.890. In terms of intention to post photos on Instagram, the KMO value was 0.674, Bartlett’s test was significant at $p < 0.001$, and the total variance extracted by the factor was 80.28%. The factor loading scores were 0.845 to 0.943. The Cronbach’s alpha score was 0.877.

Results

According to Table 3, the correlation coefficients between all pairs of factors were 0.676 or less. The variance inflation factor (VIF) values were less than 2.00 (VIF social interaction = 1.269, VIF identity seeking = 1.499, VIF leadership/entitlement = 1.699, and VIF grandiose/exhibition = 1.602). All these results show that multicollinearity was not an issue in our data set (Hair, Ringle, & Sastedt, 2011).

The results of the multiple regression analyses were presented in Table 4. In terms of personal attachment, the regression $F$ value of ANOVA was significant at $p < 0.001$ and the adjusted $R$-squared value was 0.467. The results indicated that identity seeking ($\beta = 0.422, p < 0.001$) and social interaction ($\beta = 0.238, p < 0.001$) were significantly positively associated with personal attachment to Instagram; therefore, H1 and H2 were supported. Grandiose/exhibition ($\beta = 0.246, p < 0.001$) was significantly positively associated with personal attachment to Instagram; however, leadership/entitlement was not significant. Therefore, H3 was partially supported.
<table>
<thead>
<tr>
<th>Factor</th>
<th>Items</th>
<th>Factor Loading</th>
<th>Eigenvalue</th>
<th>Variance (%)</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identity Seeking</strong></td>
<td>..because contents that I post on Instagram are part of who I am</td>
<td>.920</td>
<td>4.057</td>
<td>46.468</td>
<td>.924</td>
</tr>
<tr>
<td></td>
<td>..because contents that I post on Instagram remind me of who I am</td>
<td>.916</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>..because contents that I post on Instagram help me achieve the identity I want to have</td>
<td>.866</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>..because contents that I post on Instagram represent who I am</td>
<td>.815</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Interaction</strong></td>
<td>..to see visual updates of my friends</td>
<td>.900</td>
<td>1.466</td>
<td>32.458</td>
<td>.831</td>
</tr>
<tr>
<td></td>
<td>..to interact with my friends</td>
<td>.815</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>..to see what other people share</td>
<td>.803</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>KMO = 0.820; Bartlett’s $\chi^2 = 1286.033$; Total Variance = 78.927%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Narcissistic personality:</strong></td>
<td><strong>Leadership/Entitlement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am a born leader</td>
<td></td>
<td>.812</td>
<td>6.211</td>
<td>47.779</td>
<td>.895</td>
</tr>
<tr>
<td>I have a strong will for power</td>
<td></td>
<td>.806</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People always recognize my authority</td>
<td></td>
<td>.799</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I know I am a good person because people keep telling me so</td>
<td></td>
<td>.716</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find it easy to manipulate people</td>
<td></td>
<td>.658</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I expect a great deal from other people</td>
<td></td>
<td>.645</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like having authority over other people</td>
<td></td>
<td>.599</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually show off if I get the chance</td>
<td></td>
<td>.577</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I insist upon getting the respect that is due me</td>
<td></td>
<td>.545</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will never be satisfied until I get all that I deserve</td>
<td></td>
<td>.507</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grandiose/Exhibition</strong></td>
<td>I like to look at my body</td>
<td>.903</td>
<td>1.259</td>
<td>21.878</td>
<td>.800</td>
</tr>
<tr>
<td>I like to show off my body</td>
<td></td>
<td>.858</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like to look at myself in the mirror</td>
<td></td>
<td>.654</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KMO = 0.899; Bartlett’s $\chi^2 = 1765.482$; Total Variance = 57.996%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Personal Attachment</strong></td>
<td>Instagram has become part of my daily routine</td>
<td>.875</td>
<td>3.889</td>
<td>64.809</td>
<td>.890</td>
</tr>
<tr>
<td>I feel out of touch when I haven’t logged on Instagram for a while</td>
<td></td>
<td>.871</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel I am part of the Instagram community</td>
<td></td>
<td>.858</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am proud to tell people I am on Instagram</td>
<td></td>
<td>.780</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be sorry if Instagram shut down</td>
<td></td>
<td>.758</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instagram is part of my every day activity</td>
<td></td>
<td>.667</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KMO = 0.846; Bartlett’s $\chi^2 = 885.150$; Total Variance = 64.809%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intention</strong></td>
<td>I intend to keep using Instagram to post photos</td>
<td>.898</td>
<td>2.408</td>
<td>80.275</td>
<td>0.877</td>
</tr>
<tr>
<td>I intend to post photos on Instagram as part of my daily activities</td>
<td></td>
<td>.943</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to use Instagram in the future</td>
<td></td>
<td>.845</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KMO = 0.674; Bartlett’s $\chi^2 = 453.923$; Total Variance = 80.275%</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Table 3  
Results of Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>SI</th>
<th>IS</th>
<th>LE</th>
<th>GE</th>
<th>PEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Interaction (SI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity Seeking (IS)</td>
<td>0.440**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership/Entitlement (LE)</td>
<td>0.286**</td>
<td>0.464**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grandiose/Exhibition (GE)</td>
<td>0.304**</td>
<td>0.415**</td>
<td>0.584**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Attachment to Instagram (PEI)</td>
<td>0.479**</td>
<td>0.598**</td>
<td>0.342**</td>
<td>0.455**</td>
<td></td>
</tr>
<tr>
<td>Intention to Post Photos on Instagram</td>
<td>0.467**</td>
<td>0.671**</td>
<td>0.396**</td>
<td>0.390**</td>
<td>0.676**</td>
</tr>
</tbody>
</table>

Table 4  
Results of Multiple Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>Personal Attachment</th>
<th>Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>t</td>
</tr>
<tr>
<td>Social interaction</td>
<td>0.238</td>
<td>4.436***</td>
</tr>
<tr>
<td>Identity seeking</td>
<td>0.422</td>
<td>7.408***</td>
</tr>
<tr>
<td>Narcissistic personality: Leadership/Entitlement</td>
<td>-0.066</td>
<td>-1.092</td>
</tr>
<tr>
<td>Narcissistic personality: Grandiose/Exhibition</td>
<td>0.246</td>
<td>4.179***</td>
</tr>
</tbody>
</table>

Adjusted R² 0.467 0.497
ANOVA Regression F ratio 52.669*** 64.145***

Note: *p < 0.05; **p < 0.01; ***p < 0.001

In terms of intention, the regression F value of ANOVA was significant at p < 0.001 and the adjusted R-squared value was 0.497. Identity seeking (β = 0.503, p < 0.001) and social interaction (β = 0.256, p < 0.001) were significantly positively associated with intention to post photos on Instagram; therefore, H4 and H5 were supported. Grandiose/exhibition and leadership/entitlement were not significant. Therefore, H6 was not supported.

Discussion and Conclusion

This study examined social interaction, identity seeking, and narcissistic personality as antecedents of personal attachment to Instagram and intention to post photos on Instagram. Our study found that people who used Instagram for social interaction and identity seeking were more likely to have a higher level of personal attachment to Instagram and intend to post photos on Instagram. These findings were in line with previous studies that social interaction and identity seeking were key predictors of users’ personal attachment to Instagram and intention to post photos on Instagram (Alhabash & Ma, 2017; Andreassen et al., 2012; Cheng & Guo, 2015; Kim, 2011; Kim et al., 2016; Kuss & Griffiths, 2011; Lee et al., 2015; Wirtz et al., 2017).
The association between narcissistic personality and personal attachment to Instagram produced partially significant results. Our study results indicate that people who have the grandiose/exhibition traits are more likely to be attached to Instagram. It is assumed that Instagram can fulfill the narcissists’ needs for getting attention and admiration in front of an audience. This finding supports previous research that narcissism is a significant predictor of attachment to SNSs (O’Sullivan & Hussain, 2017).

There was no significant effect of narcissistic personality on the intention to post photos on Instagram. A possible reason for this outcome may be attributed to the culture of collectivism in the East Asian countries (e.g., South Korea). People in collectivistic cultures emphasize on social values whereas individualistic cultures place importance on the self (Vater, 2018). Studies in East Asian countries have reported low scores on narcissistic personality (e.g., Foster et al., 2014; Hepper et al., 2013). Another explanation for the results of narcissism may be attributed to social desirability. Social desirability is the tendency for participants to answer questions on personality traits in a manner considered acceptable by others (Edwards, 1957). Even though participants in this study were asked to answer survey questions as honestly as possible they may have answered questions on narcissistic personality due to social desirability.

In this study, the narcissistic personality was measured with focus on grandiose aspects of narcissism and not vulnerable narcissism. Vulnerable narcissism has received less attention from researchers compared to grandiose narcissism (Paramboukis et al., 2016). Vulnerable narcissism is associated with feelings of inadequacy, helplessness, emptiness, and shame (Pincus et al., 2014). Examining both grandiose and vulnerable narcissism would provide a better understanding of narcissists on Instagram and other SNSs. Future studies may focus on using the Pathological Narcissism Inventory which can offer comprehensive assessments of both grandiose and vulnerable narcissism (Pincus et al., 2014).

This study was based on the theory of the extended self to explain Instagram users’ personal attachment and intention to post photos on Instagram. First, our study findings provide empirical support for self-extension on Instagram via social interaction and Identity seeking. The study offers insight on Instagram as a platform to share experiences and an outlet for self-extension (Belk, 2013). The study confirms that sharing and collaborative consumption of photos is a key feature of social relationships in the digital realm (Belk, 2013). Second, the present study adds to the body of empirical research related to site attachment. In line with budding but limited research on SNSs attachment (e.g., Jun & Noh, 2015; Kim et al., 2016), the study confirms the existing relationship between social interaction, identity seeking, and personal attachment. The study findings also shed light on social interaction and identity seeking as important antecedents of intention to post photos, which contribute to studies, on behavioral intentions in the SNSs context. This study represents one of the few attempts to verify the link between narcissism and attachment. The study provided empirical support for an existing relationship between grandiose/exhibition and personal attachment to Instagram.

This research has useful implications for marketers by providing meaningful insights into understanding the important role of consumers in the online market place. Personal attachment to
Instagram can translate to greater loyalty to the site (Wirtz et al., 2017). People who are attached to SNSs will be more open to personalized advertising because of the strength of involvement. Managers should focus their advertising efforts on social networks that generate the highest attachment. Understanding the specific motives and needs are pivotal to users’ personal attachment to Instagram and other similar SNSs. Firms must offer consumers experiences in an environment where they can reinforce self-image which will lead them to share their experience on SNSs. This offers firms free publicity. The practice of posting photos is an important mode for sharing information. This means firms can use photos to promote their brands on SNSs. Firms can solicit users with more social influence on SNSs for product placement and promotion about goods, tourism destinations, social events, and activities. It is important for firms to improve relationships with consumers who consume experiences because they can share ideas, interest, identity, and lifestyle through the content they post. This will not only be helpful to companies but will also enhance the referral mechanism of electronic word of mouth on SNSs. For instance, through social interaction on SNSs users can recommend their experiences to others by posting photos. Finally, SNS organizations can further improve user interface technologies by introducing advanced customization services and interactive photo-sharing applications to facilitate sharing on SNSs (Lallmahomed et al., 2013).

This study had the following limitations. First, the study sample is college students in South Korea and thus the study results are not a representative of the general population. Research would have to be conducted to establish if the findings from this study could be generalized to the population. Second, the measurement items were originally developed in English and translated into Korean. There may have been discrepancies in respondents understanding of the survey questions. Also with regards to the useable data, some participants did not indicate their gender resulting in data size discrepancies. Future studies should focus on Instagram users from other countries and a cross-cultural study will also offer a different perspective on the subject. Future research should also focus on behavioral outcomes such as the amount of Instagram usage, frequency of posting hashtags and selfies, and the amount of time spent editing photos.
References


Huang, Y. T., & Su, S. F. (2018). Motives for Instagram use and topics of interest among young adults. *Future Internet, 10*(8), 1-12.


