Narcissism and Social Media Usage: Is There No Longer a Relationship?

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In previous studies, narcissism has been found to relate to social media behaviors, such as how often one posts and how many friends or followers one has (McCain & Campbell, 2016; Singh, Farley, and Donahue, 2018). The present study attempted to create a model of social media use predicted by narcissism and self-consciousness. A sample of 397 adults with a mean age of 29 years was collected using MTurk. Participants completed a social media use survey, the Narcissistic Personality Inventory (Raskin & Hall, 1979) and the Self-Consciousness Scale (Scheier & Carver, 1985). Results showed that while narcissism and self-consciousness were correlated, narcissism was not significantly related to social media use. Several explanations for the present study's findings are discussed.

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In recent years, the use of social media (SM) has become an increasingly popular daily activity worldwide (Kuss & Griffiths, 2011). Pew Research Center (2018) reported that 69% of people in the United States use social media, and the most active group in social media is 18 to 29-year olds. Facebook is the most popular social networking site (SNS); about two-thirds of U.S. adults (68%) now report that they are Facebook users, and roughly three-quarters of those users access Facebook daily.

Use of social media brings with it an enhanced focus on oneself and one's connections with others. Narcissism is the fascination with oneself, and narcissists generally believe that they are unique and special, inflate praise of themselves, and think they are better than others (Leung, 2013). Although there are at least two forms of narcissism, grandiose narcissism is the form that is most commonly referred to, and is a self-aggrandizing and public focus on, and concern for, oneself to the exclusion of others (Raskin & Terry, 1988). Grandiose narcissism can include attributes such as a sense of superiority, exhibitionism, a sense of entitlement and personal vanity. Researchers have argued that SNS's are attractive to those high in grandiose narcissism, because they consist of a large network of shallow, impersonal relationships and give narcissists autonomy over how they choose to present themselves, often in self-enhancing ways (Buffardi & Campbell, 2008). McCain and Campbell (2016) reported that higher levels of narcissism have been related to higher frequency of social media posts, time spent on social media, and number of friends one has on social media. Self-consciousness, the awareness of how one is perceived publicly or privately, has also been linked to social media use and correlated with number of photograph postings on SNS (Shim, Lee, & Park, 2008). In the present study, the researchers examine the relationship between SM usage and the psychological constructs of narcissism, (focusing on the grandiose style) and self-consciousness.

Narcissism and Social Media

In 2016, McCain and Campbell conducted a meta-analytic review examining the relationship between social media use and grandiose narcissism. They included 62 studies with over 14,000 participants and found a robust relationship between narcissism and social media behaviors. More specifically, they found that narcissism was related to greater number of postings on social media, more time spent on special media and having more friends/followers on social media. In terms of postings, McCain and Campbell found the relationship included posting more updates, as well as selfies.

A "selfie" refers to a self-portrait photo that one takes of oneself. Selfies increased exponentially with the popularity of using smart phones and SNS (Day, 2013). Singh, Farley, and Donahue (2018) examined the relationship between dimensions of narcissism, which included grandiose exhibitionism, entitlement and global narcissism, and selfie posting frequency, as well as other self-promoting behaviors on Facebook, Twitter, and Instagram. Global narcissism is a composite narcissism score created by summing the subscales of the Narcissistic Personality Inventory, a measure of grandiose narcissism (Raskin & Hall, 1979). According to their online survey of 124 participants, Donahue et al. found that there was a significant correlation between global narcissism and numerous social media behaviors, including perceived attractiveness of selfies, frequency of selfie posting, and number of likes. Furthermore, exhibitionism was strongly and positively correlated with selfie posting

frequency, number of friends on Facebook, Facebook status updates and Twitter postings. The researchers suggested a longitudinal study to understand the co-occurring development of narcissistic traits and SNS behaviors over time.

Status updates are one of the most preferred features on SNS. Social media users share their thoughts, feelings, and activities with friends through status updates. In Marshall, Lefringhausen, and Ferenczi's (2015) study, 555 Facebook users completed measures of the Big Five personality traits, self-esteem, global narcissism, motives for using Facebook, and frequency of updating. Their findings revealed that those higher in global narcissism post more updates focusing on their accomplishments and their diet and exercise routines in order to gain attention and validation. They also found that narcissists' tendencies to frequently update their accomplishments explained the greater number of likes and comments that they reported receiving to their updates (Marshall et al., 2015).

Leung (2013) examined the types of individual gratification sought when users develop and post content for social media, and explored generational differences in motivation and in narcissism when predicting usage of Facebook, blogs, and forums. Using a factor analytic technique, Leung found that social media users are motivated to meet five types of needs when they post: social and affection needs, the need to vent negative feelings, the need to be recognized, entertainment needs, and cognitive needs to enhance knowledge. In order to examine the relationship between narcissism and the five gratification needs, Leung used a 20-item Narcissism Scale created using items from the Narcissistic Personality Inventory that he then validated. The four dimensions of narcissism that he found were superiority, exhibitionism, exploitativeness and vanity — all components of grandiose narcissism. Results of the project showed that users with high exhibitionism used social media to show affection, express negative feelings, and achieve recognition. Those with higher levels of superiority had a high need to enhance knowledge. A high level of vanity was correlated positively with superiority, but negatively with venting feelings. Interestingly, Leung also found that Baby Boomers who had high levels of vanity and exploitativeness were more likely to use a variety of social media practices (posting, forums, etc.) in order to exploit or manipulate others. These relationships and practices were not found in younger social media users. (Leung, 2013).

Like Leung's (2013) work, Andreassen, Pallesen, and Griffiths (2017) found that narcissism may be associated with negative personal outcomes. Andreassen et al. examined the associations between addictive use of social media, narcissism, and self-esteem in Norway using a web-based survey. The findings from the 23,500 survey responses showed that addictive use of social media was positively and significantly correlated with grandiose narcissism. A positive and significant correlation was also found between narcissism and self-esteem.

Deters, Mehl, and Eid (2014) extended knowledge in the field by not only studying direct ties between narcissism and social media use, but by asking social media users what kind of posting patterns they thought narcissists would exhibit. In the first part of the Deters et al. study, the researchers administered an online questionnaire, and the participants were asked whether they believed that a narcissistic individual would post fewer, just as many, or more status updates than someone who was less narcissistic. Eighty-two percent of the participants believed that narcissists would have more status updating activity; the results confirmed that actual users of social media expect a strong association between narcissism and high status-updating activity. In the second part of the study, the participants were

asked to complete questionnaires measuring self-esteem, self-reported grandiose narcissism, Facebook use, and attitudes towards Facebook. Interestingly, and in contradiction to other studies, self-reported narcissism did not emerge as a significant predictor of status updating activity, when self-esteem was included as an additional predictor in a regression analysis (Deters et al., 2014). This finding would indicate that other personality variables may mediate, moderate, or somehow influence the direct relationship between narcissism and social media use.

To date, most existing studies found positive relationships between grandiose forms of narcissism and self-reported SM activities. The evidence showing a relationship is persuasive, especially considering the meta-analytic study conducted by McCain and Campbell (2016). However, not all studies found a relationship between narcissism and social media use. Deters et al. failed to find a relationship between self-reported grandiose narcissism and social media posting, when another personality variable, self-esteem, was included in a predictive analysis. In general, researchers called for more empirical evidence investigating how narcissism relates to use of social media, and clarification on other variables that may influence that relationship. This inspired the present study to examine the combined contribution of narcissism and self-consciousness on social media usage behaviors.

Self-consciousness and Social Media

Self-consciousness is a personality variable relevant to understanding self-presentation behaviors in SNS use (Shim, Lee, & Park, 2008). There are two types of self-consciousness (SC): private vs. public (Scheier & Carver, 1985). Private self-consciousness is a self-relevant awareness, introspection, and tendency to examine one's inner self and feelings. In contrast, public self-consciousness is an awareness of the self as it is viewed by others. As might be assumed, individuals with high public self-consciousness are not only aware of how others view them, they are concerned about how others view them. Those with high private self-consciousness tend to be more concerned about their own inner states and feelings and use those impressions to influence their behaviors, whereas concern over other people's perceptions of self would motivate behavior in those with high public self-consciousness.

In an early study linking self-consciousness to online behaviors in college students, Goutlet (2002) studied the relationship between Internet use and dependency and how those behaviors relate to both public and private self-consciousness across two time periods. While Goutlet initially hypothesized that Internet use and dependency would be positively related only to public self-consciousness, she initially found that private self-consciousness at time 2 was predicted by Internet use and dependency levels. However, when extreme outliers in private SC score were removed from the analysis, the relationship went away. Goutlet did find, however that only time 1 levels of public SC predicted later levels of public SC, and that public SC at time 2 was not predicted by Internet use or dependency.

A literature search revealed only two other studies relating self-consciousness to social media use. Lee, Moore, Park, and Park (2012) conducted research on social compensatory friending on SNS by investigating the effects of self-esteem and self-consciousness on number of friends on Facebook. The results did not reveal a significant association between private SC and number of Facebook friends. In contrast, public SC showed a significant

positive association with number of Facebook friends. These findings were consistent with what Shim et al. (2008) demonstrated in their research on photograph posting in the context of SNS use. Shim et al. found only public SC was a significant positive predictor for photograph posting, and private SC did not have a significant effect on the frequency of photo posting.

From the limited work examining self-consciousness and social media use, what can be concluded? Work by Shim et al. (2008) and Lee et al. (2012) found that public self-consciousness influenced social media behavior, while Goutlet (2002) found no relationship. As it relates to the present study, it can be argued that the two later works are more in line with behavior related specifically to social media, while Goutlet examined general amount of Internet use, rather than focusing on social media. In fact, Facebook, the most used social media application, was not even launched until 2004 (Carlson, 2010), so Internet-based, social media use only developed and flourished after this time.

In the present study, it is hypothesized that one's type of self-consciousness, may play a mediating role in the relationship between social media use and narcissism. While no other study has specifically examined this hypothesis, it is rational and consistent with theory. Social media use using SNS focuses on developing and fostering relationships with others, while portraying oneself in a socially desirable manner (Kuss & Griffith, 2011). Kuss and Griffith describe social media use as egocentric, in that is very much about how a user presents the self in order to gain friends or status. The egocentric nature of social media use would likely appeal to those with narcissistic qualities, and this is supported by research (McCain & Campbell, 2016).

In contrast, self-consciousness relates to social media use in different ways. High public self-consciousness does seem to relate to social media use, as indicated by Lee et al. (2012) and Shim et al. (2012), while private self-consciousness was unrelated to social media use. It is possible that when examined in conjunction with narcissism type of self-consciousness mediates the relationship between narcissism and social media use. Higher levels of private self-conscious, regardless of narcissism level, may lead to lower use of social media or a tendency to use social media but not post to sites, because behavior is more driven by inner needs and states and not by concern over what others are thinking or feeling about oneself. On the other hand, public self-consciousness may lead to greater social media usage, as well as postings, due to concern over and a desire to know what others think of oneself. The present study will examine the relationships between narcissism, self-consciousness and social media use, as well as explore whether type of self-consciousness may mediate the relationship between narcissism and social media use.

The Present Study

Earlier work has revealed a fairly consistent positive association between narcissism and use of social media. At the same time, only a single study (Deter et al., 2014) failed to find the expected relationship between narcissism and social networking. Likewise, limited research has linked self-consciousness to social media use. In present study, the researchers investigated how narcissism is linked with SM activities, in addition, to examining how narcissism and self-consciousness together correlate with and predict SM usage.

To address the area of inquiry, a survey was created that assessed self-reported narcissism using the Narcissistic Personality Inventory (Raskin & Hall, 1979), public self-

consciousness and private self-consciousness using the Self-Consciousness Scale (Scheier & Carver, 1985), and participants' social media (Facebook, Snapchat, and Instagram) activities. Three hypotheses were tested in the study: Hypothesis 1: Narcissism and Public SC will be positively correlated with number of SM postings and number of friends on SM; Private SC will be uncorrelated with SM postings or number of friends. Hypothesis 2: Narcissism and Public SC will predict a significant amount of variance in SM postings and number of SM friends. Hypothesis 3: Public SC will mediate the predictive relationship between narcissism and SM postings and number of SM friends.

Method

Participants

A survey was posted online on Amazon MTurk and opened to participants over 18 years old. There were 397 participants (236 female, 158 male, and 3 unknown) included in this study. Mean age of the participants was 29.44 years, and the self-reported, mean years of social media use was 9.5 years.

Measures

Demographic Survey. Participants completed a demographic survey developed for the present study. Demographic items included: age, gender, education level, and years of social media use.

Social Media Usage Survey. Participants completed a self-report, Social Media Usage Survey developed for the present study. Self-report survey items included: number of postings per week on Facebook, Snapchat, and Instagram and numbers of Friends (followers) on Facebook, Snapchat, and Instagram.

Narcissistic Personality Inventory (Raskin & Hall, 1979). The Narcissistic Personality Inventory (NPI) was used to assess participants' levels of narcissism. The questionnaire contains 40 items measuring one's narcissism-related personality characteristics. It includes 7 subscales: Authority, Self Sufficiency, Superiority, Exhibitionism, Exploitativeness, Vanity, and Entitlement. Each item is a pair of self-descriptive statements, and the participants were asked to choose the closer statement to their own feelings about themselves. To score the NPI, one point is assigned for each response that matches the key; the points of all items on the same dimension should be added together to obtain subscale scores for each respondent, and the composite score of NPI is obtained by summing the subscale scores together. In the present study we chose to use the composite narcissism score for analyses, which is consistent with the construct of grandiose narcissism. In Raskin and Terry (1988), alpha composite reliability scores of .83, .74, .80, and .90 were found for overall narcissism using the Narcissistic Personality Inventory. The Cronbach alpha for overall narcissism was .86 in the present study.

Self-Consciousness Scale (Scheier & Carver, 1985). This questionnaire is comprised of 22 items measuring public self-consciousness, private self-consciousness and social anxiety. Each item measures one aspect of self-consciousness. The items are responded to on a 4- point Likert scale from 0 (not like me at all) to 3 (a lot like me). To score the Self-Consciousness Scale, points of items on the same dimension should be summed to obtain subscale scores. According to the Measurement Instrument Database for the Social

Sciences (2018), the Cronbach alpha for private self-consciousness was found to be .75, for public self-consciousness it was .84, and for social anxiety .79. The present study only utilized the public and private subscales of the Self-Consciousness Scale. In the present study, the Cronbach alpha for private self-consciousness was found to be .68, and for public self-consciousness it was 0.80.

Procedure

After signing a consent form online, each participant was asked to complete the measures mentioned above using MTurk. After the survey was closed, the resulting data was reviewed to ensure that it appeared to be consistent with what would be expected from a survey done in a face to face manner and not using 'bots'. Data that identifiable pattern responses (e.g. the same response for all items or a pattern (1,2,3,4) repeated continuously) and incomplete data was removed from the final analysis. This resulted in 397 surveys being included in the final analysis. Microsoft Office Excel and IBM SPSS were used for data sorting and statistical analysis.

Results

Pearson Correlation Coefficient tests among NPI score, public self-consciousness score, private self-consciousness score, and social media weekly posting and numbers of friends on Facebook, Snapchat, & Instagram were performed to address Hypothesis 1, and the alpha level was set at .05. The results were shown in Table 1.

The only significant correlations were found between narcissism, private self-consciousness, public self-consciousness and number of friends (followers) on Instagram. Therefore, this analysis does not support H_1.

Hypothesis 2 proposed a significant relationship between narcissism and public self-consciousness. This hypothesis provides a second necessary basis for conducting Hypothesis 3, the proposed mediational model that would test the relationship between self-consciousness, narcissism and social media usage. These results indicate a positive and significant relationship between narcissism and both public and private self-consciousness. Correlations between narcissism and self-consciousness variables are presented in Table 2.

Table 1. *Correlation testing results*

		Average posting per week on FB	Average posting per week on Instagram	Average posting per week on Snapchat	Number of friends and followers on FB	Number of friends and followers on Instagram	Number of friends and followers on Snapchat
NPI	Pearson- Correlation	.060	.037	.102	.083	.139	.077
	Sig.(2-tailed)	.266	.543	.124	.100	.005	.259
Private SC	Pearson- Correlation	.031	.018	-.060	.067	.111	-.004
	Sig.(2-tailed)	.563	.770	.363	.183	.027	.953
Public SC	Pearson-Correlation	.024	.104	.037	.078	.102	.074
	Sig.(2-tailed)	.651	.089	.574	.120	.042	.275

Table 2. *Correlation between narcissism and self-consciousness variables*

		NPI	Private SC	Public SC
NPI	Pearson-Correlation	1	.202	.128
	Sig.(2-tailed)		.001	.011
Private SC	Pearson- Correlation	.202	1	.576
	Sig.(2-tailed)	.001		.001
Public SC	Pearson- Correlation	.128	.576	1
	Sig.(2-tailed)	.011	.001	

In order to conduct a mediational model (Hypothesis 3), all variables in the model should be significantly correlated with one another (Baron & Kenny, 1987). As the results showed, although narcissism and the self-consciousness variables were correlated, narcissism was not correlated with social media usage. Thus, one of the necessary assumptions for testing a mediational model was violated. As a result, hypotheses 3 could not be tested and was not supported.

Discussion

In the present study, the researchers attempted to verify support for the relationship between narcissism and social media use, as well as test a mediational model extending current knowledge by adding self-consciousness as a variable in understanding social media use. However, contrary to the majority of previous research, results of the present study revealed no significant relationship among narcissism, number of SM postings, and number of SM friends. The researchers generated four possible explanations for this result, two of which were able to be tested and eliminated as accurate.

First, SM activities were measured in the present study by self-reported number of weekly postings for 3 of the most popular SM platforms and number of friends on those same SM platforms, which although in alignment with past studies, may not be truly representative of SM usage.

Second, it was proposed that perhaps the sample size of the present study may not be large enough to represent the true relationship among narcissism, self-consciousness, and usage of SM. A power analysis using GPower 3.1.9.2 was done to see if this second explanation could be supported. With setting of an alpha = .05, power = 0.5, the projected sample size needed with this effect size of 0.1 is approximately $N = 270$. Thus, we could reasonably eliminate this explanation by comparing the needed sample size of 270 with the sample size of 397 in the study.

Third, it was proposed that perhaps the present sample of participants were older in age than the participants in previous studies and that the relationship between narcissism and SM use changes with age. A Pearson correlation coefficient was computed to assess the relationship between Age ($M = 29.44$, $SD = 11.99$) and NPI ($M = 14.50$, $SD = 7.29$). This analysis found a significant negative correlation between age and NPI score, such that as age increases, level of narcissism decreases ($r(397) = -.279$, $p < .01$). Since previous studies linking narcissism to social media use often used college-aged populations, while the present study had a population with a mean age of 29 years, this explanation may be plausible.

Last, the lack of statistically significant results may due to the fact that use of SM has become so widespread that the behaviors once considered overly self-focused are now normal, such that narcissists' SM behavior no longer stand outs as different from anyone

else's behavior. In order to explore this explanation more thoroughly, we first examined the mean narcissism scores found in the present study with means reported from earlier studies. The mean NPI in our sample was 14.5, which is relatively lower than the average score for the general population, 15.3 (Pinsky & Young, 2009). To explore this idea a bit further, using the sample from the present study, we created two narcissism groups, high and low. Those with overall narcissism scores one standard deviation or more above the sample mean were placed in the high group, while those falling one standard deviation or below were placed in the low narcissism group. Using this grouping variable, we then conducted a *t*-test to determine if there were mean differences on combined number of posting on Facebook, Instagram and Snapchat. Results of the t-test found no group differences on number of postings ($t(2,142) = .25$, $p = .80$). The results of this analysis are entirely exploratory in nature, and while not conclusive, they are intriguing. In future studies, it could be valuable to investigate the argument that social media use has morphed over time, possibly lessening usage differences between those with higher levels of narcissism and those with lower levels of narcissism.

The question of the relationship between SM use and narcissism is still one that is not completely understood. Is narcissism no longer related to social media use due to behavioral changes in the population sampled, or did the present study just fail to find the effect due to deficiencies in measurement? It is recommended that future studies continue to measure the variables of interest to determine if behavior change as an explanation could be supported. In addition, broadening the way in which social media usage behaviors are measured would also help to clarify the relationship between narcissism and social media use. Even though the present study raises more questions about the relationship between narcissism and social media usage, Deters et al. found that social media users believe that relationship to be present. It is important then to continue to study and understand how and which personality dynamics drive social media behaviors, understanding that as type of social media outlets evolve, studies will need to be replicated in emerging environments. Results should also be disseminated to the public in a thoughtful and accurate manner, as a majority of people are users of some form of social media.

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