

# The effect of social media use on narcissistic behavior

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## Abstract

Social media use has grown exponentially in recent years, especially amongst adolescents and young adults (Pew Research Center, 2014). Several studies have shown that social networking does indeed have an effect on self-esteem. This study posited that those who use social media more often are more likely to exhibit narcissistic behavior. The author conducted a survey of 100 students from a private, Midwestern university. The results indicated that time spent on social media does indeed increase narcissistic behavior.

*Keywords:* social media, narcissism, self-esteem

For many people, social media is an integral part of their daily entertainment and connection to others. The invention of smartphones and tablets has allowed Internet users to have access to their social networks in almost any location. Several statistics reveal the enormous numbers of people who are active on social media:

- As of January 2014, 74% of adults who use the Internet use social media websites (Pew Research Center, 2014).
- Online adults aged 18-29 are the most active age group with 89% using social networking sites (Pew Research Center, 2014).
- 71% of adults who use the Internet are members of Facebook (Pew Research Center, 2014).
- 40% of cell phone users access a social networking site on their phone (Pew Research Center, 2014).
- Facebook has 1.23 billion monthly active users (Sedghi, 2014).

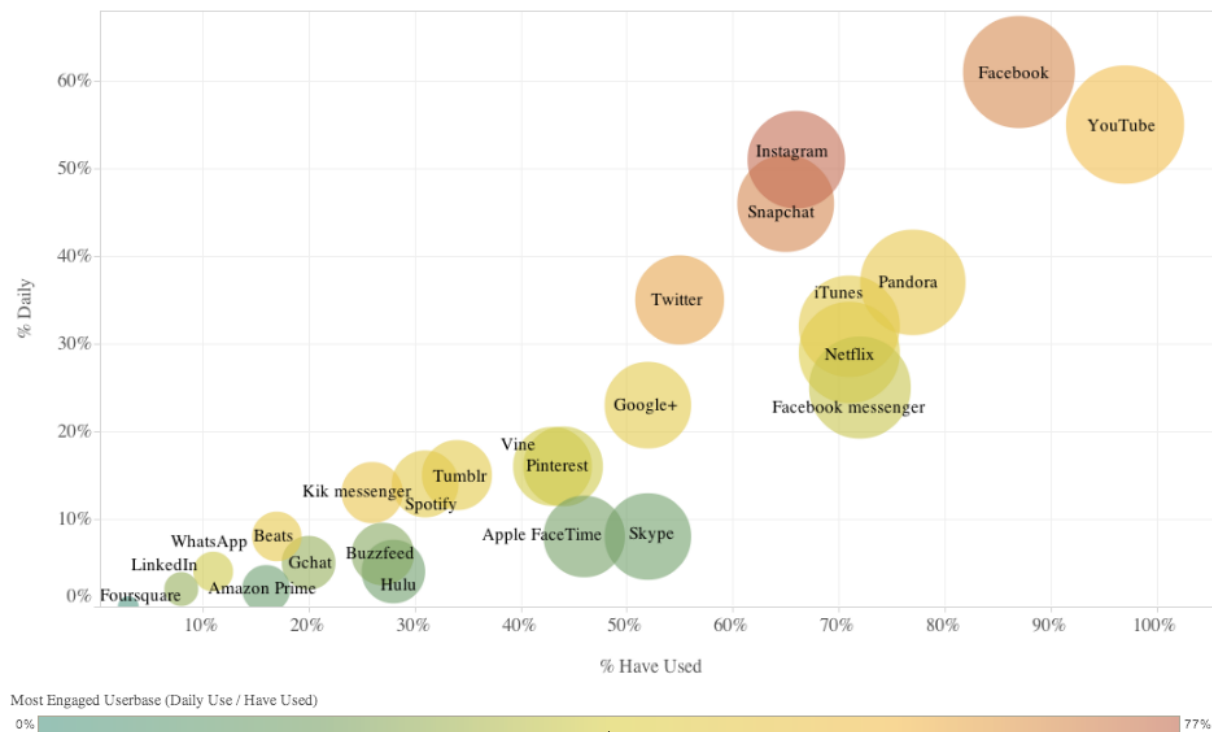
Because social media is so prevalent, psychologists are often interested in how this relatively new form of interaction affects psychological and emotional elements such as self-esteem. First, it is helpful to define the terms “social media” or “social networking,” to define elements of narcissism, and to describe the interaction between the former and the latter.

### **Definitions of Social Media/Networking**

Social networking sites can be defined as “...web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (Boyd & Ellison, 2007, p. 212). Social network sites generally have people create a profile and interact with others, typically friends that one already

knows outside of the Internet. The earliest social network sites were launched in the late 1990s, but these types of sites did not become a worldwide phenomenon until around 2003 with the launch of sites like Friendster and MySpace (Boyd & Ellison, 2007). More recently, social media sites have evolved from simple profile creation and interaction to means of “micro-blogging” – Twitter has 145 million users that send 90 million tweets per day (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). With 1.23 billion monthly users, Facebook certainly reigns as the most popular site worldwide (Sedghi, 2014).

Because social media is used as a general term to describe any site or smartphone application that allows its users to interact with others, the actual types of social networking sites are quite varied. Young adults are the most frequent users of such sites, and their activity is spread amongst several sites:



Source: *The Atlantic*, 2014

## Definition of Narcissism

The term “narcissism” has its origins in the Greek myth of Narcissus, a man who refused all lovers and was cursed by the gods to fall in love with his own reflection (Konrath, 2007). Narcissism as a psychological affliction has its roots in Freudian psychoanalysis, though the evolution of the condition has led to the inclusion of narcissistic personality disorder in the DSM (Konrath, 2007). The DSM-5 criteria for diagnosis of narcissistic personality disorder requires significant impairment in personality and interpersonal functioning as well as several pathological traits that indicate that the subject is grandiose, superficial, and attention-seeking (American Psychological Association, 2014). Persons who exhibit some elements of any of the three criteria can be said to be experiencing narcissistic behavior without meeting all of the requirements for a personality disorder (Skodol, Bender, & Morey, 2014).

Narcissistic personality disorder has two subtypes: vulnerable and grandiose. Grandiose narcissists typically experience more dramatic traits that are similar to histrionic personality disorder and they do not report much interpersonal distress (Dickinson & Pincus, 2003). Vulnerable narcissists, however, rate more highly on traits related to avoidant personality disorder, and they often experience more interpersonal distress due to their vindictive behavior (Dickinson & Pincus, 2003).

### **Developmental Theories of Narcissism**

Narcissistic personality disorder is not well-understood, and its etiology is still largely a matter of speculation. Some psychologists theorize that the condition stems from childhood developmental factors (Groopman & Cooper, 2006). Children who were overindulged by parents, given too much admiration without criticism, or abused emotionally have been found to be more likely to experience narcissistic behavior (Groopman & Cooper, 2006). The *dynamic self-regulatory processing model* postulates that people with narcissism use an ongoing process

instead of simply possessing an unchanging condition; their personality functions around maintaining and enhancing their grandiose sense of self-worth (Thomas, Bushman, Castro, and Stegge, 2009). Their actions and self-perceptions on both an interpersonal and intrapersonal level are actively created to perpetuate their maladaptive condition (Thomas, Bushman, Castro, and Stegge, 2009). Narcissistic personality disorder has also been conceptualized as an inherent need for validation that turns into pathological thoughts and behaviors (Wright, 2014).

### **Measurement of Narcissism**

Researchers have created and validated several published measures of narcissism. The first measure to accurately study narcissistic behavior was the Narcissistic Personality Inventory that was released in the 1970s (Emmons, 1987). Many of the most commonly used tests are self-report measures, such as the Five-Factor Narcissism Inventory (FFNI), the Pathological Narcissism Inventory (PNI), Narcissistic Personality Inventory (NPI), and the Hypersensitive Narcissism Scale (HSNS); some of them focus more on grandiose traits while others focus on vulnerable traits (Miller, McCain, Lynam, Few, Gentile, MacKillop, & Campbell, 2014). The Hypersensitive Narcissism Scale has been found to be one of the most accurate measures of vulnerable narcissism (Miller et al., 2014).

### **Increases in Narcissism**

Narcissistic personality disorder is actually a relatively prevalent condition with one study finding that 1.2% of females and 0.7% of males meet the criteria which is quite high for a personality disorder (Paris, 2014). Even since the 1970s, some psychologists have argued that “modern” culture continually increases levels of narcissism (Emmons, 1987). Many psychologists argue that modern cultural factors have increased the prevalence of narcissistic personality disorder. One study found that college students in 2009 had higher scores on the

Narcissistic Personality Inventory than students from 30 years prior (Paris, 2014). Several studies have shown that teenagers and middle school students have much higher self-esteem and career aspirations than members of their age group in the past few decades (Twenge, Miller, & Campbell, 2014). A search of Google Books found that first-person singular pronouns have been more commonly used in recent years (Twenge, Miller, & Campbell, 2014). These results seem indicative of a modern cultural epidemic called “expressive individualism” that encourages persons to emphasize their own emotions and expressions instead of a general social structure (Paris, 2014). Social media could definitely be a contributing factor of the modern self-absorbed culture.

### **Effect of Social Media on Self-esteem**

Social media has been shown to have significant effects on the self-esteem of its users. Psychologists have extensively studied the need to belong, and some postulate that social media provides a convenient way to fit in with others (Gangadharbatla, 2008). Belonging to a group encourages the development of collective self-esteem which is described by social psychologists as the “...aspect of the individuals' self-concept which derives from their knowledge of their membership in a social group together with the value and emotional significance attached to that membership” (Gangadharbatla, 2008, p. 8). In that respect, social media use could arguably increase self-esteem levels.

However, several studies have shown that social media uses increases narcissism and negatively affects self-esteem. Certain traits have been found to be correlated with social media use including extraversion and unconscientiousness; these traits are often connected to narcissistic behavior (Wilson, Fornasier, & White, 2010; Ong, Ang, Ho, Lim, Goh, Lee, & Chua, 2011). In one study, researchers found that narcissism was the highest predictor of social media

activity out of all of the factors studied which indicates that narcissistic behavior and social media use are strongly correlated (Buffardi & Campbell, 2008). In another study using undergraduate participants, those with higher levels of narcissism were more active on social media (Mehdizadeh, 2010). Narcissists tend to prefer shallow relationships, and social media provides a method of obtaining hundreds or thousands of superficial “friends.” In addition, social media profiles allow the user to create an inflated, grandiose self-image that aligns with a narcissistic viewpoint (Buffardi & Campbell, 2008).

### **Self-comparisons**

Another factor of interaction with others is the inherent need to compare oneself to one’s peers. Self-comparisons are helpful in many daily tasks including dealing with emotions, making decisions, and receiving ideas from others (Vogel, Rose, Roberts, & Eckles, 2014). Social comparisons are either upward or downward; in the former case, a person compares him/herself to others whom they perceive as superior, and in the latter case, a person compares him/herself to others who they perceive as inferior (Vogel et al., 2014). Social media widens the circle of social comparison – instead of comparing oneself to those physically near, one can compare oneself to people from around the globe. In addition, self-comparisons become even more troubling because social media often promotes self-image inflation and distortion in order to impress other users of social media. In a study where subjects were exposed to profiles designed to facilitate upward social comparisons, subjects were found to have lower self-esteem (Vogel et al., 2014).

### **Hypothesis**

In the past decade, social media has increased its presence and importance in the lives of many Internet users, especially young adults and adolescents. People can use social media to

create a profile, keep in touch with peers, and even meet new people. Although social media can increase feelings of community, it has also been shown to negatively affect self-esteem and increase narcissistic behavior (Buffardi & Campbell, 2008; Mehdizadeh, 2010). This paper will present the hypothesis that increased social media use leads to higher levels of narcissistic behavior in undergraduate students at a private, midwestern university.

## **Method**

### **Participants**

Ninety-nine undergraduates from a private, midwestern university participated in the study. Their mean age was 19.82 years with a range of 18 to 25 years old. Thirty-two (32%) participants identified as female while 66 (67%) identified as male.

### **Materials**

The survey consisted of two parts – the first part contained questions assessing how much time the subject spends on the Internet, how many social media sites they use from a given list (Facebook, Twitter, Instagram, Pinterest, Tumblr, YikYak, Snapchat, LinkedIn, Google+, and Other), and how much time they spend on social media. Participants also provided their age and gender.

The second portion of the survey was the Hypersensitive Narcissism Scale (HSNS) which contains ten questions. This measure was created by Hendin and Cheek in 1997 by combining Murray's narcissism scale with components of the Minnesota Multiphasic Personality Inventory (MMPI) (Hendin & Creek, 1997). The HSNS was designed to measure covert narcissism as opposed to the overt narcissism measured by tests like the Narcissistic Personality Inventory (Hendin & Creek, 1997). Each of the ten questions is a statement, and the participant rates the



extent to which they agree with the statement on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree).

## **Procedure**

The surveys were administered in classrooms and public locations on the campus of a private, midwestern university. Subjects were asked if they would like to take a survey about social media use that would contribute to the researcher's thesis project. If they agreed to take the survey, they signed an informed consent agreement and were given the survey to complete. After finishing the survey, they were debriefed about the research hypothesis.

## **Results**

In order to test the hypothesis that more time spent on social media causes higher HSNS scores, a one-way analysis of variance was performed. Results indicated that there was a significant link between social media use and HSNS score (less than one hour,  $M = 28.35$ ,  $SD = 5.04$ ; one to two hours,  $M = 26.14$ ,  $SD = 5.05$ ; two to three hours,  $M = 26.82$ ,  $SD = 4.97$ ; more than three hours,  $M = 30.17$ ,  $SD = 5.38$ ;  $F(3, 95) = 2.70$ ,  $p = .05$ ).

In order to test the hypothesis that using a higher number of social media sites/applications causes higher HSNS scores, a Pearson's bivariate correlation was performed between number of social media sites/applications used and HSNS scores. The results indicated no significant correlation between number of social media sites/applications ( $M = 4.47$ ,  $SD = 1.81$ ) and HSNS score ( $M = 27.55$ ,  $SD = 5.21$ ;  $r(96) = .153$ ,  $p = .066$ ).

In order to examine whether gender affected HSNS score, an independent samples t-test was performed. The analysis indicated that there was no significant difference between male ( $M = 26.84$ ,  $SD = 4.36$ ) and female ( $M = 27.88$ ,  $SD = 5.61$ ) scores,  $t(103) = -.916$ ,  $p = .362$ .

## Discussion

The hypothesis of this study was that increased social media use (i.e. time spent on social media and number of social media sites/applications used) would be associated with higher HSNS scores. The results showed that this hypothesis was partially correct. Time spent on social media was significantly associated with higher HSNS scores ( $p = .050$ ). However, the number of social media sites/applications used was not shown to be significantly correlated with HSNS score ( $r = .153, p = .066$ ). It appears as though social media may be correlated in some way with narcissistic traits, but perhaps not in a particularly strong manner.

One possible issue with the study was the ratio of female to male participants which was approximately 2:1. The study may have been more accurate if the gender ration had been closer to 1:1. In addition, several participants seemed to misunderstand the questions on the survey which could have affected the results; for instance, some participants indicated that they spent less time on the Internet than on social media, and this answer does not make sense as social media sites require an Internet connection. Another potential problem with the research may have been the reliance on self-report measures; Internet connectedness through smartphones has made it harder to gauge exactly how many hours per day one actually spends on the Internet and social media, so it is possible that participants may have underestimated or overestimated their usage. Finally, the correlation between social media use and narcissistic behavior is clear, but the causation is somewhat unclear; social media use may increase narcissistic behavior as hypothesized in this study, or people who are narcissistic for other reasons may just be more active on social media.

The results of this study have some implications on the growing field of Internet and social media research. Many previous studies have shown social media to have a significant impact on self-esteem (Gangadharbatla, 2008; Wilson, Fornasier, & White, 2010; Ong et al., 2011; Buffardi

& Campbell, 2008; Vogel, Rose, Roberts, & Eckles, 2014). Social media use continues to grow especially for adolescents and young adults. Because many of today's adolescents are spending most of their lives connected to social media, it is very important for researchers to discover how the effect that this exposure has on adolescent self-esteem. It would be interesting to see if social media use is correlated to any specific psychological disorders such as narcissistic personality disorder.

## References

- American Psychological Association (2012). DSM-IV and DSM-5 criteria for the personality disorders. Retrieved from [http://www.psi.uba.ar/academica/carrerasdegrado/psicologia/sitios\\_catedras/practicas\\_profesionales/820\\_clinica\\_tr\\_personalidad\\_psicosis/material/dsm.pdf](http://www.psi.uba.ar/academica/carrerasdegrado/psicologia/sitios_catedras/practicas_profesionales/820_clinica_tr_personalidad_psicosis/material/dsm.pdf)
- boyd, d. m. and Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, 13: 210–230.
- Buffardi, L. E., & Campbell, W. K. (2008). Narcissism and social networking web sites. *Personality and social psychology bulletin*, 34(10), 1303-1314.
- Dickinson, K. A., & Pincus, A. L. (2003). Interpersonal analysis of grandiose and vulnerable narcissism. *Journal of Personality Disorders*, 17(3), 188-207.
- Emmons, R. A. (1987). Narcissism: theory and measurement. *Journal of Personality and Social Psychology*, 52(1), 11.
- Gangadharbatla, H. (2008). Facebook me: Collective self-esteem, need to belong, and internet self-efficacy as predictors of the iGeneration's attitudes toward social networking sites. *Journal of Interactive Advertising*, 8(2), 5-15.
- Groopman, L. C. & Cooper, A. M. (2006). Narcissistic personality disorder. *Armenian Health Network*, 2.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 54, 241-251.

- Mehdizadeh, S. (2010). Self-presentation 2.0: Narcissism and self-esteem on Facebook. *Cyberpsychology, Behavior, and Social Networking, 13*(4), 357-364.
- Miller, J. D., McCain, J., Lynam, D. R., Few, L. R., Gentile, B., MacKillop, J., & Campbell, W. K. (2014). A comparison of the criterion validity of popular measures of narcissism and narcissistic personality disorder via the use of expert ratings. *Psychological Assessment, 26*(3), 958-969.
- Ong, E. Y., Ang, R. P., Ho, J., Lim, J. C., Goh, D. H., Lee, C. S., & Chua, A. Y. (2011). Narcissism, extraversion and adolescents' self-presentation on Facebook. *Personality and Individual Differences, 50*(2), 180-185.
- Paris, J. (2014). Modernity and narcissistic personality disorder. *Personality Disorders: Theory, Research, and Treatment, 5*(2), 220-226.
- Pew Research Center (2014). Social networking fact sheet. Retrieved from <http://www.pewinternet.org/fact-sheets/social-networking-fact-sheet/>
- Sedghi, A. (2014). Facebook: 10 years of social networking in numbers. *The Guardian*. Retrieved from <http://www.theguardian.com/news/datablog/2014/feb/04/facebook-in-numbers-statistics>
- Skodol, A. E., Bender, D. S., & Morey, L. C. (2014). Narcissistic personality disorder in DSM-5. *Personality Disorders: Theory, Research, and Treatment, 5*(4), 422-427.
- Thomas, S., Bushman, B. J., Castro, B. O., & Stegge, H. (2009). What makes narcissists bloom? A framework for the research on the etiology and development of narcissism. *Development and Psychopathology, 21*, 1233-1247.

Thompson, D. (2014). The most popular social network for young people? Texting. Retrieved from <http://www.theatlantic.com/technology/archive/2014/06/facebook-texting-teens-instagram-snapchat-most-popular-social-network/373043/>.

Twenge, J. M., Miller, J. D., & Campbell, W. K. (2014). The narcissism epidemic: Commentary on Modernity and narcissistic personality disorder. *Personality Disorders: Theory, Research, and Treatment*, 5(2), 227-229.

Vogel, E. A., Rose, J. P., Roberts, L. R., & Eckles, K. (2014). Social comparison, social media, and self-esteem. *Psychology of Popular Media Culture*, 3(4), 206-222.

Wilson, K., Fornasier, S., & White, K. M. (2010). Psychological predictors of young adults' use of social networking sites. *Cyberpsychology, Behavior, and Social Networking*, 13(2), 173-177.

Wright, A. C. (2014). Narcissism and its discontents. *Personality Disorders: Theory, Research, and Treatment*, 5(2), 232-233.

## Appendix A

### Social Media Survey

**What is your age?** \_\_\_\_\_

**What is your gender?** Male\_\_\_\_\_ Female\_\_\_\_\_

For the following questions, please account for time spent on computers, tablets, smartphones, and any other electronic devices.

**Approximately how much time do you spend on the Internet per day?**

- a. Less than one hour
- b. One to two hours
- c. Two to three hours
- d. More than three hours (if so, how many? \_\_\_\_\_)

**Please mark all social media sites and/or apps that you use:**

- Facebook
- Twitter
- Instagram
- Pinterest
- Tumblr
- YikYak
- Snapchat
- LinkedIn
- Google+
- Other (please specify) \_\_\_\_\_

**How much time do you spend per day on social media sites and/or apps?**

- a. Less than one hour
- b. One to two hours
- c. Two to three hours
- d. More than three hours (if so, how many?\_\_\_\_\_)

Please answer the following questions by deciding to what extent each item is characteristic of your feelings and behavior. Circle the number that best indicates the extent to which you agree with each statement. 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.

**I can become entirely absorbed in thinking about my personal affairs, my health, my cares or my relations to others.**

1

2

3

4

5

Strongly disagree

Strongly agree

**My feelings are easily hurt by ridicule or the slighting remarks of others.**

1

2

3

4

5

Strongly disagree

Strongly agree

**When I enter a room I often become self-conscious and feel that the eyes of others are upon me.**

1

2

3

4

5

Strongly disagree

Strongly agree

**I dislike sharing the credit of an achievement with others.**

1

2

3

4

5

Strongly disagree

Strongly agree

**I feel that I have enough on my hands without worrying about other people's troubles.**

1

2

3

4

5

Strongly disagree

Strongly agree

**I feel that I am temperamentally different from most people.**

1

2

3

4

5

Strongly disagree

Strongly agree

**I often interpret the remarks of others in a personal way.**

1

2

3

4

5



Strongly disagree

Strongly agree

**I easily become wrapped up in my own interests and forget the existence of others.**

1

2

3

4

5

Strongly disagree

Strongly agree

**I dislike being with a group unless I know that I am appreciated by at least one of those present.**

1

2

3

4

5

Strongly disagree

Strongly agree

**I am secretly "put out" or annoyed when other people come to me with their troubles, asking me for my time and sympathy**

1

2

3

4

5

Strongly disagree

Strongly agree