Selfies, Personality, and Narcissism

by

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Abstract

The purpose of this study was to determine whether there is a statistically significant relationship between the frequency of capturing selfies and extraversion, agreeableness, and self-esteem and whether these measures could give rise to a new predictive assessment scale for narcissism. Participants were recruited through the social media website Facebook. Two hundred and six individuals were administered a brief demographic questionnaire about their social media usage and the frequency with which they captured selfies. They were also administered the Narcissistic Personality Inventory (NPI), the Big Five Inventory (BFI), and the Rosenberg Self-Esteem Scale (RSES) through Qualtrics. Two hundred and five participants' results were analyzed for this study by performing a Pearson correlation and a multiple regression analysis. Based on the data collected, not all of the hypotheses were supported. However, the findings did reveal a statistically significant positive relationship between the frequency of selfies an individual captured and their scores on the NPI. Additionally, it was determined through a multiple regression analysis that extraversion BFI scores, agreeableness BFI scores, and RSES scores could be predictive of scores on the NPI. Further testing should be implemented with a greater sample size to validate the reliability of using extraversion BFI scores, agreeableness BFI scores, and RSES scores as a predictive measure of scores on the NPI.

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

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Chapter One

The art of communication has changed over the centuries. Communication has evolved from writing letters to emailing one another to communicating with others in a novel manner via social media networks on the internet—the most popular being Facebook (Ahn, 2011; McKay, 2010; Mikami, Szwedo, Allen, Evans, & Hare, 2010; Rutledge, Gillmor, & Gillen, 2013; Thelwell, 2008). Over the last decade, communication has increased dramatically through the usage of social media networks (Kramer & Winter, 2008; Valkenburg & Peter, 2007). These social media networks enable people to connect with others by searching for them and to control how people present themselves (Krämer & Winter, 2008; Valkenburg & Peter, 2007). According to the Pew Research Center (2018), as of 2011, 69% of the population is utilizing some form of social media, and social media is a regular part of most people's daily lives. The internet helps bring individuals together across the world because it is utilized as a digital common ground for people (Edwards, 2009). Additionally, the internet can be used to break down communication barriers, and it has also been suggested that the primary intent of a person going online is to communicate with others (Edwards, 2009; Jones & Fox, 2009).

For instance, on social media networking sites such as Facebook, Instagram, and Twitter, there is a general increase in attachment and community engagement amongst individuals because easier methods of communication are available without the anxiety of a face-to-face interaction (Edwards, 2009; Hall, West, & McIntyre, 2012; Huang & Park, 2013; Kavanaugh, Reese, Carroll, & Rosson, 2005; McKay, 2010; Tan, 2008). The growth of technology and social media has allowed people to instantaneously share

moments of their lives in the form of words or photographs on many technological

devices, such as laptop computers, tablets, and smart phones (Murray, 2015). The growth

of social media networks has not only facilitated social communication, but it has also

fostered connections and collaborations in academic research and in peer-reviewed

academic writing (Ogden, 2013). To illustrate, a marine biologist can post a photograph

of a living creature with which he or she might be unfamiliar on a forum to receive

feedback from peers (Ogden, 2013). Peers of the marine biologist can help identify and

provide information regarding the type of creature in the photograph, thus allowing

another form of communication for people in the academic community to gather and

share knowledge (Ogden, 2013).

Accordingly, with the recent growth of social networking and methods of sharing

information (either in written word or through photographs), there is a need for research

exploring how social networking sites impact human interaction due to less face-to-face

contact (Ahn, 2011; Kavanaugh et al., 2005; Livingstone & Brake, 2010; McKay, 2010;

Valkenburg & Peter, 2007; Valkenburg, Peter, & Schouten, 2006). One focus of research

could involve examining one's desire for affirmation from others when the individual

wants less face-to-face contact but still longs to feel a connection with others (Ahn, 2011;

Kavanaugh et al., 2005; Livingstone & Brake, 2010; McKay, 2010; Valkenburg & Peter,

2007; Valkenburg et al., 2006). For example, there has been a recent trend in capturing

"selfies", a self-captured image of one's self that is typically shared on a social media

network (Selfie, 2015). Individuals have been utilizing selfies as a novel method of

communication with other people by posting selfies on social networking sites (Kwon &

Kwon, 2015). Furthermore, Wickel (2015) indicated that children are more open in

regard to their private lives via social media than via face-to-face interactions. Because

selfies are being used as a new communication tool, exploring the impact of selfies on a

person's personality could be important because the increased usage of social media

networks has produced fewer face-to-face interactions (Wickel, 2015). Additionally,

there could be value in understanding whether people with particular personality types

are more likely to utilize this means of affirmation, because that could provide further

insight into how different personality types might interact with one another.

Ahn (2011) also indicated that due to the invention of social media, people are

interacting with the world in a different way; thus, the use of social media is changing the

behavior of individuals because people might be having fewer face-to-face interactions.

Additionally, Livingstone and Brake (2010) stated that face-to-face interactions help

shape identities, which further emphasizes the importance of learning more about the

trend of selfies. The act of capturing selfies could correlate with increased social media

usage, which could be reducing face-to-face interactions, because selfies are being used

as a mode of communication between individuals (Ahn, 2011; Livingstone & Brake,

2010). In addition, selfies assist in the development of one's self-concept (Ahn, 2011;

Livingstone & Brake, 2010). Furthermore, since the act of capturing selfies is changing

people's behaviors, it is important to determine whether there are similar personality

traits amongst people who take selfies, because personality and behavior interplay with

one another (Livingstone & Brake, 2010).

Online Social Networking

Social media, an online network, is used as a means of self-expression to connect

individuals with one another and to allow self-expression, which can result in social and

psychological insights about oneself (Murray, 2015; Weiser, 2015). For example,

individuals receive feedback on what they post, which can result in a new way of

thinking by increasing a person's self-awareness due to comments they read regarding

their posts (Murray, 2015; Weiser, 2015). Youth have utilized the internet as a new

means of communication. Although face-to-face interactions are often lost in this media,

youth have used social media to reconnect with old friends and to broaden their social

circles (Ahn, 2011; Kavanaugh et al., 2005; McKay, 2010; Mikami et al., 2010; Suler,

2015; Thelwell, 2008). A study that Park, Kee, and Valenzuela (2009) conducted

determined that college students joined Facebook groups to socialize with friends, to find

activities and entertainment, and to seek self-status. Instagram, Twitter, Tumblr, and

Facebook are a few examples of social media platforms that can be utilized to allow an

individual to befriend more people and increase one's popularity (Murray, 2015; Park et

al., 2009; Weiser, 2015). As a result, social media websites such as Facebook and

Instagram are a way to bring people together over the internet (Park et al., 2009).

Tan (2008) indicated that "MySpace profiles allow users to keep in touch with

and make new friends, upload photos, blog, comment on friends' pages, listen and load

popular songs on their page, befriend their favorite bands and generally socialize and

'hang out' online" (p. 145). Part of the communication process via social media entails

leaving comments on people's profile pages and/or blogs as well as connecting with other

individuals through one's current friend circle (Ahn, 2011; Hall et al., 2012; McKay,

2010; Scifo, 2009; Tan, 2008; Valkenburg & Peter, 2007). Additionally, a popular feature

of Facebook is the capability to share photographs with friends, family, and even

strangers. Every minute, more than 200,000 photographs are uploaded to the site,

illustrating the prevalence of photo-sharing as a means of communication with others on social media networks (Sorokowska et al., 2016).

Selfies

A self-portrait is a way to portray one's identity and share a story through the medium of photography (Lasâen & Gâomez-Cruz, 2009; Suler, 2015; Wilson, 2013). Wilson (2013) described how the inventions of polaroid cameras and photo booths in the early to mid-20th century led to an automated system of developing and printing self-portraits without the need of a photographer. Additionally, photography has been described as a way to express the unique way that one views the world, and photographs are typically captured by amateur photographers with an intent to post on social media websites (Bruno, Bertamini, & Protti, 2015; Lasâen & Gâomez-Cruz, 2009; Suler, 2015; Wilson, 2013). McKay (2010) suggested that "displaying images allows users to bring together aspects of the self usually separated in space and time" (p. 481), indicating that images can be utilized as a form of self-expression and instantaneous communication with people across distances (Lasâen & Gâomez-Cruz, 2009; Lee, 2010).

Additionally, the continued growth of social media photo-sharing sites such as Instagram, Facebook, and Twitter have enabled individuals to more easily share photographs with each other as an alternative form of communication (Abbot, Donaghey, Hare, & Hopkins, 2013; Kwon & Kwon, 2015; Suler, 2015; Tiidenberg, 2014). Suler (2015) claimed that self-portraits allow an individual to open up on social media sites by posting photographs and allowing control of one's self-awareness. Self-portraits also allow people to express their individuality and uniqueness, and they help them foster self-awareness through the freedom and ease of posting on a social networking site (Suler,

2015). Suler believed that individuals who post self-portraits are seeking feedback from others about their lives, even if the person is not conscious of what the photograph might actually reveal to those around him or her.

An increasingly popular global trend since the early 2000s is the act of taking selfies (Kwon & Kwon, 2015; Suler, 2015). Historically, taking images of oneself and sharing them with others has been a medium of communication used to help explain stories to enhance individuals' social experiences (Schwalbe, 2009; Suler, 2015; Tiidenberg, 2014; Weiser, 2015). Within the past decade, there has been an increase in mobile phones with front-facing cameras, which has made the act of capturing selfies easier for the individual (Kwon & Kwon, 2015; Suler, 2015). Furthermore, Lee (2010) stated that the advancement of cameras and the camera's capability to connect with social networks has led to an increase of the type and number of photographs captured. The camera phone has been a great tool in helping individuals instantaneously share their photographs, allowing individuals to shift from a private to a public display of personal pictures (Lee, 2010; Scifo, 2009). Lee signified that digital cameras have made it possible for individuals to capture as many images of themselves as necessary in order to obtain a desirable shot.

A selfie is defined as "an image of oneself taken by oneself using a digital camera especially for posting on social networks" (Selfie, 2015, para. 1). Selfies are a form of personal photography but are typically shared impersonally on an individual's social media networking site (Kwon & Kwon, 2015; Selfie, 2015). According to Day (2013), selfies are the new self-portrait in this new day of technology. A person can share a selfie on his or her Facebook "wall" (a newsfeed on Facebook to update friends) with all of

one's Facebook friends (Kwon & Kwon, 2015). Selfies have been termed "current pop culture" because they are accepted as part of the daily lifestyle of an individual and are gaining public attention in television shows and even in the mainstream media (Barry, Doucette, Loflin, Rivera-Hudson, & Herrington, 2015; Pullen, 2016). As selfies have been increasing in popularity, devices such as the "selfie stick" have been invented (Entis, 2015). A selfie stick is a device used to make the act of capturing selfies easier for an individual by allowing the person to attach his or her phone to a pole to help provide the user with a better angle for a selfie (Entis, 2015).

Benefits and Risks of Social Media and Selfies

One of the benefits of social media sites has been their therapeutic function (Tan, 2008). Individuals can use blogging to express themselves in a creative and potentially therapeutic fashion (Tan, 2008). In addition, people utilize social media networks as a form of support in the midst of challenging life circumstances (Replogle, 2014).

Social media can also be used for suicide prevention (Codrea-Rado, 2012; SAMHSA, 2016). Recently, Facebook has implemented a chat feature called LifeLine within the Facebook chat program that allows users to report if they are having suicidal ideation (Codrea-Rado, 2012). Facebook has designed two methods to help users access the chat feature—reporting on the users' post or reporting directly to the Facebook Help Center (Codrea-Rado, 2012). These users are then connected with a trained counselor through an email urging the user to start an online chat with a counselor or to call the help line directly, which functions in the same manner as the Suicide Hotline with the addition of the internet (Codrea-Rado, 2012). Currently, the service is dependent on online Facebook users; the service is not capable of scanning through Facebook posts to single

out messaging related to suicidal ideation because the language around suicide is rather

complex (Codrea-Rado, 2012). In addition, the services of LifeLine are being utilized

across several social media platforms, such as Twitter and Tumblr (Codrea-Rado, 2012).

Overall, there is a belief that the increase in social media usage has been helpful in

suicide prevention because individuals have greater access to reading their friends' posts

on social networks and are better able to notice distressing messages (Codrea-Rado,

2012). However, it is crucial to remember that social media can be a form of online

journaling that provides individuals with a platform for self-discovery and self-

expression, which might lead a reader to believe someone is in distress when one is only

expressing oneself (Codrea-Rado, 2012).

Furthermore, selfies can be used altruistically. In addition to being used as a form

of self-expression, selfies can be shared on social media networks to raise awareness for

social causes such as cancer research, representing another way selfies are being utilized

as a communication tool ("Blue Lip Selfies", 2014).

But despite the above-listed benefits of social media and selfies, social media and

selfies can also be used negatively. Even though selfies have been used to raise

awareness about social causes, selfies can sometimes negatively impact people, and with

the growing popularity of capturing selfies, some public places have prohibited taking

selfies in landmarks across the world, such as at Disney parks, because capturing selfies

on a ride can potentially be dangerous (Entis, 2015; Suler, 2015). Furthermore, even

though therapeutic benefits from using social media are apparent, there can be unintended

negative consequences when communicating in an online community (Entis, 2015; Suler,

2015). According to Replogle (2014), because social media can be very informal,

individuals are more likely to disclose information that could potentially cross traditional

boundaries of what is deemed appropriate to share with others. Replogle (2014) described

attention seeking as a probable reason why an individual would intentionally cross typical

social boundaries. There is also the risk of sharing sensitive information (Suler, 2015).

To illustrate, it is risky to share a semi-nude self-portrait on an online social network site

because once the photograph is posted online to an individual's social media's newsfeed,

the photograph is on the internet forever, meaning the photograph cannot be removed

from the internet (Suler, 2015). A semi-nude self-portrait of an individual could

potentially be used against the person when he or she is looking for jobs or for a

promotion within a job (Suler, 2015).

In some cases, there are safety risks around capturing selfies, and reported selfie-

related accidents have increased over the last two years (Pullen, 2016). Since 2014, there

have been 49 selfie-related deaths (Pullen, 2016). In 2016, a Washington State resident

was capturing a selfie while pointing a gun at his face, believing the gun was unloaded

(Pullen, 2016). While attempting to capture the selfie, the man pulled the trigger and shot

himself in the face, resulting in his death (Pullen, 2016). Another example of a selfie-

related death was in Spain in August of 2015 (Pullen, 2016). During the annual Running

of the Bulls in Pamplona, a 32-year-old man was attempting to capture a selfie with the

running bulls and was gored to death by a bull (Pullen, 2016). Also, in January 2015 in

Russia, two Russian soldiers were attempting to capture a selfie while posing with a live

grenade, and the grenade unexpectedly detonated (Pullen, 2016). These are several

examples illustrating some of the safety risks that could be associated with capturing

selfies (Pullen, 2016).

Selfie Research

In addition to understanding the risks and benefits of social media, several studies have been conducted to examine the process of capturing selfies. A study that Kwon and Kwon (2015) conducted entailed examining the process and time involved in capturing selfies and the impact on the individuals who produced the selfies. Through in-depth interviews, 66 Korean college students were questioned in South Korea, which has a predominant selfie culture and is a collectivistic society (Kwon & Kwon, 2015). A collectivistic society often dictates family before self, and selfies in this context might provide insight into the formulation of one's self-concept (Kwon & Kwon, 2015). The intent of Kwon and Kwon's research was to increase understanding of how social interactions helps form one's self-concept and the development of one's authentic self: "The selfie culture is a newly emerging practice of exploring authenticity of self" (Kwon & Kwon, 2015, p. 302) and a tool to help individuals interact with one another by providing a sense of empowerment because each individual dictates what encompasses his or her selfie.

Kwon and Kwon (2015) found that selfies are a form of self-expression in which one can reflect upon one's self from a different view point, as in a third person, to promote self-discovery. They also found that selfies can serve as a means to monitor mood. Additionally, they determined that feeling connected to others after posting a selfie was important enough that individuals would rather have mean/negative comments on their selfies than no comments at all (Kwon & Kwon, 2015). Kwon and Kwon concluded that among Korean college students, selfies are not destructive to a person's well-being

because the pictures taken allow individuals to develop their identities and establish their authentic selves.

Some researchers have suggested that selfies represent a way in which people can communicate their motivations and interests with people around them (Lasâen & Gâomez-Cruz, 2009; Lee, 2010; Huang & Park, 2013). According to McKay (2010),

> Most profile images are portrait photographs that seem to be rich sources of information on the owner, offering suggestions of the user's motives on the site, physical appearance, work or leisure activities, family relations, drinking habits, and attributes such as quirkiness or sense of humour. (p. 483)

Lee (2010) and McKay (2010) also indicated that individuals choose images of themselves that they have captured on a camera phone or on personal digital cameras from social or holiday settings to communicate important events in their lives with friends. Scifo (2009) asserted that the camera on a mobile phone has been an essential part of everyday life for young adults, particularly because of the functionality of the device and the ease with which photographs of immediate surroundings can be captured. An individual can conveniently capture everyday memories that are important to him or her as a way to help create his or her identity and sense of belonging in a family, social, and group setting (Lee, 2010; Scifo, 2009).

An individual might capture a selfie for numerous reasons. According to Tiidenberg (2014), selfies are ubiquitous, and these photographs are continuously being uploaded to social media websites for people to view to enhance social relationships (Lasâen & Gâomez-Cruz, 2009; Lee, 2010; Marwick, 2015). Valkenburg et al. (2006) proposed that positive comments on one's social media page can lead to better social

adjustment in adolescents. Suler (2015) claimed that when people hit the "like" button on an individual's photograph, the person is positively reinforced and is more likely to continue posting similar photographs to garner the same positive response. Additionally, Ahn (2011) contended that positive comments on one's profile page can lead to higher psychological well-being because of feelings of acceptance. Also, socially anxious preadolescents and adolescents have been able to use online communication as a means to be more open with their friends (Valkenburg & Peter, 2007).

Selfies can also be useful in establishing a young adult's online identity (Mascheroni, Vincent, & Jimenez, 2015). Mascheroni et al. (2015) discovered that the manner in which young adults portray themselves through online photographs helps them learn what is considered socially acceptable in terms of gender and social identities. Additionally, the act of capturing and posting selfies can be therapeutic for a person (Tiidenberg, 2014). Tiidenberg (2014) discovered that selfies can be used therapeutically by fostering a positive body image of an individual through capturing "sexy" selfies. Murray (2015) stated that women use selfies as a form of empowerment over their bodies and lives in male-dominated cultures such as the United States'. Murray (2015) further explained that the act of capturing selfies is under a woman's control because she can choose what kind of selfie she captures and how the selfie will be shared with those around her. Additionally, Suler (2015) also considered the idea that selfies allow for an "objective viewpoint about [people's] identity" (p. 177). Selfies allow people to observe their egos from a detached viewpoint, which could allow for a better understanding of the self and how others view them (Suler, 2015).

Selfies and Personality

Day (2013) asked an important question: "If selfies are simply an exercise in recording private memories and charting the course of our lives, then why do we feel such a pressing need to share them with hundreds and thousands of friends and strangers online?" (para. 14). Day's article suggests that people are social and therefore are motivated to share their selfies for self-affirmation and approval of others (Day, 2013). Emmons (1995) stated that "personality deals with the whole person, the total functioning organism, and as such, has the potential to serve as an integrative force in psychology" (p. 343). An individual's personality helps guide his or her behavior (Emmons, 1995). Therefore, an individual's behavior could be a precursor to the personality traits shared amongst people who do or do not capture selfies.

Additionally, McKay (2010) argued that social networking can shape the way people portray themselves online and how they interact with people. A few studies have involved examining the relationship between selfies and various personality traits (Sorokowski et al., 2016). For example, narcissistic personality disorder is more common in men while histrionic personality disorder has greater frequency in women, potentially resulting in variances in selfie-taking behaviors due to the differentiations in personality disorders amongst men and women (Sorokowski et al., 2016). Another study conducted by Orr et al. (2009) revealed that there was a strong positive correlation between one's time on social media (Facebook) and one's level of shyness; a shyer individual would spend more time on Facebook as a method to help him or her communicate with others.

Mehdizadeh (2010) explored how self-esteem and narcissism are expressed on the social media website Facebook and determined that high narcissism and low self-esteem

were both related to a greater online presence and some self-promoting behaviors. A study conducted by Carpenter (2012) involved examining Facebook behavior and two types of narcissism: grandiose exhibitionism and entitlement/exploritativeness. Carpenter (2012) concluded that individuals with grandiose exhibitionism were more likely to have self-promoting behaviors while individuals with entitlement/exploritativeness narcissism displayed a mix between self-promoting behaviors and anti-social behaviors. These studies are important in helping people understand which traits might lead to certain behaviors on social media.

The Big Five. Previous research has indicated that some qualities of individuals who have narcissistic-like personality traits include self-centeredness, arrogance, attention seeking, impulsivity, exhibitionism, and condescension (Bender, 2012; Watson, 2012). According to Watson (2012), "narcissism (a pre-occupation with one's self) can be seen as a distinct personality, the product of a combination of traits that comprise the Big Five" (p. 77). The Big Five personality traits are openness, conscientiousness, extraversion, agreeableness, and neuroticism (Costa & McCrae, 1992; Costa & McCrae, 2007; Hull, Beaujean, Worrell, & Verdisco, 2010; Maples, Guan, Carter, & Miller, 2014; Watson, 2012). Watson (2012) suggested that individuals who are narcissists will score higher in extraversion and lower in agreeableness when determining their Big Five personality traits. Additionally, Correa, Hinsley, and Gil de Zuniga (2010) determined that individuals who are open to experiences, who are less emotionally stable, and who are extraverted are more likely to interact on the Web through social media than individuals who are not.

Narcissism. Barry et al. (2015) were some of the first researchers to examine the

relationship between selfies, narcissism, and self-esteem. Through naturalistic

observation, Barry et al. explored the relationship between self-esteem, narcissism, and

an individual's number of selfies taken and frequency of posting selfies. Barry et al.

indicated that narcissism would be a variable with how people interact with social media

because social media indirectly allows an individual to receive feedback from others and

allows one to evolve his or her self-presentation. The researchers hypothesized that

higher displays of selfies would lead to narcissistic-like tendencies or elevated levels of

self-esteem because in order to capture selfies, one must be focused on himself or herself

(Barry et al., 2015). Additionally, Barry et al. considered different types of selfies and the

various dimensions of narcissism in their assessment.

Participants of the study were recruited from an undergraduate psychology course

from a United States public university and received research credit or extra credit for

participation (Barry et al., 2015). There were 109 females and 19 males (128 total

participants) ranging between 18 and 43 years of age in the study (Barry et al., 2015).

Inclusion criteria for the study required participants to have an active Instagram account

because the researchers believed that these users would be actively posting selfies (Barry

et al., 2015). Participants were administered the following measures at the beginning of

the study: the Pathological Narcissism Inventory (PNI), the Narcissistic Personality

Inventory (NPI), and the Rosenberg Self-Esteem Scale (RSES, Barry et al., 2015). Four

independent coders followed the study participants for 30 days and coded for themes of

the selfies and any contextual information associated with each selfie post: physical

appearance, activity/event/location of the selfie, affiliation with others, a collage of

selfies, and other/undifferentiated (Barry et al., 2015). Furthermore, the coders tracked the following data for the 30 days: (a) how long the individual had the account, (b) total number of posts, (c) how many photographs were posted, (d) the difference in followers from the beginning to the end of the study, (e) how many selfies were posted during the 30-day period, and (f) how many total selfies the individual had on his or her account (Barry et al., 2015).

Barry et al. (2015) determined that no significant relationship existed between narcissism and selfies or self-esteem and selfies. However, when categories of selfies (physical appearance, activity/event/location of the selfie, affiliation with others, a collage of selfies, and other/undifferentiated) were compared to some of the dimensions of narcissism, there appeared to be a significant relationship (Barry et al., 2015). For example, vulnerable narcissism (feelings of entitlement, contingent self-esteem, devaluating others/need for others, and hiding the self) was associated with a physical-appearance-themed selfie (Barry et al., 2015). However, Barry et al. believed that the gender imbalance of the study, the limiting of participants to Instagram users, and the examined selfie categories were limitations of the study, and hence they were not able to generalize their findings.

Another study that Halpern, Valenzuela, and Katz (2016) conducted focused on the relationship between selfies and narcissism. Halpern et al. questioned whether capturing many selfies caused narcissism or whether narcissism resulted in a person's capturing more selfies. The researchers posited two hypotheses: (a) "Higher levels of narcissism will predict increasing frequency of taking selfies for sharing", and (b) "Higher frequency of taking selfies for sharing will predict increasing levels of

narcissism" (Halpern et al., 2016, p. 99). Essentially, Halpern et al. assessed whether narcissists captured selfies as a continued maintenance of "positive self-views" (p. 100) or if individuals who captured selfies would increase their level of narcissism. Halpern et al. found that both hypotheses were supported and suggested a self-reinforcement effect from the selfies over time. The researchers discovered that levels of narcissism increased as the frequency of sharing photos grew (Halpern et al., 2016). Furthermore, Halpern et al. noted that this positive correlation might have been due to the consistent constructive reinforcement and feedback on the selfies by an individual's followers.

According to Sorokowski et al. (2015), one's activity on online social networking sites can be predictive of narcissism in individuals. However, the researchers also noted inconsistencies in associating social media with narcissism due to the limiting nature of studying only selfie takers (Sorokowski et al., 2015). For the research that Sorokowski et al. conducted, they expanded on a previous study that Fox and Rooney (2015) conducted. Sorokowski et al. examined selfie-posting behavior (individual selfies, group selfies, and romantic partner selfies) in both men and women by administering narcissism assessments in Poland. Although the study was conducted in Poland, individuals were used in the study with the belief that the results would be generalizable to other cultures if there was a relationship between capturing selfies and narcissism (Sorokowski et al., 2015).

Sorokowski et al. (2015) implemented a two-part study. In the first part of the study, there were 748 participants (393 men and 355 women) ranging in age from 17 to 47 years who were recruited from universities across Poland (Sorokowski et al., 2015). In the second part of the study, a new group of individuals ($N = 548$, 218 men and 330

women) who used Facebook were recruited (Sorokowski et al., 2015). Participants from both parts of the study completed a Polish adaptation of the NPI (Sorokowski et al., 2015). Additionally, the researchers examined three types of selfies—individual selfies, group selfies, and selfies with a romantic partner—and the researchers also examined how many total photographs an individual had posted on social media (Sorokowski et al., 2015). In Part 1 of the study, the participants self-reported how many photographs they posted on social media sites in the last month (Sorokowski et al., 2015). In the second part of the study, the researchers measured Facebook photographs that the participants posted (Sorokowski et al., 2015).

Sorokowski et al. (2015) determined that there was a significant positive correlation between selfies posted on social media sites and narcissism. The researchers found that there was a stronger relationship between narcissism and frequency of selfie posting behavior in men than in women, which is consistent with previous findings (Sorokowski et al., 2015). Sorokowski et al. concluded that the findings of their study might provide insight for future research into an individual's development of self-concept based on how people develop and manage their social media networks.

According to Sorokowska et al. (2016), prior research has led to the conclusion that selfie-posting behaviors are linked with narcissism, especially in men, but there has been limited research on other personality traits. An additional study that Sorokowska et al. conducted focused on which personality styles were most associated with posting selfies. As a result of the two studies, Sorokowska et al. hypothesized that "selfie-sharing is related to selfie-presenting behaviors" (p. 119) such as social exhibitionism, self-

esteem, and extraversion. The two studies that Sorokowska et al. conducted will be summarized here.

Study 1 included 748 participants (393 male and 355 female) who were recruited from various universities across Poland. They ranged in age from 17 years to 47 years, and they were asked to self-report the number of photographs they had posted on social media sites over the past month (Sorokowska et al., 2016). Study 2 consisted of 548 participants (218 male and 330 female) with an age range of 14 years to 47 years. They were not part of Study 1, and they were Facebook users (Sorokowska et al., 2016). Study 2 also involved assessing the actual number of photographs posted on social media sites, not just Facebook (Sorokowska et al., 2016). All participants were administered the following Polish adapted questionnaires: The RSES, the Extraversion scale of the NEO-Five Factor Inventory, and the Murray Social Exhibitionism Index (Sorokowska et al., 2016). Additionally, the researchers examined three categories of selfies—selfies by oneself, group selfies, and selfies with a romantic partner (Sorokowska et al., 2016).

Sorokowska et al. (2016) found a positive correlation between men's and women's selfie-sharing behavior on social media networks and social exhibitionism and extraversion. Correlational data analysis failed to show a significant relationship between selfie-behavior and self-esteem (Sorokowska et al., 2016). Additionally, Sorokowska et al. determined that women post more selfies than men post because women are more willing to admit to capturing selfies.

Moving beyond selfies and narcissism, some researchers claimed that selfies were a form of *superficial exhibition* or non-personal self-expression (Marwick, 2015; Suler, 2015, p. 178). Suler (2015) claimed that individuals were attempting to star in their own

reality shows though selfies or to achieve *Instafame* through having a large following on Instagram, which led to narcissism because people were constantly comparing themselves to others (Marwick, 2015). There was attention-seeking behavior (inappropriate selfies), a need for validation from others, and a social dependence on the reinforcement of the like button from the participants, all of which were attempts to offset one's low self-esteem (Suler, 2015). Suler postulated that those who posted nude or provocative selfies experienced a sense of narcissistic empowerment, because the individual was in control of the selfie and was the focus of the image.

Saltz (2014) claimed that selfies (a) are prevalent in society today, (b) have changed aspects of social interactions amongst individuals, and (c) might lead to an era of narcissism due to the focus on oneself. Gregoire (2015) suggested that according to a recent Ohio State University research study investigating 800 men conducted by Jesse Fox and Margaret Rooney, the more selfie photographs men posted, the higher their scores were on the narcissism and psychopathology scales. Men who edited their photographs displayed greater levels of narcissistic traits, which might have been due to insecurities, whereas men who were impulsive and lacked empathy scored higher on the psychopathology scale (Gregoire, 2015). The findings cannot be generalized to say that men who post selfies are psychopaths or narcissists (Gregoire, 2015). However, the researchers found a significant correlation between selfies and anti-social traits in men (Gregoire, 2015).

Seidman (2015) discussed the link between frequency of selfie posting and narcissism or psychopathology and indicated that there is little information pertaining to how selfies can affect individuals psychologically and/or behaviorally. He built his

research upon Paulhus' and Williams' (2002) theory of the three traits of self-

objectification known as the "dark triad"—narcissism, psychopathy, and

Machiavellianism (a tendency to manipulate and disregard others)—and he discussed

how these traits are linked to people who capture selfies (Seidman, 2015). Individuals

displaying traits associated with the dark triad are typically manipulative and callous in

their interactions with others (Paulhus & Williams, 2002). In conclusion, individuals who

post selfies display some narcissistic and psychopathological traits but not

Machiavellianism traits (Seidman, 2015).

Rationale for the Study

The term selfie is rather new in the sense that it was only added to the dictionary

in 2015, but it is rapidly becoming culturally relevant to society (Selfie, 2015). Selfies are

a significant part of society, but little is known about their impact on behavior,

personality, or self-esteem. According to several researchers, there appears to be a gap in

existing literature regarding online social communication and its impact on an individual

(Mikami et al., 2010; Valkenburg et al., 2007; Valkenburg et al., 2006). When an

individual types the word selfie in the Google web search engine, over 300,000 articles

relating to selfies appeared as of October 2015, and a majority of the articles link selfies

to various personality traits such as narcissism. A thorough review of the literature related

to selfies revealed a gap in peer-reviewed documentation of selfies (which is not

surprising due to how new the topic is in the field), but it also did reveal several informal

articles on the subject. Currently, few peer-reviewed articles are focused on the

relationship between the number of selfies an individual captures and his or her

personality or behavior since the topic is so new to the culture. This is an important topic

to study due to the increase of selfie-capturing behaviors to the point of a preoccupation with selfies or even death. Additionally, research has shown that selfies have changed the way individuals communicate with one another, and there also appears to be a relationship between individuals who capture selfies, one's personality, and one's self-esteem; however, there has been little scientific research conducted to establish a relationship between behavior, personality, and self-esteem and the long-term effects in how people form relationships.

After reading through the literature regarding selfies, it is evident that selfies are a means of communication, and there appears to be an association between selfie behaviors and narcissism. Typically, selfies are utilized by adolescents and adults to allow them to communicate with friends and acquaintances through the photographs captured on mobile phones and shared on social media sites such as Facebook. The review of the literature also indicates that additional research needs to be conducted regarding the new phenomenon known as selfies. There appear to be links between selfie-capturing behavior and personality, but little is known from a peer-reviewed approach to the topic about how selfies impact behavior, personality, and self-esteem.

For this study, the focus was on examining the relationship between personality traits that are determined by the BFI and the number of selfies an individual captures. It is important to create a foundation of the interplay between selfies and personality in order to explore the long-term effects of how communication is shaped and relationships are formed. This study was designed to determine if people who capture selfies share similar personality traits and if there is a relationship between frequency of selfies captured and self-esteem. Additionally, the study was designed to determine if selfie behavior and the

BFI can be predictive of narcissistic traits when compared to the NPI, a determination that could be helpful in therapeutic intervention of individuals who are narcissistic or who have a preoccupation with selfies. Overall, this study is aimed at adding to the field of psychology by researching more deeply into the link between selfies and narcissism, which could lead to a deeper understanding of selfie behavior and potentially therapeutic interventions for when one's selfie behavior becomes problematic or distressing to one's functioning.

Research Question

The purpose of this study was to determine if there is a relationship between the frequency of capturing selfies and extraversion, agreeableness, and self-esteem. Additionally, the researcher hypothesized that the relationship between frequency of selfies captured and extraversion, agreeableness, and self-esteem can be predictive of narcissistic traits and therefore can be utilized as another measurement to assess for narcissism. Previous researchers have already determined that there is a link between an individual's capturing selfies and narcissism; therefore, this research will take what is known about the relationship between selfies and narcissism one step further.

The following research question guided this study: Is there a relationship between the frequency of capturing selfies and extraversion, agreeableness, and self-esteem that could give rise to a new predictive assessment scale for narcissism? It was hypothesized that individuals who capture more selfies would exhibit an elevated extraversion score and a decreased agreeableness score on the BFI based on previous research conducted by Watson in 2012. Watson (2012) concluded that narcissistic individuals exhibited a high extraversion score and a low agreeableness score on the BFI. Furthermore, the increased

frequency of selfies an individual captures and his or her score on the NPI would predict narcissistic traits in a person, which has been suggested by previous researchers (Barry et al., 2015; Halpern et al., 2016; Sorokowska et al., 2016; Sorokowski et al., 2015). Building upon previous research, it was hypothesized for this study that:

H_1: There would be a positive correlation between the frequency of selfies an individual captured and extraversion scores on the BFI;

H_2: There would be a negative correlation between the frequency of selfies an individual captured and agreeableness scores on the BFI;

H_3: There would be a positive correlation between the frequency of selfies an individual captured and self-esteem scores on the RSES;

H_4: There would be a positive relationship between the frequency of selfies an individual captured and scores on the NPI; and

H_5: Scores on the BFI and RSES would be predictive of scores on the NPI.

Chapter Two

Methods

The purpose of this study was to determine if there is a relationship between the frequency of capturing selfies and extraversion, agreeableness, and self-esteem. Additionally, it was hypothesized that the relationship between frequency of selfies captured and extraversion, agreeableness, and self-esteem could be predictive of narcissistic traits and therefore can be utilized as another measurement to assess for narcissism. Previous researchers have already determined that there is a link between an individual's capturing selfies and narcissism; therefore, the researcher examined what is known about the relationship between selfies and narcissism in greater depth.

The following research question guided this study: Is there a relationship between the frequency of capturing selfies and extraversion, agreeableness, and self-esteem that would give rise to a new predictive assessment scale for narcissism? It was hypothesized that individuals who captured selfies would exhibit elevated personality scores on the BFI. Furthermore, the frequency of selfies an individual captured and his or her score would predict narcissistic traits in a person. It was hypothesized for this study that:

H_1: There would be a positive correlation between the frequency of selfies an individual captured and extraversion scores on the BFI;

H_2: There would be a negative correlation between the frequency of selfies an individual captured and agreeableness scores on the BFI;

H_3: There would be a positive correlation between the frequency of selfies an individual captured and self-esteem scores on the RSES;

H_4: There would be a positive relationship between the frequency of selfies an individual captured and scores on the NPI; and

H_5: Scores on the BFI and RSES would be predictive of scores on the NPI.

Participants

The participants of this study were recruited via the social networking site Facebook. The researcher created an initial post raising awareness of the research study, asked friends to share the post, and asked friends to ask their friends to share the post about the study. The study was not restricted by location of the participants and was limited to 200 individuals. Participants agreed to an informed consent form on Qualtrics and were required to be at least 18 years old. By clicking the next button after the informed consent on Qualtrics, the participant gave implied consent. The participant was then asked to answer the demographics questionnaire and online versions of the following: the BFI, the RSES, and the NPI.

Materials and Procedures

The participants of the study were administered an informed consent form (see Appendix A); a brief demographics questionnaire (see Appendix B); and online versions of the NPI (see Appendix C), the BFI (see Appendix D), and the RSES (see Appendix E). The informed consent form contained a brief description of the study as well as the rights of the participant. The brief demographics questionnaire was used to determine each participant's age, gender, social media use, the reason for taking selfies, and how many selfies he or she had taken over the previous week.

Narcissistic personality inventory. The NPI is a 40-item, forced-choice (meaning there are only two options), nonpathological inventory created by Raskin and Hall in 1979 with an internal consistency of Alpha = 0.85 (Miller & Campbell, 2012; Raskin & Terry, 1988; see Appendix C). Originally, the NPI consisted of 54 items but was reduced to 40 questions to make the assessment more internally reliable (Raskin & Terry, 1988; Watson, 2012). Previous research has indicated that narcissism is a combination of the Big Five personality traits with a lower agreeableness score and a higher extraversion score (Buss & Chiodo, 1991; Paulhus & Williams, 2002; Saulsman & Page, 2004; Watson, 2012). Additionally, higher scores on the NPI resulted in higher rates of self-enhancement, entitlement, exhibitionism, and impulsivity (Watson, 2012). The population in this study was non-clinical; therefore, the NPI was chosen as the personality assessment to be administered to the participants to account for the target population for the study (Miller & Campbell, 2012; Raskin & Terry, 1988; Twenge et al., 2008). The purpose of the NPI was to give the researcher a basic understanding of whether or not a person exhibits narcissistic traits; it was not to diagnose an individual with a personality disorder.

The NPI is scored from 0 to 40, and a higher score indicates that the individual has selected more narcissistic statements, indicating narcissism in the person (Raskin & Terry, 1988). An example prompt is "I can live my life in any way I want" or "People can't always live their lives in terms of what they want", in which case the second response would receive one point (Raskin & Hall, 1981).

Big five inventory. The BFI, which was constructed by John, Donahue, and Kentle in 1991 (John & Srivastava, 1999; see Appendix D) was also utilized in this study. The BFI is a 44-item questionnaire that utilizes a 5-point Likert scale, where 1 is *disagree strongly* and 5 is *agree strongly* (John & Srivastava, 1999). The BFI has a sound Cronbach's alpha for internal consistency: Extraversion = 0.82, agreeableness = 0.75, conscientiousness = 0.81, neuroticism = 0.84, and openness = 0.80 (John & Srivastava, 1999).

Rosenberg self-esteem scale. Additionally, the participants were administered the RSES (Appendix E). The RSES is a 10-question questionnaire that utilizes a 4-point Likert scale (Kernis, 2005; Martin-Albo, Nunez, Navarro, & Grijalvo, 2007; Richardson, Ratner, & Zumbo, 2009). The RSES consists of five positively-worded and five negatively-worded items that are intermixed throughout the scale (Martin-Albo et al., 2007; Richardson et al., 2009). The RSES has a sound test-retest reliability (0.82 to 0.88) and strong internal validity (Alpha = 0.77 to 0.88; Martin-Albo et al., 2007; Richardson et al., 2009; Rosenberg, 1965). The intent for utilizing the RSES was to develop a comprehensive picture of the participant when determining the relationships between frequency of selfies, and personality and self-esteem.

Data Analysis

To analyze the results of this study, the researcher performed Pearson's correlations on all the hypotheses to determine any relationships between the variables. Then the researcher performed a multiple regression analysis. The multiple regression was used to determine whether the number of selfies and scores on the BFI using agreeableness and extroversion could be a predictive measure of narcissism, and it was

also used to determine how much each variable could account for different levels of

narcissism. In addition, the researcher performed a *t*-test to compare whether there were

differences between genders and age amongst selfie behavior.

Summary

This study was conducted over a two-month period and consisted of 200

individuals who were at least 18 years old. The participants were recruited randomly via

Facebook through online postings and were administered an informed consent form, a

brief demographics questionnaire, the BFI, the NPI, and the RSES via Qualtrics.

Chapter Three

Results

 Analytic strategy. To analyze the results of this study, the researcher performed

Pearson's correlations on all the hypotheses to determine any relationships between the

variables. The researcher then performed a multiple regression analysis. The multiple

regression was used to determine if the number of selfies and the agreeableness and

extroversion scores of the BFI could be used to predict narcissism and measure the extent

to which each predictor variable can account for variation in narcissism scores. In

addition, the researcher performed a t-test to determine if selfie behavior differed

between gender and age. The researcher also performed Pearson's correlations for each

hypothesis and a multiple regression using only individuals who captured selfies.

 To prepare the data for analysis, the researcher imported the data into Excel. The

researcher then scored each assessment (the BFI, the RSES, and the NPI). The scores for

each assessment were then entered into SPSS for analysis.

 Findings. There were 206 participants who completed the series of questionnaires

for this study. Out of 206 participants, 205 participant scores were scored. One

participant's survey data were discarded due to being incomplete. There were 170

females and 35 males who completed surveys ($M = 1.17$, $SD = 0.377$). Participants were

between 19 and 77 years of age ($M = 45.81$ years, $SD = 12.702$). Participant scores for

frequency of social media usage ranged from *very little* to *always*, with a mean score of

often ($M = 3.22$, $SD = 0.725$; *very little* $= 1$, *sometimes* $= 2$, *often* $= 3$, and *always* $= 4$).

Individual scores for number of selfies posted last week ranged from 0 to 12, with a mean

score of 1.01 selfies posted last week ($M = 1.01$, $SD = 2.027$). According to results

gathered from the demographic portion of the survey, individuals captured selfies for a

variety of reasons; these reasons included "needing a mirror", "capturing memories", and

"posting on social media". A paired-samples t-test was performed to see if there was a

difference between gender and age regarding selfie behavior, and there was no difference

between gender (M = 1.17, SD = 0.377) and age (M = 45.81, SD = 12.702,

$t(204)$ = 48.269, p = 0.01; see Table 2).

Table 1

Descriptive Statistics

	N	Minimum	Maximum	Mean	SD
Age	205	19	77	45.81	12.702
Gender	205	1	2	1.17	.377
Social media usage frequency	205	1	4	3.22	.725
Selfies taken in previous week	205	0	12	1.01	2.027
Valid N (listwise)	205				

Table 2

Paired Samples Statistics

		Mean	N	SD	Std. Error Mean
Pair 1	Age	45.81	205	12.702	.887
	Selfies taken in previous week	1.01	205	2.027	.142
Pair 2	Gender	1.17	205	.377	.026
	Selfies taken in previous week	1.01	205	2.027	.142

A series of Pearson's correlations were used to test the associations between (a)

the frequency of selfies an individual captured and extraversion scores on the BFI, (b) the

frequency of selfies an individual captured and agreeableness scores on the BFI, (c) the

frequency of selfies an individual captured and self-esteem scores on the RSES, and (d) the frequency of selfies an individual captured and scores on the NPI. No statistically significant relationship was found between the frequency of selfies and extraversion scores on the BFI ($r = 0.059$, $p > 0.01$; see Table 3 and Figure 1). There were also no statistically significant relationships between frequency of selfies and agreeableness scores on the BFI ($r = -0.098$, $p > 0.01$; see Table 4 and Figure 2) or frequency of selfies and self-esteem scores on the RSES ($r = 0.007$, $p > 0.01$; see Table 5 and Figure 3). However, there was a strong statistically significant relationship between frequency of selfies and scores on the NPI ($r = 0.259$, $p < 0.01$; see Table 6 and Figure 4), meaning the more selfies an individual captured, the higher his or her scores were on the NPI.

Table 3

Frequency of Selfie Posting and BFI Extraversion Score

		Frequency of selfie posting	BFI extraversion score
Frequency of selfie posting	Pearson correlation	1	.059
	Sig. (2-tailed)		.401
	N	205	205
BFI extraversion score	Pearson correlation	.059	1
	Sig. (2-tailed)	.401	
	N	205	205

Figure 1.

Simple Scatter with Fit Line of How many selfies did you take last week? by BFI Extraversion Score

R^2 Linear = 0.003

Figure 1 is a simple scatterplot with a fit line showing the data for the question, "How many selfies did you take last week?" presented by BFI extraversion score. R^2 linear = 0.003.

Table 4

Frequency of Selfie Posting and BFI Agreeableness Score

		Frequency of selfie posting	BFI agreeableness score
Frequency of selfie posting	Pearson correlation	1	-.098
	Sig. (2-tailed)		.161
	N	205	205
BFI agreeableness score	Pearson correlation	-.098	1
	Sig. (2-tailed)	.161	
	N	205	205

Figure 2.

Simple Scatter with Fit Line of How many selfies did you take last week? by BFI Agreeableness Score

Figure 2 is a simple scatterplot with a fit line showing the data for the question, "How many selfies did you take last week?" presented by BFI agreeableness score. R^2 linear = 0.010.

Table 5

Frequency of Selfie Posting and RSES Score

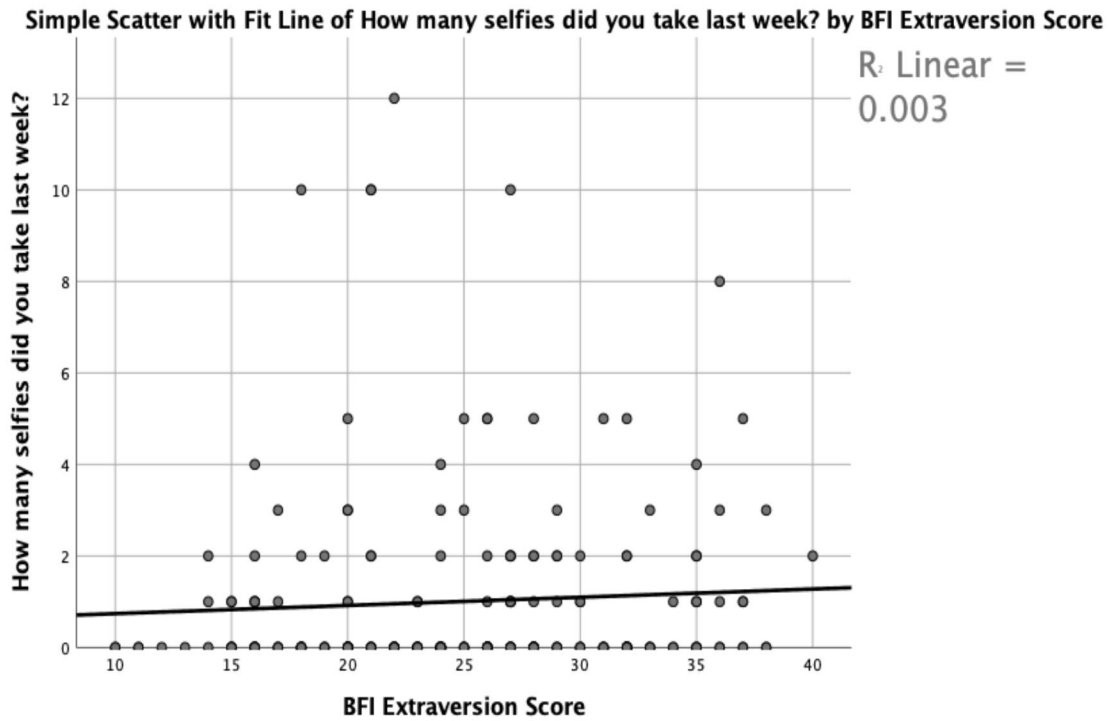|		Frequency of selfie posting	RSES score
Frequency of selfie posting	Pearson correlation	1	.007
	Sig. (2-tailed)		.915
	N	205	205
RSES score	Pearson correlation	.007	1
	Sig. (2-tailed)	.915	
	N	205	205

Figure 3.

Figure 3 is a simple scatterplot with a fit line showing the data for the question, "How many selfies did you take last week?" presented by RSES score. R^2 linear = 5.592E-5.

Table 6

Frequency of Selfie Posting and NPI Score

		Frequency of selfie posting	NPI score
Frequency of selfie posting	Pearson correlation	1	.259**
	Sig. (2-tailed)		.000
	N	205	205
NPI score	Pearson correlation	.259**	1
	Sig. (2-tailed)	.000	
	N	205	205

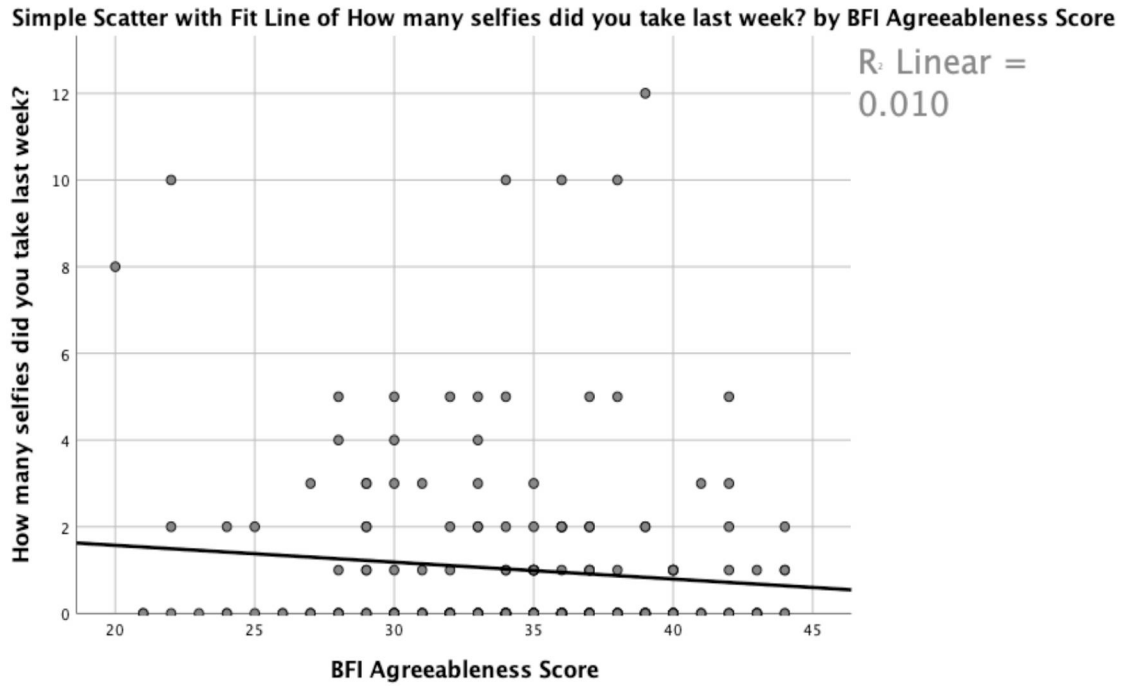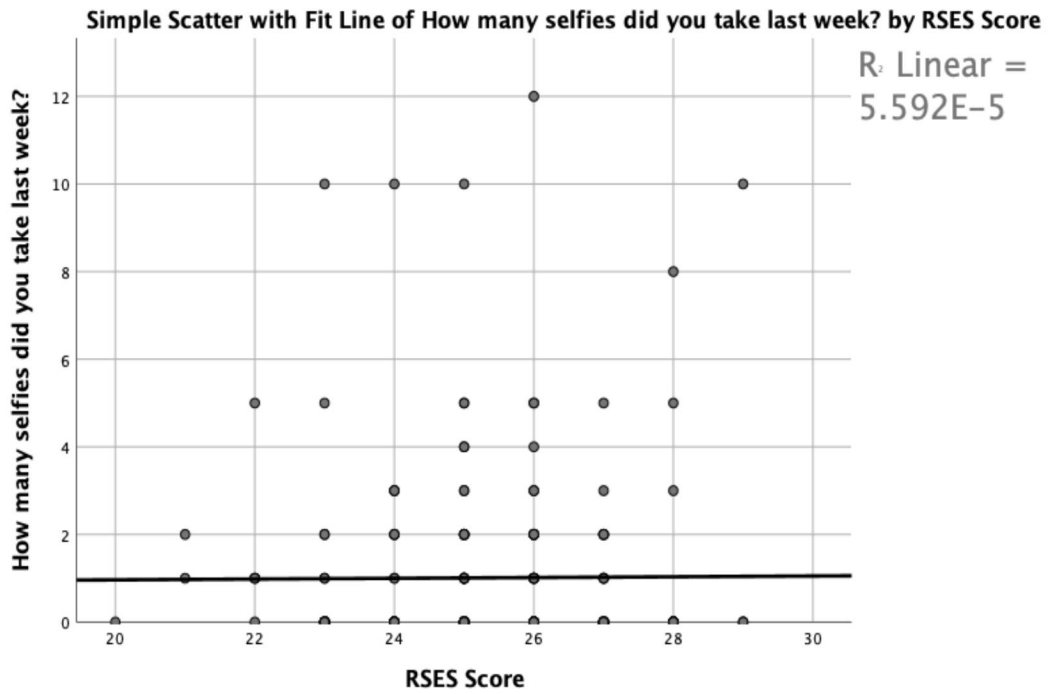*Note.* **Correlation is significant at the 0.01 level (2-tailed).

Figure 4.
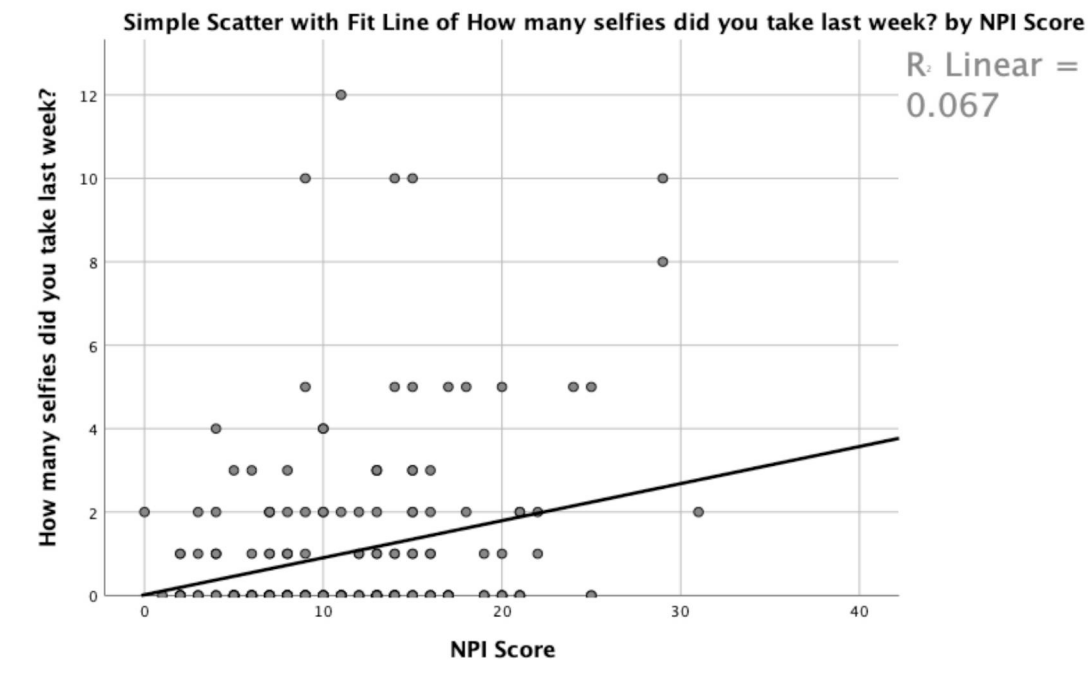
Figure 4 is a simple scatterplot with a fit line showing the data for the question, "How many selfies did you take last week?" presented by NPI score. R^2 linear = 0.067.

Additionally, a multiple regression analysis was performed to determine if scores on the BFI (extraversion and agreeableness) and RSES would be predictive of scores on the NPI. A statistically significant regression equation was found ($F[3, 201] = 25.495$, $p < 0.05$), with an R^2 of 0.276 (see figures 6 and 7). Participants' scores on the assessments predicted that NPI scores = 6.909 – (0.038 x RSES Score) – (0.460 x Extraversion BFI Score) – (-0.238 x Agreeableness BFI Score). Participants' NPI scores increased 0.038 points from RSES scores, 0.460 points from extraversion BFI scores, and -0.238 from agreeableness BFI scores (see figures 6 and 7 for the prediction equation model). The scores for extraversion BFI ($p < 0.05$), agreeableness BFI ($p < 0.05$), and the RSES ($p < 0.05$) are significant predictors to scores on the NPI, which supports the fifth

hypothesis of whether scores on the BFI (extraversion and agreeableness) and scores on the RSES would be predictive of scores on the NPI. Regression coefficients and standard errors can be found in Table 9.

Table 7

Model Summary[b]

Model	R	R square	Adjusted R square	Std. error of the estimate	Durbin-Watson
1	.525[a]	.276	.265	5.057	1.831

Note. [a] Predictors. (constant), RSES score, BFI extraversion score, BFI agreeableness score [b] Dependent variable. NPI score

Table 8

ANOVA[a]

Model	Sum of squares	df	Mean square	F	Sig.
Regression	1955.980	3	651.993	25.495	.000[b]
Residual	5140.342	201	25.574		
Total	7096.322	204			

Note. [a] Dependent variable. NPI score, [b] Predictors. (constant), RSES score, BFI extraversion score, BFI agreeableness score

Table 9

Coefficients[a]

Model	Unstandardized Coefficients B	std. error	Standardized coefficients beta	t	Sig.
(constant)	6.909	5.490		1.258	.210
BFI extraversion score	.460	.054	.521	8.501	.000
BFI agreeableness score	-.238	.071	-.207	-3.369	.001
RSES score	.038	.206	.011	.183	.855

Note. [a] Dependent variable. NPI score

Figure 5.

Histogram

Dependent Variable: NPI Score

Mean = 2.45E−16
Std. Dev. = 0.993
N = 205
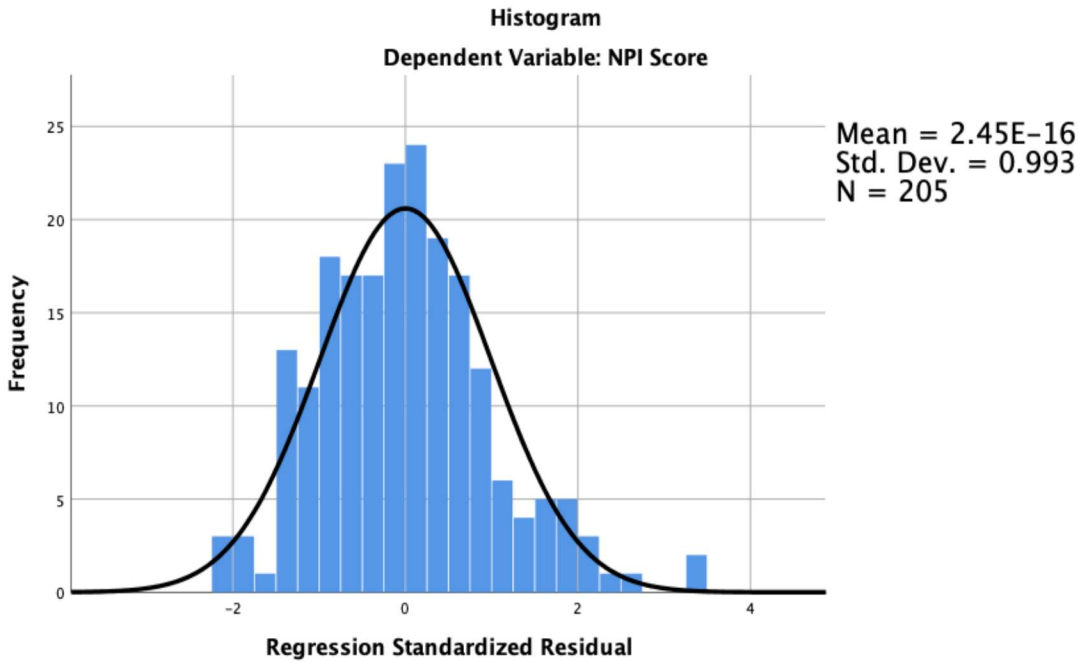
Figure 5 illustrates the bell-curve data distribution for the dependent variable (NPI score).

Figure 6.

Scatterplot

Dependent Variable: NPI Score
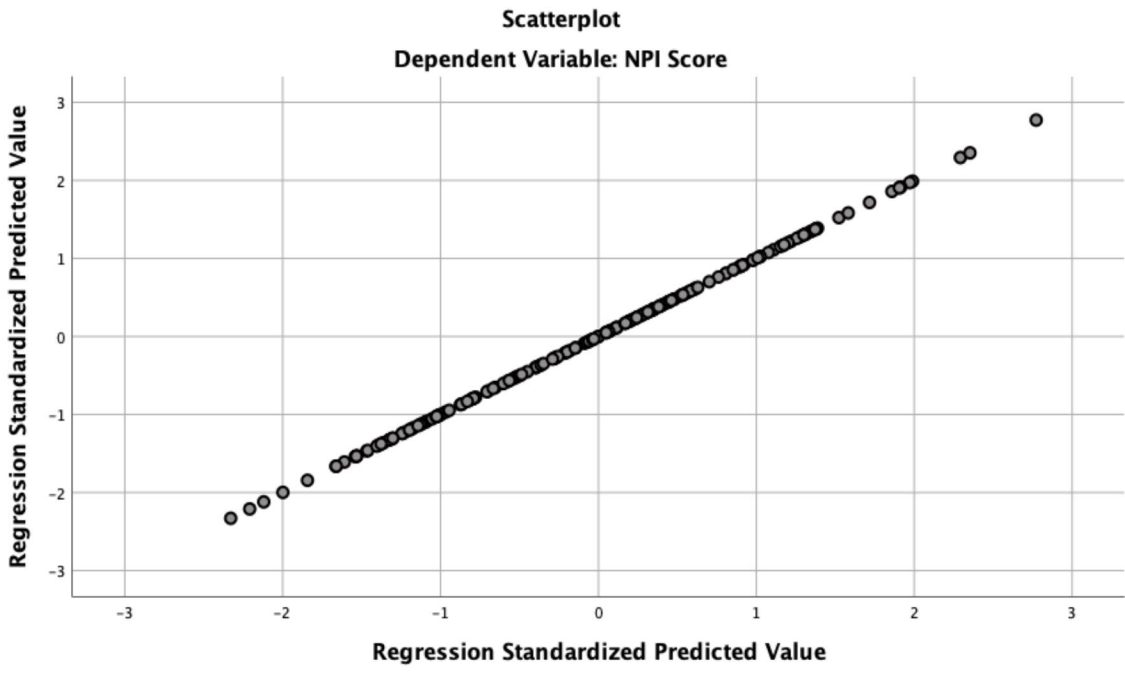
Figure 6 illustrates a scatterplot of the data for the dependent variable (NPI score).

Figure 7.
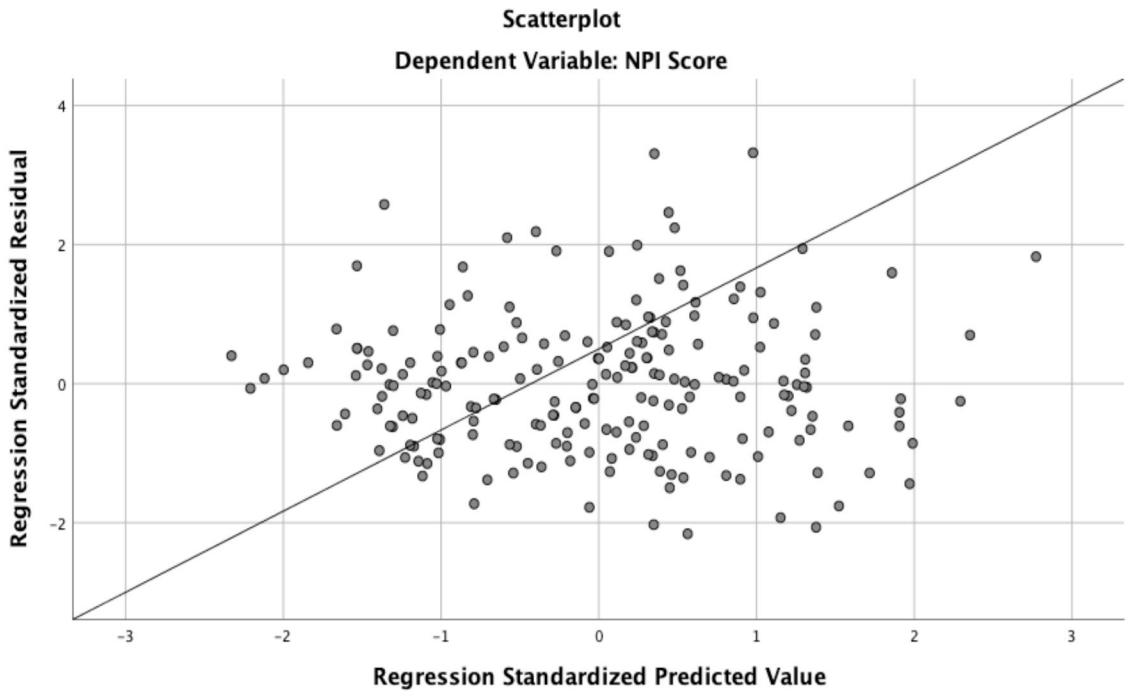
Figure 7 illustrates the predicted regression scatterplot for the dependent variable (NPI

score).

The researcher then analyzed all data using participants who only captured selfies

to see if there was a difference between the two groups (see Tables 10-14). The data did

not yield different results. Additionally, the data were grouped into 0-1 selfies captured

($N = 158$; see Tables 15-18) and 2+ selfies captured ($N = 47$; see Tables 19-22) to see if

there were any differences. Even though the data did not yield significant results, there

did appear to be differences in the relationship between the variables within the 0-1 selfie

and the 2+ selfie groups. For example, when comparing the 0-1 selfie group's BFI

extraversion scores and the 2+ selfie group's BFI extraversion scores, the first group has

a negative relationship whereas the second group has a positive relationship. There are

also differences in the type of relationship between the BFI agreeableness scores and

RSES scores between the two groups. The NPI scores between the two groups are consistent with each other in term of the type of relationship but different on the strength between the variables. Therefore, the frequency of selfies does impact the type of relationship between the scores on each of the following measures: the BFI extraversion score, the BFI agreeableness scores, the RSES scores, and the NPI scores.

Table 10

Descriptive Statistics (Selfie Only Group)

	N	Minimum	Maximum	Mean	*SD*
Age	73	19	69	40.88	12.075
Gender	73	1	2	1.12	.331
Social media usage frequency	73	1	4	3.25	.619
Selfies taken in previous week (selfie only group)	73	1	12	2.84	2.528
Valid *N* (listwise)	73				

Table 11

Selfies Taken (Selfie Only Group) and BFI Extraversion Score

		Selfies taken in previous week	BFI extraversion score
Selfies taken in previous week	Pearson correlation	1	-.042
	Sig. (2-tailed)		.725
	N (selfie only group)	73	73
BFI extraversion score	Pearson correlation	-.042	1
	Sig. (2-tailed)	.725	
	N (selfie only group)	73	73

Table 12

Selfies Taken (Selfie Only Group) and BFI Agreeableness Score

		Selfies taken in previous week	BFI agreeableness score
Selfies taken in previous week	Pearson correlation	1	-.186
	Sig. (2-tailed)		.116
	N (selfie only group)	73	73
BFI agreeableness score	Pearson correlation	-.186	1
	Sig. (2-tailed)	.116	
	N (selfie only group)	73	73

Table 13

Selfies Taken (Selfie Only Group) and RSES Score

		Selfies taken in previous week	RSES score
Selfies taken in previous week	Pearson correlation	1	.150
	Sig. (2-tailed)		.205
	N (selfie only group)	73	73
RSES score	Pearson correlation	.150	1
	Sig. (2-tailed)	.205	
	N (selfie only group)	73	73

Table 14

Selfies Taken (Selfie Only Group) and NPI Score

		Selfies taken in previous week	NPI score
Selfies taken in previous week	Pearson correlation	1	.299*
	Sig. (2-tailed)		.010
	N (selfie only group)	73	73
NPI score	Pearson correlation	.299*	1
	Sig. (2-tailed)	.010	
	N (selfie only group)	73	73

Note. * Correlation is significant at the 0.05 level (2-tailed).

Table 15

Selfies Taken (Group 0-1) and BFI Extraversion Score

		Selfies taken in previous week	BFI extraversion score
Selfies taken in previous week	Pearson correlation	1	.051
	Sig. (2-tailed)		.528
	N (group of 0-1 selfies)	158	158
BFI extraversion score	Pearson correlation	.051	1
	Sig. (2-tailed)	.528	
	N (group of 0-1 selfies)	158	158

Table 16

Selfies Taken (Group 0-1) and BFI Agreeableness Score

		Selfies taken in previous week	BFI agreeableness score
Selfies taken in previous week	Pearson correlation	1	.123
	Sig. (2-tailed)		.122
	N (group of 0-1 selfies)	158	158
BFI agreeableness score	Pearson correlation	.123	1
	Sig. (2-tailed)	.122	
	N (group of 0-1 selfies)	158	158

Table 17

Selfies Taken (Group 0-1) and RSES Score

		Selfies taken in previous week	RSES score
Selfies taken in previous week	Pearson correlation	1	-.129
	Sig. (2-tailed)		.105
	N (group of 0-1 selfies)	158	158
RSES score	Pearson correlation	-.129	1
	Sig. (2-tailed)	.105	
	N (group of 0-1 selfies)	158	158

Table 18

Selfies Taken (Group 0-1) and NPI Score

		Selfies taken in previous week	NPI score
Selfies taken in previous week	Pearson correlation	1	.002
	Sig. (2-tailed)		.979
	N (group of 0-1 selfies)	158	158
NPI score	Pearson correlation	.002	1
	Sig. (2-tailed)	.979	
	N (group of 0-1 selfies)	158	158

Table 19

Selfies Taken (Group 2+) and BFI Extraversion Score

		Selfies taken in previous week	BFI extraversion score
Selfies taken in previous week	Pearson correlation	2	-.132
	Sig. (2-tailed)		.376
	N (group of 2+ selfies)	47	47
BFI extraversion score	Pearson correlation	-.132	2
	Sig. (2-tailed)	.376	
	N (group of 2+ selfies)	47	47

Table 20

Selfies Taken (Group 2+) and BFI Agreeableness Score

		Selfies taken in previous week	BFI agreeableness score
Selfies taken in previous week	Pearson correlation	2	-.070
	Sig. (2-tailed)		.640
	N (group of 2+ selfies)	47	47
BFI agreeableness score	Pearson correlation	-.070	2
	Sig. (2-tailed)	.640	
	N (group of 2+ selfies)	47	47

Table 21

Selfies Taken (Group 2+) and RSES Score

		Selfies taken in previous week	RSES score
Selfies taken in previous week	Pearson correlation	2	.111
	Sig. (2-tailed)		.457
	N (group of 2+ selfies)	47	47
RSES score	Pearson correlation	.111	2
	Sig. (2-tailed)	.457	
	N (group of 2+ selfies)	47	47

Table 22

Selfies Taken (Group 2+) and NPI Score

		Selfies taken in previous week	NPI score
Selfies taken in previous week	Pearson correlation	2	.256
	Sig. (2-tailed)		.082
	N (group of 2+ selfies)	47	47
NPI score	Pearson correlation	.256	2
	Sig. (2-tailed)	.082	
	N (group of 2+ selfies)	47	47

Summary

The purpose of this study was to determine if there is a relationship between the frequency of capturing selfies and extraversion, agreeableness, and self-esteem. The researcher hypothesized that the relationship between frequency of selfies captured and extraversion, agreeableness, and self-esteem can be predictive of narcissistic traits and therefore can be utilized as another measurement to assess for narcissism. Based on the data collected, the findings did not support all of the hypotheses. The hypothesis that there would be a positive correlation between the frequency of selfies an individual captured and extraversion scores on the BFI was not supported ($r = 0.059$, $p > 0.01$). The

second hypothesis that there would be a negative correlation between the frequency of

selfies an individual captured and agreeableness scores on the BFI was also not supported

($r = -0.098$, $p > 0.01$). Also, the third hypothesis that there would be a positive correlation

between the frequency of selfies an individual captured and self-esteem scores on the

RSES was not supported ($r = 0.007$, $p > 0.01$). In summary, there was not a positive

correlation between frequency of selfies and individual captured and extraversion scores

on the BFI or self-esteem scores on the RSES. Also, there was not a negative correlation

between frequency of selfies an individual captured and agreeableness scores on the BFI.

However, the fourth hypothesis that there would be a positive relationship

between the frequency of selfies an individual captured and scores on the NPI was

supported ($r = 0.259$, $p < 0.01$). The results indicated that there was a statistically

significant relationship between the frequency of selfies an individual captured and

scores on the NPI. Additionally, the fifth hypothesis stating that scores on the BFI and

RSES would be predictive of scores on the NPI was supported, $F(3, 201) = 25.495$,

$p < 0.05$. The findings from the multiple regression analysis revealed that extraversion

BFI scores, agreeableness BFI scores, and RSES scores were predictive of NPI scores.

There were also no differences between age and gender in regards to selfie behavior or a

difference between individuals who captured selfies and individuals who did not capture

selfies and the assessments used.

Chapter Four

Discussion

      Interpretation. The purpose of this study was to explore if there is a relationship between the frequency of selfies an individual captures and each of the following: extraversion scores on the BFI, agreeableness scores on the BFI, RSES scores, and NPI scores. Additionally, the researcher wanted to determine if extraversion scores on the BFI, agreeableness scores on the BFI, and RSES scores could be predictive of NPI scores. The study findings revealed a statistically significant positive relationship between the frequency of selfies an individual captured and scores on the NPI, which is consistent with previous findings. Also, the researcher was able to determine through a multiple regression analysis that extraversion BFI scores, agreeableness BFI scores, and NPI scores could be predictive of scores on the NPI. Therefore, the researcher suggests that further research be conducted to determine if extraversion BFI scores, agreeableness BFI scores, and RSES scores could be used to produce a new inventory for narcissism.

      Limitations.

      Low sample size. The low sample size was a limitation of the study. There were only 205 participants in the study; therefore, the researcher might not have captured a thorough representation of the population. Additionally, a low sample size can increase the margin of error of the study and reduce the power of the study. A larger sample size would provide more reliable results. In addition, a percentage of the participants did not capture selfies, which might have skewed the data if the sample was larger, because the researcher was focused on gaining information about selfie behavior. It would be

important in the future to expand the sample size and to only study people who regularly capture selfies.

Self-esteem. Additionally, when analyzing the results, one should also consider how individuals might answer questions on each of the questionnaires. Individuals tend to answer questionnaires based on how they believe they should answer, or they answer questions to try and make themselves appear favorable. For this study, individuals might have been inflating their self-esteem scores in order to present themselves more favorably (Baumeister, Tice, & Hutton, 1989). Due to the self-esteem questions potentially leading individuals to answer in a method that would appear favorable for him or her, it would be interesting in future research if the self-esteem questions were scattered throughout the other questionnaires. It would also be interesting to determine if there was a self-esteem measurement available that was less direct in what the assessment was measuring in order to help with individuals answering more truthfully.

Demographics. Another potential limitation of the study might pertain to the demographics section. The researcher gathered information as to why an individual captures selfies, but no analysis was performed on this information. Therefore, the researcher could have examined the data in a descriptive way to gather more information as to why an individual captures selfies in the first place. The researcher could have performed a mixed methodology with a blend of qualitative and quantitative research to strengthen the overall study. The researcher also did not specify the difference between capturing selfies to have for one's self and capturing selfies with the intent to post on social media, so it is difficult to get a true understanding of a person's selfie-capturing behavior.

Narcissism inventory. Additionally, to fully determine whether a new measurement for narcissism can be created from this study, this study should be replicated and re-tested for reliability and validity in different parts of the United States of America and in different countries, and then the multiple regression analysis equations should be compared. In the study, the researcher found a statistically significant equation. But if, for example, 800 out of 1,000 studies do not produce a statistically significant equation, then perhaps the data from this study are unreliable. Conversely, if this study is replicated hundreds (or thousands) of times, and the overwhelming majority of the studies produce a statistically significant multiple regression analysis equation, then the researcher can be certain that an additional way to predict narcissism has been found.

Integration. There appears to be mixed results within the literature on the association between the frequency of selfies captured and both of the following variables: self-esteem and narcissism. Barry et al. (2015) determined that no statistically significant relationship existed between narcissism and selfies captured or self-esteem and selfies captured; however, the researcher did determine through this study that there was a relationship between narcissism and the frequency of selfies captured. The researcher believes there might have been a discrepancy between the results because there were fewer participants and because of the participant pool that was utilized for the study. Barry et al. (2015) recruited from an undergraduate psychology class at a university. Additionally, because the researcher's sample pool consisted of individuals who were using social media, they might have been less exposed to questions involving narcissism, while individuals from a psychology class might have had some exposure to narcissism.

Another study that Halpern, Valenzuela, and Katz (2016) conducted focused on the relationship between selfies and narcissism. The researchers discovered that levels of narcissism increased as the frequency of sharing photos grew (Halpern et al., 2016), which is also supported by the findings from this study. Furthermore, Halpern et al. noted that this positive correlation might have been due to the consistent, constructive reinforcement of and feedback on the selfies by an individual's followers. The researcher believes her results were obtained for similar reasons as Halpern et al. because when participants were asked why they captured selfies, they provided the following responses: "needing a mirror", "capturing memories", and "posting on social media". The posting on social media response will lead to feedback on the selfies by a person's social network followers.

According to Sorokowski et al. (2015), one's activity on online social networking sites can be predictive of narcissism in individuals. However, the researchers also noted inconsistencies in associating social media with narcissism due to the limiting nature of studying only selfie takers (Sorokowski et al., 2015). Sorokowski et al. determined that there was a significant positive correlation between selfies posted on social media sites and narcissism, which is consistent with the findings from this study: the relationship between capturing selfies and NPI scores. In this study, the researcher took the aforementioned research one step further in determining if one's frequency of selfies captured in combination with BFI and RSES scores were predictive of NPI scores.

Sorokowska et al. (2016) found a positive correlation between men's and women's selfie-sharing behavior on social media networks and social exhibitionism and extraversion. Additionally, Sorokowska et al. determined that women post more selfies

than men post because women are more willing to admit to capturing selfies, which is not consistent with the findings from this study. This study's findings revealed no difference between the two genders regarding selfie-capturing behavior. The researcher believes her results were inconsistent with previous findings because of the researcher's sample population. The researcher's sample population came from individuals who used social media, as that is how the survey was accessed. Conversely, in the study Sorokowska et al. conducted, participants were recruited from various universities and not via social media. Consequently, the two population samples were different, which might have led to the inconsistency of the findings.

Application to counseling and future directions. It would be important to develop another assessment to predict narcissism in individuals as an inventory for mental health professionals to use with their clients, because the term narcissism has a negative connotation to individuals. Given how destructive narcissistic traits (e.g., interpersonal exploitation, lack of empathy, self-centeredness, arrogance) can be in romantic relationships, family relationships, and work relationships, developing an assessment that is based on the scores from the BFI and RSES might represent a significant way to identify potential narcissists at work and in dating relationships. This could help people stay away from narcissists at work and in their relationships, and it might also be beneficial in the client/mental health professional relationship. Questions on the BFI and the RSES might be less offensive for an individual to answer than questions on an assessment with the word narcissism in the title, and it might also make it more difficult for clients to be able to manipulate the results of the assessment in their favor.

The mental health professional can use the new assessment to help with treatment by gathering information about a client in a less directive manner, in which the client would have less of an idea of what the mental health professional was trying to measure. Additionally, the questions on the BFI and the RSES use a Likert scale for measurement, whereas the NPI uses forced-choice questions, which could make a person more reluctant to answer the questions. Some of the questions a person could answer would be "I take a positive attitude towards myself", ranking from *strongly agree* to *strongly disagree* (a question from the RSES), versus a person having to answer the following question: "A. I am much like everybody else, or B. I am an extraordinary person" (a question from the NPI), which could be more difficult to answer.

Most people probably do not want to be subjected to taking an assessment called the Narcissistic Personality Inventory, but if scores from the BFI and RSES can be used instead, then mental health professionals might be able gather more information about individuals who are administered the BFI and RSES to find out aspects of an individual's personality. In addition, employers and dating websites might be able to include the BFI and RSES as part of their criteria in order to determine if an individual might be a good fit for a job, or in the case of a dating website, if a person has narcissistic-like personality traits.

Additionally, it would be beneficial to replicate this current study to help with reliability and validity to confirm if using the agreeableness and extraversion scores on the BFI as well as the RSES scores are predictive of scores on the NPI. An example replication study could be increasing the number of individuals in the study to at least 1,000 participants. Also, the researcher could set a much higher minimum criteria for the

number of selfies captured, and the researcher could play with the time frame in which

the individual captured the selfies. For example, the researcher could make a study with a

criteria consisting of at least 1,000 participants who have captured at least 10 selfies over

the last week, or 50 within the last month, as data from this study has suggested that there

are differences between the relationships of the scores on the BFI, RSES, and NPI, and

frequency of selfies captured. Therefore, it would be interesting to see with a larger

sample size if the frequency of selfies does in fact have a significant effect on the test

scores. Furthermore, the researcher could do a two-part study comparing at least 1,000

individuals who captured zero selfies in a week or under 10 selfies in a month and

compare their scores with at least 1,000 participants who had captured at least 20 selfies

in a week (or 60 selfies in a month, or whatever minimums the researcher wants to set)

and see if there is a statistically significant difference in the collective scores between the

two groups.

In addition to creating a new narcissism inventory, it is import to study the

personality traits common to individuals who capture selfies. It is important in the field of

psychology to gather information and gain an understanding behind the reasoning to why

individuals capture selfies and if there are common personality traits, because selfies

appear to be prevalent in people's lives. Once researchers understand the motivation

behind why an individual captures selfies, then researchers can begin to assess if the act

of capturing selfies is becoming a problem in the person's life and whether treatment

might be needed.

Conclusion

The purpose of this study was to determine if there is a relationship between the frequency of capturing selfies and extraversion, agreeableness, and self-esteem. The researcher hypothesized that the relationship between frequency of selfies captured and extraversion, agreeableness, and self-esteem can be predictive of narcissistic traits and therefore can be utilized as another measurement to assess for narcissism. It would be important to the field of psychology to have a new method to assess narcissism, because the assessments that are being utilized could cause individuals to answer the inventory in a way he or she views as favorable. A new inventory could take an indirect line of questioning to determine if the individual has narcissism-like traits without actually utilizing a narcissism personality inventory.

Previous researchers have already determined that there is a link between an individual's capturing selfies and narcissism; therefore, the researcher wanted to take what is known about the relationship between selfies and narcissism one step further by using the BFI and the RSES to see if the scores could be predictive of scores on the NPI. This study had similar findings but also some different results within the current body of literature on the association between the frequency of selfies captured and both of the following variables: self-esteem and narcissism.

The findings within the study did reveal a statistically significant positive relationship between selfie behavior and narcissism, and the analysis of the findings also suggest the possibility that analyzing selfie behavior using scores on the BFI (extraversion and agreeableness) and the RSES can be a predictive measurement of narcissism. It was determined through a multiple regression analysis that extraversion

BFI scores, agreeableness BFI scores, and RSES scores could be predictive of scores on the NPI.

Further testing and replication should be implemented with a greater sample size as well as analysis of the motivation behind why an individual captures a selfie to validate the reliability of using extraversion BFI scores, agreeableness BFI scores, and RSES scores as a predictive measure of scores on the NPI. Once more studies have been conducted to validate whether extraversion BFI scores, agreeableness BFI scores, and RSES can be predictive of scores on the NPI, the potentially the questions for the three scales can be used to officially create a new inventory to measure for narcissistic-like traits.

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Appendix A

Informed Consent

Impact of Social Media
Consent Form
Northwest University
Asha Madsen-Humeniuk, MA

You are invited to participate in a research study conducted by Asha Madsen-Humeniuk, MA. at Northwest University. The study is being conducted as a requirement for Asha's dissertation. The purpose of this study is to gather information about an individual's usage of social media and its potential impact on an individual.

If you agree to participate in the study you will complete a series of 4 short questionnaires that should take approximately 10-20 minutes to complete via Qualtrics.

There are minimal risks associated with participation. Some individuals may be uncomfortable answering personal questions. You may choose not to participate in this research study. The benefit of taking part in this study is the opportunity to participate in the research process as a research subject. This study has limited risks, which may include embarrassment when answering questions on the surveys. If the survey becomes a source of distress, please stop the survey and contact the crisis line at 866-4CRISIS (427-4747), text HOME to 741741, or find a counselor at www.psychologytoday.com for support.

Participation in this study is voluntary. You may choose not to participate in this study at any time and for any reason. There will not be any negative consequences for you if you refuse to participate. You may refuse to answer any questions asked. All responses are anonymous. By turning in the questionnaire, you are giving permission to use your responses in this research study.

The results from this study will be presented in Asha's dissertation with potential to be published and/or presented at a conference or meeting of psychology professionals in Summer 2019. All data forms will be destroyed on or before August 31, 2025.

If you have any questions about this study, contact Asha Madsen-Humeniuk, MA at asha.madsen12@northwestu.edu. If you have further questions, please contact my faculty advisor Dr. Kim Lampson, PhD at kim.lampson@northwestu.edu. You may also contact the Chair of the Northwest University IRB, Dr. Molly Quick, at molly.quick@northwestu.edu or 425-889-5304.

Thank you for your consideration of this request.

Asha Madsen-Humeniuk, MA
Asha.madsen12@northwestu.edu

Dr. Kim Lampson, PhD
Kim.lampson@northwestu.edu

Appendix B

Demographics Questionnaire

Please answer the following questions:

1. What is your age?

2. What is your gender?
    Male   Female
3. How often do you use social media websites (e.g. Facebook)?
    Very little   Sometimes   Often   Always
4. How many selfies did post take last week?

5. What is your reason for taking selfies?

Appendix C

Narcissistic Personality Inventory (NPI)

Please answer the following questions:

1. A. I have a natural talent for influencing people.
    B. I am not good at influencing people.

2. A. Modesty doesn't become me.
    B. I am essentially a modest person.

3. A. I would do almost anything on a dare.
    B. I tend to be a fairly cautious person.

4. A. When people compliment me I sometimes get embarrassed.
    B. I know that I am good because everybody keeps telling me so.

5. A. The thought of ruling the world frightens the hell out of me.
    B. If I ruled the world it would be a better place.

6. A. I can usually talk my way out of anything.
    B. I try to accept the consequences of my behavior.

7. A. I prefer to blend in with the crowd.
    B. I like to be the center of attention.

8. A. I will be a success.
    B. I am not too concerned about success.

9. A. I am no better or worse than most people.
    B. I think I am a special person.

10. A. I am not sure if I would make a good leader.
    B. I see myself as a good leader.

11. A. I am assertive.
    B. I wish I were more assertive.

12. A. I like to have authority over other people.
    B. I don't mind following orders.

13. A. I find it easy to manipulate people.
    B. I don't like it when I find myself manipulating people.

14. A. I insist upon getting the respect that is due me.
    B. I usually get the respect that I deserve.

15. A. I don't particularly like to show off my body.
    B. I like to show off my body.

16. A. I can read people like a book.
    B. People are sometimes hard to understand.

17. A. If I feel competent I am willing to take responsibility for making decisions.
    B. I like to take responsibility for making decisions.

18. A. I just want to be reasonably happy.
    B. I want to amount to something in the eyes of the world.

19. A. My body is nothing special.
    B. I like to look at my body.

20. A. I try not to be a show off.
    B. I will usually show off if I get the chance.

21. A. I always know what I am doing.
    B. Sometimes I am not sure of what I am doing.

22. A. I sometimes depend on people to get things done.
    B. I rarely depend on anyone else to get things done.

23. A. Sometimes I tell good stories.
    B. Everybody likes to hear my stories.

24. A. I expect a great deal from other people.
    B. I like to do things for other people.

25. A. I will never be satisfied until I get all that I deserve.
    B. I take my satisfactions as they come.

26. A. Compliments embarrass me.
    B. I like to be complimented.

27. A. I have a strong will to power.
    B. Power for its own sake doesn't interest me.

28. A. I don't care about new fads and fashions.
    B. I like to start new fads and fashions.

29. A. I like to look at myself in the mirror.
    B. I am not particularly interested in looking at myself in the mirror.

30. A. I really like to be the center of attention.
    B. It makes me uncomfortable to be the center of attention.

31. A. I can live my life in any way I want to.
    B. People can't always live their lives in term of what they want.

32. A. Being an authority doesn't mean that much to me.
    B. People always seem to recognize my authority.

33. A. I would prefer to be a leader.
    B. It makes little difference to me whether I am a leader or not.

34. A. I am going to be a great person.
    B. I hope I am going to be successful.

35. A. People sometimes believe what I tell them.
    B. I can make anybody believe anything I want them to.

36. A. I am a born leader.
    B. Leadership is a quality that takes a long time to develop.

37. A. I wish somebody would someday write my biography.
    B. I don't like people to pry into my life for any reason.

38. A. I get upset when people don't notice how I look when I go out in public.
    B. I don't mind blending into the crowd when I go out in public.

39. A. I am more capable than other people.
    B. There is a lot that I can learn from other people.

40. A. I am much like everybody else.
    B. I am an extraordinary person.

Appendix D

Big Five Inventory (BFI)

Please answer the following questions:

Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
1	2	3	4	5

I see myself as someone who...

1. __ Talkative
2. __ Tends to find fault in others
3. __ Does a thorough job
4. __ Is depressed, blue
5. __ Is original, comes up with new ideas
6. __ Is reserved
7. __ Is helpful and unselfish with others
8. __ Can be somewhat careless
9. __ Is relaxed, handles stress well
10. __ Is curious about many different things
11. __ Is full of energy
12. __ Starts quarrels with others
13. __ Is a reliable worker
14. __ Can be tense
15. __ Is ingenious, a deep thinker
16. __ Generates a lot of enthusiasm
17. __ Has a forgiving nature
18. __ Tends to be disorganized
19. __ Worries a lot
20. __ Has an active imagination
21. __ Tends to be quiet
22. __ Is generally trusting

23. __ Tends to be lazy
24. __ Is emotionally stable, not easily upset
25. __ Is inventive
26. __ Has an assertive personality
27. __ Can be cold and aloof
28. __ Perseveres until the task is finished
29. __ Can be moody
30. __ Values artistic, aesthetic experiences
31. __ Is sometimes shy, inhibited
32. __ Is considerate and kind to almost everyone
33. __ Does things efficiently
34. __ Remains calm in tense situations
35. __ Prefers work that is routine
36. __ Is outgoing, sociable
37. __ Is sometimes rude to others
38. __ Makes plans and follows through with them
39. __ Gets nervous easily
40. __ Likes to reflect, play with ideas
41. __ Has few artistic interests
42. __ Likes to cooperate with others
43. __ Is easily distracted
44. __ Is sophisticated in art, music, or literature

Appendix E

Rosenberg Self-Esteem Scale (RSES)

Please answer the following questions:

1. I feel that I am a person of worth, at least on an equal plane with others.

    Strongly Agree   Agree   Disagree   Strongly Disagree

2. I feel that I have a number of good qualities.

    Strongly Agree   Agree   Disagree   Strongly Disagree

3. All in all, I am inclined to feel that I am a failure.

    Strongly Agree   Agree   Disagree   Strongly Disagree

4. I am able to do things as well as most other people.

    Strongly Agree   Agree   Disagree   Strongly Disagree

5. I feel I do not have much to be proud of.

    Strongly Agree   Agree   Disagree   Strongly Disagree

6. I take a positive attitude toward myself.

    Strongly Agree   Agree   Disagree   Strongly Disagree

7. On the whole, I am satisfied with myself.

    Strongly Agree   Agree   Disagree   Strongly Disagree

8. I wish I could have more respect for myself.

    Strongly Agree   Agree   Disagree   Strongly Disagree

9. I certainly feel useless at times.

    Strongly Agree   Agree   Disagree   Strongly Disagree

10. At times, I think I am no good at all.

    Strongly Agree   Agree   Disagree   Strongly Disagree