



Selfie or Selfish? The Relationship Between Social Media Use and Narcissism Levels

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## ABSTRACT

The present study sought out to examine the relationship between social media use and narcissism levels. Research on this topic has become increasingly more popular in the last number of years, especially in the rise of people using social media in their daily lives. The current study aimed to expand on past research. The three main hypotheses for this study were (1) High social media use is related to higher levels of narcissism, (2) There is a gender difference in how social media affects levels of narcissism, and (3) Different social media sites are related to higher narcissism levels. A total of 196 participants took part in an online survey containing questionnaires on their daily social media use, narcissism levels, and selfie taking and posting habits. Pearson's correlations presented no significant relationships between social media use and narcissism, as well as no significant relationships between selfie taking habits and narcissism. T-Tests found no significant relationship between gender and narcissism, although there was a significant relationship between gender and social media use. Finally, a standard multiple regression revealed that narcissism can be predicted by both social media use and gender combined. Implications and suggestions for future research are discussed.

*Keywords:* narcissism; social media; social media use; gender differences; selfie taking; social media sites

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## INTRODUCTION

### **Narcissism**

Narcissism in literature has greatly accelerated in recent years, especially in relation to social media. Sigmund Freud described the term narcissism as the attitude of a person who treats their own body in the same way the body of a sexual object is said to be treated – by getting complete satisfaction from looking at and touching the object (Freud, 1914). Narcissism can be theorised as the ability to maintain a positive self image (Pincus et al., 2009). It can range from healthy, to pathological, to the enduring narcissistic personality disorder (NPD), and identified by degree of severity, dominance of aggression versus shame, and by the extent to which its manifestations are overt or internally hidden (Maj, Asiskal, Mezzich & Okasha, 2005). Characteristics of narcissism are similar to those of psychopathy and antisocial personality disorder, such as a lack of anxiety, dominance, aggression and impulsivity (Kelsey, Ornduff, McCann & Reiff, 2003). According to the DSM 5, features of NPD is a persistent pattern of lavishness, a need for admiration, and lack of empathy (Skodol, Bender & Morey, 2014). Narcissists also have a sense of self-importance, low communication with others, and feelings of entitlement (Brown, Budzek, & Tamborski, 2009).

There are many different types of narcissism, two of which are overt and covert narcissism. Overt narcissists experience externalising behaviours, such as arrogance, exaggerated self-esteem, aggression and grandiosity (Ronningstam, 2009) and has shown to be related to proactive and reactive aggression (Fossati, Borroni, Eisenberg & Maffei, 2010). On the other hand, covert narcissists experience more internalising behaviours, such as vulnerability, lower self-esteem and hypersensitivity (Gabbart,

2009) and is related to only reactive aggression (Fossati, Borroni, Eisenberg & Maffei, 2010). Other forms of narcissism include hypersensitive and grandiose narcissism. Hypersensitive, or vulnerable, narcissism is associated with introversion, defensiveness and avoidance (Miller et al., 2011; Hart et al., 2017), and grandiose narcissism is often associated with extroversion (Miller et al., 2011).

### **Influences of Narcissism**

**Age.** Age has been recognised as an influence on the level of narcissism in some individuals, as it can decrease from young adulthood to being middle aged (Wilson & Sibley, 2011). This can be due to the persons career and family pathways (Wetzel, Grijalva, Robins & Roberts, 2020). On the other hand, when looking at the changes of narcissism in adults over 25 years, it was found that hypersensitive narcissism decreased, while willfulness narcissism, which is similar to grandiose narcissism, did not change due to age (Cramer, 2011).

**Gender.** Along with age, gender has been widely researched as a potential influence of a person's narcissism levels. It is widely believed that men are more narcissistic than woman, as per Grijalva et al. (2015), while Freud (1914) originally believed that women were more narcissistic than men, based on his belief that women were more interested in their physical appearances. While there is little research on gender differences in narcissism overall, there has been research to show gender differences in different forms of narcissism, for example, women were shown to score higher in vulnerable narcissism than males (Valashjardi, MacLean & Charles, 2020). A study by Ryan, Weikel and Sprechini (2008) showed that in relationships, entitlement type narcissism was correlated with sexual coercion in women, while covert narcissism was correlated with physical assault in men.



**Early Development.** As discussed above, age and gender can have a significant influence on narcissism. This poses the question if narcissism can be influenced at a young age. In early development, overparenting has been found to potentially cause narcissism. Overparenting, or sometimes referred to as “helicopter parenting”, is characterised by parents over-involvement in their childrens lives, although the parents may believe that their intentions are good (Alexander, 2019). Several studies have concluded that overparenting can be significantly correlated to narcissism for the child (Winner & Nicholson, 2018; van Schie, Jarman, Huxley & Grenyer, 2020). Parents overvaluation and inflated views of their child can also lead to future narcissism (Brummelman et al., 2015), as the child grows up with their parents overly complimenting and praising them.

**Relationships.** In romantic relationships, the goal of narcissists is not to achieve positive long-term relational outcomes; instead they use their relationships to look popular, successful, and to create a high social status in the short term (Buffardi & Campbell, 2008). When looking for a romantic partner, Campbell (1999) found that narcissists are shown to be more attracted to those who are more self-orientated than those who are more other-orientated, as well as being more attracted to admiring and highly positive people rather than more caring people. Narcissism can greatly effect relationships, even in a negative way. Campell and Foster (2002) found that narcissists admitted to being less committed than their partners in their relationships, which was arbitrated by both their perception of different relationships and their attention to different romantic partners.

## **Social Media**

Narcissism has also been linked with the topic of social media, for example, the gender differences in the relationship between narcissism and selfie-posting (Arpaci, Yalçın, Baloğlu & Kesici, 2018). Within the last 10 years, social media has roughly gained 2 billion users (Wang et al., 2015) on over 4,000 active social media sites (Ezumah, 2013). In 2015, it was found that 65% of American adults use social media (Perrin et al., 2015). In 2016, it was found that Facebook had more than 1.09 billion users daily, Instagram had more than 400 million users monthly, Twitter had 310 million users monthly, and LinkedIn had more than 433 million active users (Hawi & Samaha, 2016). Popular uses for social media are relaxation, communicatory utility, convenience utility, expression of opinion, and knowledge about others (Whiting & Williams, 2013).

## **Effects of Social Media**

**Positive Effects.** Social media is considered a useful tool that has many benefits, such as social connectivity, social involvement, information attainment, and entertainment (Khan, Swar & Lee, 2014). It has been found to be helpful among patients by benefitting patient engagement and empowerment and community building (Househ, Borycki & Kushniruk, 2014). It has also benefitted adolescents in finding like-minded people their own age online and helps them feel less lonely and more confident (Uhls, Ellison & Subrahmanyam, 2017). Social media can also be used as a tool to spread positivity and good news. For example, a study by Bonnevie et al. (2020) showed that when 177 social media influencers promoted a flu vaccine campaign, it ended in a significant increase in positive beliefs of the flu vaccine in the general public. Halpern, Valenzuela and Katz (2017) showed that sharing political information on

Facebook and Twitter leads to higher levels of participation through collective and non-collective efficacy.

It is also a very useful tool for advertising. Okazaki and Taylor (2013) found that, in a study conducted by the University of Massachusetts Dartmouth, 73% of companies have an official corporate account on Twitter, while 66% have a corporate account on Facebook. Social media advertisements have a positive effect on consumer's views of social media advertising, which can influence their online shopping habits (Van-Tien Dao, Nhat Hanh Le, Ming-Sung Cheng & Chao Chen, 2014). For example, companies who have Super Bowl advertisements found that posting the adverts on social media prior to the Super Bowl increased public engagement with the advertisement, as social media users would like and share it with others (Burton, Mueller, Gollins & Walls, 2019).

**Negative Effects.** While social media use can lead to positive outcomes, the negatives of social media have also come to light as social media use increases among the public. When speaking on the topic of social media, David Letterman quoted "It seems like a valuable tool that has turned against us" (Bonfiglio, Ritchie & Steed, 2018-2020). Many studies have been conducted to show the accuracy of this statement. Student populations have been the focus of some studies to show the negative effects of social media. College students are exposed to technology and social media almost everyday (Browning, Gerlich, & Westermann, 2011), and studies have shown that this can have a negative impact on academic performances. Paul, Baker and Cochran (2012) found a negative relationship between the students academic performances and their increased time on social media.

This topic has sparked the debate that victimisation of young people online has a greater impact on them than victimisation which occurs in person (Slonje et al. 2013). It has been identified that social media has a significant effect on the mental health of children and young people, specifically with self-esteem and well-being due to cyberbullying issues (Richards & Caldwell, 2015). Barry, Briggs and Sidoti (2019) have also found that parents viewed their children as more maladjusted after their children experienced aggression and victimisation online. The studies discussed have highlighted the clear victimisation that young people on social media are at risk too.

Overuse of social media can lead to many symptoms of addiction, such as negative consequences, preoccupation, and withdrawal (Griffiths, Kuss, & Demetrovics, 2014). Further, social media addiction can cause low academic performances (Hou et al., 2019) and low self-esteem (Hawi and Samaha, 2016) in university students, while also being highly associated with neuroticism (Margengo, Poletti & Settanni, 2020). Overuse of social media has risen during the current Covid-19 pandemic, as people have admitted to using social media more frequently than ever due to lockdown restrictions (Kashif, Rehman & Javed, 2020).

### **Narcissism and Social Media**

It is suggested that narcissists rely on social media to develop a positive self-image online due to social media being the “perfect source” for narcissists to receive attention from a large number of people (Kim & Jang, 2018). A study conducted by Singh, Farley and Donahue (2018) found that narcissism was positively correlated with behaviours on social media, such as frequency of selfie posting, perceived attractiveness of selfies, along with frequency of tagging, commenting, and liking on

social media posts. Frederick and Zhang (2019) found that there was not a significant relationship between narcissism and social media, but narcissism and self-consciousness were correlated. While social media and narcissism have been found to affect each other, Zia and Malik (2019) discovered that introversion, as well as narcissism, were found to be predictors for social media use. The studies mentioned above show how narcissism, as well as other factors, affect behaviours on social media, while nothing is mentioned on whether social media affects narcissism levels.

**Gender Differences.** A study by Martin (2020) demonstrates that both males and female's competitiveness and narcissism influence the type of photos that they post on social media, whether it be athletic, sexual or attractive photos. Frequent travellers who experience envy and narcissism are more likely to post selfies directly and through self-promotion, according to the study by Taylor (2020). Similar to the studies in the previous paragraph, these studies highlight how narcissism effects behaviour on social media, but not if social media effects narcissism.

**High Social Media Use and Narcissism.** Social media and narcissism have been linked together in research, showing that narcissism has an effect on social media use and behaviour, in the way that narcissistic people use social media for attention seeking (Hawk, van den Eijnden, van Lissa & ter Bogt, 2019). Lee and Sung (2016) indicated that those with a higher level of narcissism were more inclined to post selfies online due to the positive feedback they would hope to receive by their followers. Sorokowski et al. (2015) also found that the frequent of selfie-posting significantly influenced the levels of narcissism in men. Similarly, Arpacı, Yalçın, Baloğlu, and Kesici (2018) discovered that high narcissism levels were significantly correlated to a

higher frequency of selfie-posting in only men and not women, although women were found to spend more time on social media and take more selfies.

It was already mentioned that due to the current pandemic, social media use has significantly increased due to global lockdowns and the public being restricted to their homes. Due to increased social media use, a study by Gao et al. (2020) during this pandemic found that those who were more frequently exposed to social media reported higher levels of anxiety and a combination of depression and anxiety. With these results in mind, it could be speculated that this heightened social media use due to Covid-19 could increase levels of narcissism as well as combined depression and anxiety.

**Different Social Media Sites and Narcissism.** It is evident that there is some form of connection between narcissism and social media use, but it is not known if one particular social media site may cause higher narcissism levels or if those with high narcissism levels are more inclined to use a particular social media site. Panek, Nardis and Konrath (2013) suggest that in regard to college students, those who post on Twitter are more associated with the superiority (i.e., believing one is better than others) component of narcissism. This study also discovered that those who post on Facebook are more associated with the exhibitionism (i.e., showing off) component (Panek, Nardis & Konrath, 2013). In this study, college students as a whole were found to use Facebook and Twitter as a means of “showing off”, while adults use these sites to focus on their own appearance (Panek, Nardis & Konrath, 2013). This study shows that although there is not one particular social media site that those with higher narcissism levels are attracted to, different social media sites can be related to a certain component of narcissism.

In regard to Instagram, it could possibly be predicted that it can be related to high levels of narcissism, due to the fact that Instagram's main use is to post pictures. Sheldon and Bryant (2016) found that in relation to narcissism, there was a positive relationship between the use of Instagram to come off as "cool". On the contrary, Paaramboukis, Skues and Wise (2016) found only a weak relationship between narcissism and Instagram use. Again, this shows that Instagram is not necessarily correlated with higher narcissism levels and those with higher levels of narcissism are not particularly attracted to Instagram more than other sites.

**Selfie Taking and Narcissism.** It has been noticed by Weiser (2015) and Halpern, Valenzuela and Katz (2016) that there is a recurring theme in literature about how narcissism influences social media behaviour, and, similarly to Lee and Sung (2016), both found that narcissism was significantly correlated to the frequency of taking and posting selfies. There is a lack of research found on whether social media use directly effects levels of narcissism, but more on how selfie posting behaviours is correlated to narcissism levels. If it can be shown that social media increases narcissism levels, social media users can be informed about this relationship, in the hopes that users will be more aware of how they respond and behave on social media.

### **Current Study**

This research topic was motivated by personal interest and important observations of social media and narcissism in both research, such as the McCain and Campbell (2016) paper on narcissism and social media use, and in real life. Since the popularity of social media has grown, there has been extensive research conducted to show both the positive and negative effects of social media. The majority of research

displays that social media has a negative effect on its users, such as its addictive nature (Siddiqui & Singh, 2016). Social media has been known to cause mental illnesses, such as depression and anxiety (Gao et al., 2020). The topic of the harm of social media is being brought to light every day.

The aim of this present study is to fill the gaps in research by examining effects of social media use on levels of narcissism. Does social media increase levels of narcissism? Does one particular social media site increase narcissistic levels more than others? Also, is there a difference in gender on how social media effects narcissistic levels? With that being said, the hypotheses for this current study is that:

- (H1) High social media use is related to higher levels of narcissism.
- (H2) There is a gender difference in how social media effects levels of narcissism.
- (H3) Different social media sites are related to higher narcissism levels.



## METHODS

### Participants

Participants were recruited for this survey using the convenience sampling method as they were all recruited through online engagement, due to the nature of the COVID-19 pandemic. A link for the survey, along with a brief description, was distributed through Instagram, Snapchat, Twitter and WhatsApp. The participants were highly encouraged to send the survey link to anyone they felt would be willing to participate, as it was aimed to collect 200 responses. Before taking part in the survey, it stated to any potential participants that they must be over 18 years of age, due to ethical considerations.

The sample size for this study consisted of 196 participants. These participants were split by gender, which included 81 males and 115 females. There were no participants who answered non-binary or other for their gender. The mean age of the participants was 26.16 years of age (SD = 10.47), ranging from 18 years to 60 years of age.

### Measures

**Demographics.** The participants were required to state their gender (female, male, non-binary, other). The participants were also required to indicate their age. Participants were then required to indicate how often they use the internet, how many hours on average they use the internet daily, and which social media site they use the most (Facebook/Facebook Messenger, Instagram, WhatsApp, Snapchat, Twitter).

**Social Media Use.** The first scale included in this study was the Shi, Luo, Yang, Liu and Cai (2014) Social Networking Site (SNS) Featured Usage Scale. This scale was used to measure the participants daily social media usage and habits. This scale is made up of 13 questions in relation to social media usage, for example, “How frequently do you update your profile picture?” To answer these questions, a 7-point Likert scale was used, while one question was answered on a 4-point Likert scale. In the original study for this scale by Shi, Luo, Yang, Liu and Cai (2014), they showed that the SNS Featured Usage Scale is highly reliable and valid ( $\alpha = 0.82$ ) which is why this scale was chosen for this study. The Cronbach’s alpha for this scale in the current study was  $\alpha = .74$ , showing that this scale had a high reliability for this study and was useful in order to successfully conduct this study.

**Narcissism.** The second scale that was used was the Ames, Rose and Anderson (2006) NPI-16, which is a shorter version of the Raskin and Terry (1988) 40-item Narcissistic Personality Inventory (NPI-40). The NPI-16 was used instead of the NPI-40 due to the short amount of time it takes to complete the NPI-16. This was to eliminate the possibility of participants clicking out of the survey during participation because of the length of time it requires to complete. This scale contains 16 sets of paired statements, for example “I am comfortable being the centre of attention” and “It makes me uncomfortable to be the centre of attention”. The participant was required to click the statement that they felt most represents their personality. The method in which this inventory is scored is that one statement in each pair is labelled as “narcissistic”, but the participant is unaware of which statement this is, as the statements are in alternating pairs. The Ames, Rose and Anderson (2006) study reported that the NPI-16 has a high reliability with a Cronbach’s alpha of .72 and it was shown to

correlate strongly with the Raskin and Terry NPI-40, which was the reason behind the use of this scale in this current study. The Cronbach's alpha in this current study was  $\alpha = .73$ , also showing that the NPI-16 had a good reliability for this study.

**Selfie Taking and Posting Questionnaire.** The final scale that was used in this study was a self-made questionnaire which focused on addressing general social media use, selfie taking and picture posting habits. A pilot study was conducted on four participants for the final section of the questionnaire as these questions were self-made. All four of the participants found this section of the questionnaire straightforward to read, answer and did not find that the questions were too invasive. The reason behind creating this questionnaire was due to research, such as Lee and Sung (2016) and Sorokowski et al. (2015), which is discussed in section 1.5.4, which showed how those with higher levels of narcissism are more inclined to take and post more selfies on social media. This questionnaire took inspiration from past selfie taking and behaviour questionnaires, such as Singh (2016) and Paris and Pietschnig (2015). The researcher noticed that these questionnaires were lacking in up-to-date questions, such as asking about photo editing habits or the use of filters. For this reason, this self-made questionnaire contains these missing questions, for example, "How often to you use photo editing apps?" The questions were answered with 3-point, 4-point, 5-point, 6-point and 7-point Likert scales. This scale resulted in having a Cronbach's alpha of .73, meaning that this is a reliable scale for this study.

### **Design and Analyses**

The research design of this study was a quantitative correlational design. The predictor variables in this study were social media use and gender, while the criterion variable is the level of narcissism. Three analyses were conducted to investigate the

hypotheses. A Pearson's correlation was conducted in order to explore the correlation between social media use and narcissism levels. A standard multiple regression was conducted to determine if narcissism levels were influenced by both gender and social media use. Two independent samples T-Tests were also conducted in order to discover a comparison of narcissism levels and social media use between males and females. A final Pearson's correlation was conducted to investigate if there is a positive relationship between selfie taking and posting habits and narcissism levels. While this is not a hypothesis, this analysis was conducted as an exploration to test the self-made Selfie Taking and Posting Habits Questionnaire.

### **Procedure**

Participants were invited to anonymously take part in this online survey through online engagement. A link to the survey that was made through Google Forms along with a message to invite participants to help with my research. This was posted on Instagram, Snapchat and Twitter. The link and invitation message were also sent via researchers personal group chats to allow participants share the survey link with others. The link contained an information form about the nature of the survey (see Appendix A), a consent form (see Appendix B) along with the survey itself (see Appendix C). All participants were encouraged to share the survey with others.

When the participant clicked into the link and read the information form and consent form, they were then able to start the survey. The survey was split into four sections. The first section contained questions about the participant's demographics, such as age bracket and gender. The second section then contained the Social Networking Site (SNS) Featured Usage Scale. These questions contained a statement

and the participant answered how relevant the statement was to them. The third section contained the Narcissistic Personality Inventory. Similar to the second section, the participants were presented with two statements and they were required to click the statement that they felt described themselves the most. The final section was the self-made questionnaire selfie taking and posting habits. Similar to the previous sections, the participants were required to read the question and select which answer most applied to them.

The duration of this survey was approximately between 5-10 minutes to read through both the information form and the consent form and it took approximately 10 minutes to complete the survey. There was no time limit for this survey, so this allowed the participants to take as much time as they wished to complete all sections. If the participant wished to take any breaks during their completion of the survey, they were allowed to do so on their own accord.

Once the survey was completed, the participants submitted their results and the surveys were sent anonymously to the researcher. A debriefing form (see Appendix E) was presented to the participant after completion of the survey, which stated that their results could not be withdrawn due to anonymity. The form also contained a statement encouraging the participants to send on the surveys to their contacts, the researcher's email, and phone numbers for Pieta House and Aware. As stated in the information form, if the participants wished to find out the results of this study, they are authorised to contact the researcher via email.

## RESULTS

### Descriptive Statistics

Continuous and categorical descriptive statistics were performed for all variables, including age, gender, total social media usage scores and total narcissism scores. The Mean (M), Standard Deviation (SD) and Range were obtained for all variables and presented in Table 1. Tests of normality were also obtained for these variables. The Frequency and Valid Percent (%) were collected for age and gender and are presented in Table 2.

Table 1: *Descriptive statistics for Age, Social Media Usage and Narcissism Levels*

Variable	<i>M</i> [95% CI]	<i>SD</i>	Range
Age	26.16 [24.68, 27.63]	10.47	18-60
Social Media Use	43.86 [42.6, 45.12]	9.0	18-62
Narcissism	18.91 [18.54, 19.3]	2.68	16-30

Table 2: *Descriptive statistics for Gender and Age*

Variable	Frequency	Valid %
<b>Gender</b>		
Male	81	41.3%
Female	115	58.7%
<b>Age</b>		
18-29	150	76.5%
30-44	19	9.7%
45-60	27	13.8%
<b>Social Media Sites</b>		
Facebook/Facebook Messenger	22	11.2%
Instagram	84	42.9%
WhatsApp	35	17.9%
Snapchat	29	14.8%
Twitter	14	7.1%
Other	12	6.1%

### **Inferential Statistics**

**Hypothesis 1.** The first hypothesis for the current study was to determine whether there is a relationship between social media use and narcissism levels. This relationship was investigated using a Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There is no correlation between the two variables ( $r = .10$  [95% CI =  $-.05, .25$ ],  $n = 196$ ,  $p = .159$ ).

**Hypothesis 2.** The second hypothesis for this study was that there is a gender difference in how social media affects levels of narcissism. An independent samples t-test was conducted to compare levels of narcissism between males and females. There was no significant difference in scores, with males ( $M = 19.31$ ,  $SD = 2.71$ ) scoring slightly higher than females ( $M = 18.64$ ,  $SD = 2.63$ ),  $t(194) = -1.72$ ,  $p = .09$ , two-tailed.

Another independent samples t-test was conducted to compare social media use between males and females. There was a significant difference in scores, with males ( $M = 39.3$ ,  $SD = 8.15$ ) scoring significantly lower than females ( $M = 47.07$ ,  $SD = 8.17$ ),  $t(194) = 6.57$ ,  $p < .001$ , two-tailed. The magnitude of the differences in the means (mean difference = 7.77, 95% CI: 5.44 to 10.11) was large (Cohen's  $d = .95$ ).

Finally, a multiple regression analysis was performed to determine how well narcissism levels could be explained by two variables, which were gender and social media use. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. The correlations between the predictor variables and the criterion variable included in the study were examined (see Table 3 for full details). The two predictor variables were significantly correlated with the criterion variable, and these significant effects ranged from  $r = .10$ , (social media use,  $p = .017$ ) to  $r = .12$  (gender,  $p = .010$ ). Tests for multicollinearity also indicated that all Tolerance and VIF values were in an acceptable range. These results indicate that there was no violation of the assumption of multicollinearity and that the data was suitable for examination through multiple linear regression analysis.



Table 3: *Correlations between variables included in the model*

Variable	1	2	3
<b>1. Narcissism</b>	-		
<b>2. Gender</b>	.12*	-	
<b>3. Social Media Use</b>	.10	-.43	-

Note: \* $p < .05$

Since no priori hypotheses had been made to determine the order of entry of the predictor variables, a direct method was used for the analysis. The two predictor variables explained 4.4% of variance in narcissism levels ( $F(2, 193) = 4.42, p = .013$ ). The two variables were found to uniquely predict narcissism levels to a statistically significant level: gender ( $\beta = .20, p = .010$ ), and social media use ( $\beta = .19, p = .017$ ) (see Table 4 for full details).

Table 4: *Multiple regression model predicting narcissism scores*

Variable	R <sup>2</sup>	B	SE	$\beta$	$t$	$p$
<b>Model</b>	<b>.04</b>					
Gender		1.1	0.42	0.2	2.6	.010
Social Media Use		0.06	0.02	0.19	2.4	.017

Note: R<sup>2</sup> = R-squared;  $\beta$  = standardized beta value; B = unstandardized beta value; SE = Standard errors of B; N = 196

**Hypothesis 3.** The third hypothesis for this study was that particular social media sites were related to higher narcissism levels. A one-way between groups ANOVA was conducted to investigate this hypothesis. Six different social media sites

were investigated (Facebook/Facebook Messenger, Instagram, WhatsApp, Snapchat, Twitter, and Other). There was no statistically significant difference in levels of narcissism for the six social media sites,  $F(5, 190) = .95, p = .451$ . The effect size indicated a very small difference in narcissism ( $\eta^2 = .02$ ).

**Exploration Analysis.** This exploration analysis was to determine whether there is a relationship between selfie taking habits and narcissism levels. This relationship was investigated using a Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There is no correlation between the two variables ( $r = .04$  [95% CI =  $-.11, .18$ ],  $n = 196, p = .552$ ).

## DISCUSSION

This current study explored the relationship between social media use and levels of narcissism. The purpose of this topic was to investigate whether high social media use was related to higher levels of narcissism. This study also investigated whether one particular social media site was related to high narcissism levels. Gender differences were investigated to find a potential comparison in social media use and narcissism, and was a second predictor variable for narcissism levels. While there has been little found on gender differences in narcissism, one study found that males tend to have higher levels of general narcissism than females (Grijalva et al. 2015), while another study found that females have higher vulnerable narcissism levels than males (Valashjardi, MacLean and Charles, 2020). Previous research has reported that social media use is significantly associated with narcissism (Casale & Banchi, 2020; Cai, Kwan & Sedikides, 2012). On the contrary, Frederick and Zhang (2019) found that narcissism was not significantly correlated to social media use. These two contradicting results is one of the reasons the researcher wanted to investigate the relationship between social media use and narcissism further.

**Hypothesis 1.** The first hypothesis for this current study is that (H1) high social media use is related to higher levels of narcissism. In order to investigate this hypothesis, a Pearson's correlation was conducted. No correlation was reported between social media use and narcissism. This finding contradicts previous findings of the same topic, as past studies by Singh, Farley and Donahue (2018) and Savci, Turan, Griffiths and Ercengiz (2019) both discovered that there is a relationship between social media use and narcissism. Malik and Khan (2015) also reported that addictive use of social media can be correlated with higher narcissism levels. This was an unexpected

discovery considering the amount of research that has previously found a significant correlation between social media use and narcissism levels.

**Hypothesis 2.** The second hypothesis for this study is that (H2) there is a gender difference in how social media affects levels of narcissism. This hypothesis was investigated by conducting two separate independent samples T-Tests along with a standard multiple regression. The first T-Test conducted investigated the difference in narcissism levels among males and females. It was discovered that there was no significant difference in narcissism levels among males and females. These findings contradict some findings and beliefs from past literature. Aforementioned in the introduction, studies have reported that males are more narcissistic overall than females (Wilson & Sibley, 2011; Watson & Biderman, 1994), and Freud believed that females were more narcissistic than males. However, studies have found that males and females score higher in different types of narcissism. For example, O’Leary and Wright (1986). Found that females typically have higher levels of vulnerable narcissism while males have higher levels of grandiose narcissism. Overall, these results are not consistent with past findings.

The second independent samples T-Test investigated the difference in social media use among males and females. The results from this t-test showed that there is a significant difference in social media use among males and females, with females scoring significantly higher. However, when comparing our results to those of older studies, it has been found that there is no significant difference between males and females in social media use (Kim, Sin & Tsai, 2014). The main source of research found on the gender differences of social media use is the individual uses on social

media. It has been found that males use Wikis and internet forums more frequently than females (Kim, Sin & He, 2013), while females would engage in more general internet use and texting (Twenge & Martin, 2020). Overall, the topic of gender differences in social media has investigated the different uses of social media sites and internet use for males and females individually, along with some research on the gender differences in social media use and well being (de Calheiros Velozo & Stauder, 2018; Booker, Kelly & Sacker, 2018)

The final test conducted for this hypothesis was the standard multiple regression, in order to investigate how narcissism could be influenced by social media use and gender. The results of this analysis found that both gender and social media use predict narcissism levels. This is an interesting outcome, as there was no correlation found between social media and narcissism, as well as no correlation between gender and narcissism. It is predicted by the researcher that the nature of these results is due to the little collinearity among the predictors. Due to the fact that a multiple regression model accounts for more variance than any single predictor, this could be why the model resulted in being significant. These results highlighted that little is known about the relationship between social media use and gender on narcissism levels, as no research was found that matched these results. This presents an opportunity for future research to explore this relationship further to find out the reasoning behind this significant relationship.

**Hypothesis 3.** The third and final hypothesis for this study is (H3) different social media sites are related to higher narcissism levels. To investigate this hypothesis, a one-way between-groups ANOVA was conducted. It was discovered that there is no

significant difference in each social media site and narcissism levels. This is consistent with what has been found in previous research, as studies have mainly investigated individual social media sites and their relationships with narcissism. The Panek, Nardis and Konrath (2013) study found that the use of Twitter is related to the superiority component of narcissism, while Facebook is related to the exhibitionism component of narcissism. In regards to Instagram, Sheldon and Bryant (2016) found a positive relationship between narcissism and engaging on Instagram. On the other hand, Paaramboukis, Skues and Wise (2016) only found a weak relationship between Instagram use and narcissism. These basic findings of the current study are consistent with research showing that there is not one particular social media site that has a stronger influence of narcissism than others, but each social media site can influence narcissism.

Although the results show that there is not one particular social media site correlated with narcissism levels, which is consistent with past research and literature, it was not an expected result by the researcher. This is due to the fact that there was a high number of participants who answered “Instagram” (N = 84) as their most used social media site. High selfie taking and posting has been found to be associated with grandiose narcissism (McCain et al., 2016), and Instagram is a predominantly picture sharing/posting social media site. However, the researcher predicted that Instagram would be related to high narcissism levels.

**Exploration Analysis.** The final analysis that was performed for this study was a second Pearson’s correlation to determine if there was a relationship between selfie taking habits and narcissism levels. This analysis was conducted for exploration

purposes to test the self-made Selfie Taking and Posting Habits Questionnaire. The results revealed that there was no significant correlation between selfie taking habits and narcissism levels. A comparison was done against a past study by Stuart and Kurek (2019), who stated that narcissistic personality traits are a key predictor of selfie behaviours. Sorokowski et al. (2015) discovered that the narcissism scores of males were predicted by selfie posting, and it was not predicted in females. Overall, the findings of the present study contradict past literature on selfie taking behaviours and narcissism levels.

### **Strengths and Limitations**

**Strengths.** A main strength of this study is how it expands on previous research of a similar topic. The researcher found many studies on both social media use and narcissism individually. The researcher also found studies that reported that those with high narcissism levels are more inclined to have high social media use. There are very few studies found to show if social media use was related to high narcissism levels, which was one reason why this topic was chosen. A second strength of this study is the accuracy of the Narcissistic Personality Inventory-16 and the Social Networking Site Featured Usage Scale. Both of these scales had good reliability, as well as a sufficient number of items in both, so there is a clear advantage of applying these scales to research.

No missing data arose during the analysis process, which can be considered as a primary strength. This is due to the fact that the data for this study was collected through a survey. A final strength in this study was the number of participants who, when answering the Narcissistic Personality Inventory-16 section of the survey, were

willing to answer the statement that was more narcissistic in nature. It is possible that this could be due to the fact that the participants were aware that the survey was anonymous, which would lead them to be more inclined to answer the survey truthfully without the risk of judgement.

**Limitations.** Although the sample population was high, which can be seen as a strength, 76.5% of the participants were in the younger age bracket, ranging from 18-29 years of age. Previous studies found that younger people are more likely to be affected by social media addiction (Sheldon & Bryant, 2016) and narcissism seems to decline as one grows older (Foster, Keith Campbell, & Twenge, 2003). These studies report that age can influence both social media use and narcissism levels. Due to the uneven age range, it was decided not to investigate the relationship between age and narcissism levels. It would be of benefit to investigate if age also influences narcissism levels alongside social media use and gender in the future with the right sample size.

Demographics, such as socioeconomic status or employment status, for example, working full time, student, or unemployed, were not collected for this study. The only demographics that were collected were gender and age. Therefore, information regarding how one's employment status or nationality affects their social media use and narcissism levels have not been discovered. For example, a study conducted in China found that those with a higher socioeconomic status are more narcissistic than those with a lower socioeconomic status, and those living in urban areas are more narcissistic than those from a rural area (Cai, Kwan & Sedikides, 2012). In previous studies, He, Li, Ma and Liu (2020) found that those with a lower socioeconomic status had increased social media addiction, while Masthi, Pruthvi and



Mallekavu (2017) found that private school students, who are typically in a higher socioeconomic status, are more prone to social media addiction. Taking all of these studies into consideration, socioeconomic status has a significant effect on both social media use and narcissism, therefore it would have been useful to investigate the socioeconomic status of the participants to report if it would have an effect on the results.

Harms, Patel and Carnevale (2020) reported that there is a link between narcissism and self-employment, which suggests that narcissism may have an effect on one's career choice. Robertson and Kee (2017) observed that part-time workers spend the highest amount of time on social media, particularly on Facebook. Overall, employment status has a significant effect on both narcissism and social media use, hence, there may be an effect of employment status on both narcissism and social media use combined.

Another limitation from this study was the self-made questionnaire that was part of the survey. The questions asked in this questionnaire were inspired from the Singh (2016) and Paris and Pietschnig (2015) studies on selfie taking and behaviour. The questionnaires used in these studies only included the questions asked and not the scoring key or the way they were answered. Due to this, the scoring for the self-made questionnaire was not consistent, which led to the questionnaire not being a composite scale.

### **Implications**

While the present study does not support the main hypothesis that there is a relationship between social media use and narcissism, past research has supported this hypothesis. High levels of social media use, as it is well known, can often lead to other mental health issues as well as narcissism, such as negative body image (Eckler, Kalyango, & Paasch, 2016), depression (Lin et al., 2016), and anxiety (Vannucci, Flannery, & Ohannessian, 2017). An effort can be made by the government to provide better funding to the Health Service Executive (HSE) to aid in those affected with either social media addiction, narcissism, or both.

This topic should also be made aware in both primary and secondary schools. Young children and adolescents have grown up with technology, smart phones and social media. High social media and technology use among youths can lead to chronic sleep deprivation, as well as negative effects on cognitive control, academic performances and socioemotional functioning, as per the study by Abi-Jaoude, Naylor, and Pignatiello (2020). It is recommended that schools should hold classes and talks for their students to make them aware of social media addiction as well as the potential mental effects it may cause, one being narcissism.

### **Conclusion**

In conclusion, this study successfully addressed and tested the hypotheses and research objectives. The current study found that there is no correlation between social media use and narcissism, which contradicts previous findings. Gender differences were not found in relation to narcissism levels, yet differences were found in social media use, with females scoring higher. Although, there is a significant prediction of

both social media and gender on narcissism levels. There was also no significant relationship between particular social media sites and narcissism levels. This current study successfully contributed to the topic of social media and narcissism, and the results can be further expanded on in future literature.

While some of the hypotheses for this current study were rejected, it would be beneficial for this topic to be made aware to both children and adolescents in a school setting. For future research, it is recommended to investigate age as a predictor variable in relation to social media use and narcissism. Furthermore, in future work, investigating other demographics, such as employment status or socioeconomic status, might prove important in the prediction of narcissism levels. This current study was an attempt to build on previous studies and literature. Future research could continue to explore social media, narcissism, and the relationship they have on each other. This topic is very important in today's society and there will be many more developments to come.

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## APPENDICES

### **Appendix A: Information Sheet**

#### PROJECT TITLE

The Relationship between Social Media Use and Narcissistic Traits – Selfie or Selfish?

#### INVITATION

You are being asked to take part in a research study on the effects social media use has on narcissistic traits, if a particular social media site causes increased narcissistic traits, and if there is a gender difference in the effects on narcissistic traits.

This study is part of my final year project for my Psychology Bachelor's Degree in National College of Ireland.

This study has also been approved by the Psychology Research Ethics Committee. To participate in this study, you must be OVER the age of 18.

#### WHAT WILL HAPPEN

In this study, you will be asked to complete all the questions presented. The survey will require some personal details, contain questions about social media and questions about your personality. Before the survey starts, you will be shown a consent form.

To begin the survey, you must click "I CONSENT" at the end of the form.

The survey is in three sections with instructions given when necessary.

#### TIME COMMITMENT

The study typically takes 5-10 minutes to answer the full survey. There is no time limit, so you may take your time when reading and answering questions.

#### PARTICIPANTS' RIGHTS

You may decide to stop being a part of the research study at any time without explanation before completion of the survey. All information given will be anonymous so if you wish to withdraw your results after completing the survey, I will be unable to do so. You have the right to have your questions about the procedures answered. If you have any questions as a result of reading this information sheet, you should ask the researcher before the study begins.

#### BENEFITS AND RISKS

There are no benefits to taking part in this survey. All cooperation and participation is voluntary. There is little risk to taking part. The only known, yet unlikely risk, is slight distress or discomfort by some of the questions asked. To address this risk, resources are available in the debriefing sheet at the end of the survey. If any distress or discomfort arises during participation, you have the right to withdraw yourself at any time before completion of the survey.

**COST, REIMBURSEMENT AND COMPENSATION**

Your participation in this study is voluntary.

**CONFIDENTIALITY/ANONYMITY**

The data I collect does not contain any personal information about you except for your gender and age bracket. No one will link the data you provided to the identifying information you supplied. The storage of the data will be kept on my personal laptop, ensuring that no outside party has access to the data given. The data collected from your participation will be presented in my thesis which will be accessed online. It will also be printed out to keep personally. None of the information given will be traced back to you, as the participant.

**FOR FURTHER INFORMATION**

I, Laura Kelly, will be glad to answer your questions about this study at any time. You may contact me by email ([laurakellyfyp@gmail.com](mailto:laurakellyfyp@gmail.com)) or contact my supervisor Dr. April Hargreaves ([april.hargreaves@ncirl.ie](mailto:april.hargreaves@ncirl.ie)).

If you want to find out about the final results of this study, feel free to email me.

Thank you for your participation.

**Appendix B:**  
**Consent Form**

In agreeing to participate in this research I understand the following:

This research is being conducted by Laura Kelly, an undergraduate student at the School of Business, National College of Ireland.

The method proposed for this research project has been approved in principle by the Departmental Ethics Committee, which means that the Committee does not have concerns about the procedure itself as detailed by the student. It is, however, the above-named student's responsibility to adhere to ethical guidelines in their dealings with participants and the collection and handling of data.

If I have any concerns about participation, I understand that I may refuse to participate or withdraw at any stage.

I have been informed as to the general nature of the study and agree voluntarily to participate.

There are no known expected discomforts or risks associated with participation.

All data from the study will be treated confidentially. The data from all participants will be compiled, analysed, and submitted in a report to the Psychology Department in the School of Business. No participant's data will be identified by name at any stage of the data analysis or in the final report.

At the conclusion of my participation, any questions or concerns I have will be fully addressed.

By giving my consent, I am showing that I am above the age of 18.

I may withdraw from this study at any time and may withdraw my data before conclusion of my participation if I still have concerns.

I understand that after my results are submitted, I will not be able to withdraw my data due to my data being anonymous.

**Appendix C:**

**Survey**

Section A

1. Gender:

- Male
- Female
- Non-binary
- Other, specify \_\_\_\_\_

2. Age:

- 18-25
- 26-35
- 36-45
- 46-55
- 56+

3. How often do you use the internet?

- Never
- Rarely
- Monthly
- Weekly
- Daily

4. How many hours on average do you spend on the internet weekly?

- <1 hour
- 1-3 hours
- 4-5 hours
- 6-7 hours
- >7 hours

5. What social media site do you use the most?

- Facebook/Facebook Messenger
- Instagram
- Snapchat
- WhatsApp
- Twittero
- Other, Specify \_\_\_\_\_



Section B

Read each statement carefully and tick which applies to you:

1. How frequently do you use social networking sites (SNS)?  
Never   
Yearly   
Monthly   
Weekly   
Multiple times a week   
Daily   
Multiple times a day
  
2. On average, each time you visit SNS, how long would you spend on it?  
15min or less   
15-35min   
0.5-1hr   
1-2hrs   
2-3hrs   
3-4hrs   
More than 4hrs
  
3. In your favourite SNSs, how many friends do you have?  
1-50   
50-100   
100-200   
200-300   
300-400   
400-500   
More than 500
  
4. In your favourite SNSs, the composition of your friends...  
All acquaintances in reality   
All strangers in reality   
Equal
  
5. How frequently do you send private messages to others?  
Never   
Yearly   
Monthly   
Weekly   
Multiple times a week   
Daily   
Multiple times a day

6. How frequently do you update your status?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

7. How frequently do you write notes/blogs?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

8. How frequently do you update your profile image?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

9. How frequently do you post photos?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

10. How frequently do you share or re-send others' profiles (e.g. notes or photos)?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

11. How frequently do you visit your friends' homepage?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

12. How frequently do you comment on others' notes or photos?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

13. How frequently do you check others' comments or messages on your profile?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

### Section C

Read each pair of statements below and tick the one that comes closest to describing your feelings and beliefs about yourself. You may feel that neither statement describes you well but pick the one that comes closest. Please complete all pairs.

1.  I really like to be the centre of attention  
 It makes me uncomfortable to be the centre of attention
2.  I am no better or no worse than most people  
 I think I am a special person
3.  Everybody likes to hear my stories  
 Sometimes I tell good stories
4.  I usually get the respect that I deserve  
 I insist upon getting the respect that is due me

## SOCIAL MEDIA AND NARCISSISM

5.  I don't mind following orders  
 I like having authority over people
6.  I am going to be a great person  
 I hope I am going to be successful
7.  People sometimes believe what I tell them  
 I can make anybody believe anything I want them to
8.  I expect a great deal from other people  
 I like to do things for other people
9.  I like to be the centre of attention  
 I prefer to blend in with the crowd
10.  I am much like everybody else  
 I am an extraordinary person
11.  I always know what I am doing  
 Sometimes I am not sure of what I am doing
12.  I don't like it when I find myself manipulating people  
 I find it easy to manipulate people
13.  Being an authority doesn't mean that much to me  
 People always seem to recognize my authority
14.  I know that I am good because everybody keeps telling me so  
 When people compliment me, I sometimes get embarrassed
15.  I try not to be a show-off  
 I am apt to show off if I get the chance
16.  I am more capable than other people  
 There is a lot that I can learn from other people

Section D

1. How often do you check your own SNS profiles?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

2. Do you feel comfortable getting your picture taken by someone else?

- Yes
- No
- Sometimes

3. Do you feel comfortable taking your own picture?

- Yes
- No
- Sometimes

4. For what reason do you post pictures on your most used SNS?

- Boredom
- In hopes of receiving likes
- Confidence boost
- To share with friends
- I don't post pictures
- Other \_\_\_\_\_

5. How often do you post selfies on your most used SNS?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

6. How often do you post pictures with friends or family on your most used SNS?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

7. How often do you post pictures of scenery, food, pets, etc. on your most used SNS?

- Never
- Yearly
- Monthly
- Weekly
- Multiple times a week
- Daily
- Multiple times a day

8. How long does it take for you to take a selfie?

- Less than one minute
- 5-10 minutes
- 10-20 minutes
- 20+ minutes
- I don't take selfies

9. How many selfies do you take before you find your favourite one to post?

- 1-10
- 10-20
- 20-30
- 30-40
- 40+
- I don't take selfies

10. How often do you use filters on your photos?

- Never
- Sometimes
- Often
- Always

11. How often do you use photo editing apps?

- Never
- Sometimes
- Often
- Always

12. How many likes do you expect/hope to get on a post?

- 1-100
- 100-200
- 200-300
- 300-400
- 400+

13. Do you ever delete a post that does not have "enough" likes?

- Yes
- No
- Sometimes

## Appendix D:

### Scores

NPI-16 Key: Responses consistent with narcissism are shown in bold.

1.    o    **I really like to be the centre of attention**  
      o    It makes me uncomfortable to be the centre of attention
2.    o    I am no better or no worse than most people  
      o    **I think I am a special person**
3.    o    **Everybody likes to hear my stories**  
      o    Sometimes I tell good stories
4.    o    I usually get the respect that I deserve  
      o    **I insist upon getting the respect that is due me**
5.    o    I don't mind following orders  
      o    **I like having authority over people**
6.    o    **I am going to be a great person**  
      o    I hope I am going to be successful
7.    o    People sometimes believe what I tell them  
      o    **I can make anybody believe anything I want them to**
8.    o    **I expect a great deal from other people**  
      o    I like to do things for other people
9.    o    **I like to be the centre of attention**  
      o    I prefer to blend in with the crowd
10.   o    I am much like everybody else  
      o    **I am an extraordinary person**
11.   o    **I always know what I am doing**  
      o    Sometimes I am not sure of what I am doing
12.   o    I don't like it when I find myself manipulating people  
      o    **I find it easy to manipulate people**
13.   o    Being an authority doesn't mean that much to me  
      o    **People always seem to recognize my authority**



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- 14.  **I know that I am good because everybody keeps telling me so**  
 When people compliment me, I sometimes get embarrassed
  
- 15.  I try not to be a show-off  
 **I am apt to show off if I get the chance**
  
- 16.  **I am more capable than other people**  
 There is a lot that I can learn from other people

**Scoring: compute proportion of responses consistent with narcissism**

## **Appendix E**

### **Debriefing Form**

Thank you for participating as a research participant in this present study exploring the association between social media and narcissistic traits. It is greatly encouraged that you pass on this survey to any friends or family (over the age of 18) who are willing to participate. All participation is greatly appreciated.

I would like you to be made aware that your information and results cannot be withdrawn from this study due to the anonymous results. If you have any questions regarding the results and how they will be kept, feel free to contact me via email (laurakellyfyp@gmail.com), or contact my supervisor (april.hargreaves@ncirl.ie). In the event that you feel psychologically distressed by the participation in this study, please contact Pieta House at (01) 458 5490 or Aware: 1800 80 4848.

If you know any friends that are also partaking in this study, I ask that you do not discuss it with them until they have had the chance to participate. Prior knowledge of what this study entails can invalidate the results. I greatly appreciate your cooperation.

If you have any questions regarding this study, please feel free to email me. Thank you again for your participation.

Laura Kelly

## Appendix F

### SPSS Data and Output

FYP\_Data.sav [DataSet1] - IBM SPSS Statistics Data Editor

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	Gender	Numeric	6	0		{0, Female}...	None	7	Right	Nominal	Input
2	Age	Numeric	3	0		None	None	7	Right	Nominal	Input
3	Dem_Q1	Numeric	34	0	How often do y...	{1, Never}...	None	8	Right	Scale	Input
4	Dem_Q2	Numeric	40	0	How many hour...	{1, <1 hour}...	None	9	Right	Scale	Input
5	Dem_Q3	Numeric	40	0	What Social Me...	{1, Faceboo...	None	8	Right	Scale	Input
6	Dem_Total	Numeric	8	2		None	None	8	Right	Nominal	Input
7	SNS_Q1	Numeric	40	0	How frequently ...	{1, Never}...	None	9	Right	Scale	Input
8	SNS_Q2	Numeric	40	0	On average, ea...	{1, 15 mins ...	None	8	Right	Scale	Input
9	SNS_Q3	Numeric	40	0	In your favourit...	{1, 1-50}...	None	8	Right	Scale	Input
10	SNS_Q4	Numeric	40	0	In your favourit...	{1, Close fri...	None	9	Right	Scale	Input
11	SNS_Q5	Numeric	40	0	How frequently ...	{1, Never}...	None	7	Right	Scale	Input
12	SNS_Q6	Numeric	40	0	How frequently ...	{1, Never}...	None	7	Right	Scale	Input
13	SNS_Q7	Numeric	40	0	How frequently ...	{1, Never}...	None	8	Right	Scale	Input
14	SNS_Q8	Numeric	40	0	How frequently ...	{1, Never}...	None	8	Right	Scale	Input
15	SNS_Q9	Numeric	34	0	How frequently ...	{1, Never}...	None	9	Right	Scale	Input
16	SNS_Q10	Numeric	40	0	How frequently ...	{1, Never}...	None	9	Right	Scale	Input
17	SNS_Q11	Numeric	40	0	How frequently ...	{1, Never}...	None	8	Right	Scale	Input
18	SNS_Q12	Numeric	40	0	How frequently ...	{1, Never}...	None	9	Right	Scale	Input
19	SNS_Q13	Numeric	40	0	How frequently ...	{1, Never}...	None	8	Right	Scale	Input
20	SNS_Total	Numeric	8	2		None	None	8	Right	Nominal	Input
21	NPI_Q1	Numeric	40	0	Comfortable/u...	{1, It makes ...	None	8	Right	Scale	Input
22	NPI_Q2	Numeric	40	0	No better than ...	{1, I am no b...	None	7	Right	Scale	Input
23	NPI_Q3	Numeric	36	0	Enjoys my stori...	{1, Sometim...	None	7	Right	Scale	Input
24	NPI_Q4	Numeric	40	0	Usually get/insi...	{1, I usually ...	None	7	Right	Scale	Input
25	NPI_Q5	Numeric	35	0	Don't mind ord...	{1, I don't m...	None	7	Right	Scale	Input
26	NPI_Q6	Numeric	35	0	I am/I hope to ...	{1, I hope I a...	None	7	Right	Scale	Input
27	NPI_Q7	Numeric	40	0	People sometim...	{1, People s...	None	7	Right	Scale	Input
28	NPI_Q8	Numeric	30	0	Expect a great ...	{1, I like to d...	None	7	Right	Scale	Input

Data View Variable View

IBM SPSS Statistics Processor is ready Unicode:ON

Results\_Output.spv [Document1] - IBM SPSS Statistics Viewer

Explore

Case Processing Summary

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender	196	100.0%	0	0.0%	196	100.0%
Age	196	100.0%	0	0.0%	196	100.0%
SNS_Total	196	100.0%	0	0.0%	196	100.0%
NPI_Total	196	100.0%	0	0.0%	196	100.0%

Descriptives

		Statistic	Std. Error
Gender	Mean	.41	.035
	95% Confidence Interval for Mean		
	Lower Bound	.34	
	Upper Bound	.48	
	5% Trimmed Mean	.40	
	Median	.00	
	Variance	.244	
	Std. Deviation	.494	
	Minimum	0	
	Maximum	1	
	Range	1	
	Interquartile Range	1	
	Skewness	.355	.174
	Kurtosis	-1.893	.346
Age	Mean	26.16	.748

IBM SPSS Statistics Processor is ready Unicode:ON