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It's All About Me Even If It Appears to Be About You: Narcissism and Facebook Self-Promotion Through Personal Visual Posting and Corporate Content Sharing

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This study aimed to examine the impact of narcissism and its three facets, Grandiose Exhibitionism (GE), Leadership/Authority (LA), and Entitlement/Exploitativeness (EE), on the frequency of personal photo and video posting and corporate content sharing behaviors on Facebook. In addition, status update frequency was used as a covariate while gender and age were moderators of these relationships. A total of 343 respondents completed an online survey which assessed their narcissism levels and their Facebook usage behaviors. Results demonstrated that after accounting for status update frequency, narcissism predicted the posting of photos and videos of just oneself, oneself with family and friends, and oneself surrounded by natural scenery. GE was the strongest predictor of the posting of photos/videos of oneself with friends while EE most strongly predicted the posting of photos/videos of oneself, oneself with family, and oneself with friends. Younger participants were found to be more impacted by LA when posting photos/videos of oneself with family and friends while older subjects were more influenced by GE when sharing content from a company or organization. Future research should extend the study by employing a multigenerational sample to further examine the impact of narcissism and its components on these sharing behaviors.

Keywords: narcissism, social networking sites, social media, photo sharing, video sharing, self-presentation, self-promotion, exhibitionism, corporate content, Facebook

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Over the years, numerous articles and books have been written on narcissism with respect to its clinical basis and the term has been included in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5-TR; American Psychiatric Association, 2022). Cross-temporal meta-analyses with college students have shown a significant increase in narcissism levels prior to the Great Recession before falling in the subsequent post-recession years. From 1982 to 2008, narcissism levels increased by 58% while they decreased some 37% from 2009-2016 (Twenge et al., 2021). The significant rise in

narcissism levels during the years leading up the Great Recession, and likely in economically-stable years in the future, is concerning.

Social network sites (SNSs) have revolutionized the media landscape and have now given anyone with a device and minimal computer skills the ability to showcase themselves to an online audience. While having the ability to share content about oneself, including photos and videos, is of interest to many people, those with narcissistic tendencies are oftentimes striving to be the center of attention. There is an abundant array of social network sites in existence today with large and active user bases providing for the opportunity for self-promotion. However, Facebook has substantially more active users than the other SNSs. According to a quarterly report by Statista, as of the end of the Third Quarter of 2022, the popular SNS had 2.96 billion monthly active users (Dixon, 2022a). This placed the site well ahead of second-ranked Instagram with its estimated 2 billion monthly active users as of December 2021 (Dixon, 2022b). In addition, Facebook users tend to be very active with some 70% of them using the site daily. In comparison, only 59% of Instagram users are actively using that site daily (Pew Research Center, 2021).

Considering the substantial percentage of people using Facebook daily and the rise in narcissism levels in society and among college students, it is deemed necessary for more academic research to be conducted regarding the impact of narcissism on the usage of this popular SNS. While trends in the interactive nature of newer media platforms, such as SNSs, has allowed for a substantially wider range of possibilities through which one can express him or herself through text, aural messaging, and visual imagery, the trend towards higher levels of narcissism is thought to have preceded these technological advances (Twenge et al., 2021). In addition, given the use of Facebook as an important marketing tool used by brands and the potential for users of the platform to assist in information proliferation, such an examination is even more critical as users are able to share content from companies. Therefore, the purpose of this study was to better understand how narcissism considered as both a global and multidimensional construct drives self-promotional activities and organizational content sharing on the prominent SNS.

LITERATURE REVIEW

Narcissism

Narcissism is characterized by a highly inflated, positive but unrealistic self-concept, a lack of interest in forming warm and caring interpersonal relationships, and an engagement in self-regulatory strategies to affirm positive self-views (Campbell & Foster, 2007). Raskin and Terry (1988) found evidence to suggest that narcissism included an array of heterogeneous facets, including a grand sense of self-importance, an inability to handle criticism, and entitlement or the belief that one is due special favors even though they are unwilling to reciprocate the same courtesy to others. These researchers developed the Narcissistic Personality Inventory (NPI), with its 40 items, to measure the personality construct. In 2006, Ames et al. developed a shorter measure of the NPI, known as the NPI-16, by selecting items from the NPI and then comparing the short and long measures with the Big Five personality traits. The NPI-16 is a useful tool for researchers since it measures a variety of aspects as one personality trait, and it allows for studies to be conducted where a longer measure would be impractical (Ames et al., 2006).

While the NPI-16 affords researchers a valuable global measure of narcissism, Ackerman et al. (2011) contended that the NPI is actually measuring three different traits, with two of them linked to anti-social behavior and one associated with pro-social behavior. The first socially noxious component is that of "Entitlement/Exploitativeness" (EE), which is defined as a sense of deserving respect and an inclination to take advantage of other people. The second element deemed as anti-social is that of "Grandiose Exhibitionism" (GE), which encompasses such traits as vanity, exhibitionist tendencies, self-absorption, and superiority (Ackerman et al., 2011). The pro-social component, "Leadership/Authority" (LA), focuses on a person's optimism and boldness while also emphasizing interpersonal relationships (Emmons, 1984).

Impact of Narcissism on Facebook Self-Promotion

People normally aim to portray themselves in a positive light. This desire to make a favorable impression on others is the driving force behind impression management, a controlled presentation of information about a variety of things (Goffman, 1959). One key impression management strategy is to engage in self-promotional behaviors. Self-promotion is a particular type of impression management aimed at boosting one's

perceived status, achievements, and attractiveness in the eyes of others. This encompasses the explicit mention of one's importance, talents, and strengths in addition to directly highlighting achievements and claiming internal as opposed to external attributions for accomplishments (Rudman, 1998). Self-promotion in and of itself is not the same as narcissism, however. Individuals low in narcissism may also choose to self-promote to impress someone, even if it is not something that they typically do (Den Hartog et al., 2020).

Nonetheless, SNSs provide for an appealing communication environment for narcissists. These online communities grant individuals greater control over self-presentation, the practice of shaping how others view oneself (Leary, 1996), than is afforded to them in face-to-face interactions. This increased control allows an SNS user to selectively share certain content that presents oneself in only the most positive way (Ellison et al., 2006). Therefore, the individual must negotiate various self-presentational aims, enhancing the importance of stable personality traits' impact on self-presentation (Kramer & Winter, 2008).

There has been some research on the influence of the personality trait of narcissism on SNS usage for strategic self-presentation via self-promotion. Marshall et al. (2015) found that narcissists more frequently post Facebook status updates which relate to their achievements as well as their diet and exercise routines. Carpenter (2012) unveiled the narcissism component of GE as a predictor of self-promotional behaviors on Facebook, including higher frequencies of posting status updates, posting photos of oneself, updating profile information, changing one's profile picture, and tagging photos of oneself. Panek et al. (2013) and Ong et al., (2011) also found a relationship between GE and frequency of status updates.

Frequency of Posting Different Types of Photos and Videos. Due to the empirical support of the influence of narcissism on a higher frequency of engaging in self-promotional behaviors, it seems logical that narcissism would also have an impact on the frequency of posting photos and videos of oneself on Facebook. Due to attention seeking and concern over their physical appearance (Vazire et al., 2008), narcissistic individuals have been found to have a greater propensity for uploading attractive photos of themselves (Wand et al., 2012) and photos showing them having fun over less narcissistic individuals

(Buffardi & Campbell, 2008). Sung et al. (2016) found that narcissism predicted both the frequency and intention of posting selfies on SNSs. Furthermore, Moon et al. (2016) examined Instagram profiles and discovered a positive correlation between narcissism and the frequency of selfie posting, the proportion of selfies in a photo collection, and the percentage of self-presented photos (i.e., a photograph that one has taken with others) in a photo collection. Also, Fox and Rooney (2015) observed that narcissism and psychopathy predicted the number of selfies posted while Taylor (2020) found narcissism to be a factor in people posting "selfies" while traveling.

While nearly all prior studies have assessed the influence of narcissism on the posting of selfies on social media, Scott et al. (2018) examined the impact of the personality variable on the frequency of posting selfies in addition to a range of different types of photos. These photos included the following elements: family, friends, pets, selfies, significant other, parties, travel, sports, food, achievements, and other. By employing linear regressions, these researchers found that narcissism was a significant predictor of posting photos of sport, pets, travel, achievement, food, and other (Scott et al., 2018). In this study, however, whether these photos included oneself or not was not defined.

To expand upon the research of Scott et al. (2018), this current study examines many of the same or similar categories and it also considers videos in conjunction with photos. Yet, in this research, photos/videos from these different categories are defined as including oneself along with the various elements. Furthermore, there was not a special designation for photos classified as "selfies" as only the content within the frame was of importance and not whether it was a selfie or taken by someone else. These photos show the profile owner in the pictures, and him or herself with friends, family, and pets as well as with interesting backdrops such as beautiful scenery, sports arenas and events, and compelling art. Because these visual content categories include oneself within the frame, it is believed that after accounting for status update frequency, narcissism will positively predict the posting photos and videos of these types. Thus, the following hypothesis is predicted:

> H1: Over and above status update frequency, narcissism will predict the frequency of posting photos/videos of (a) just oneself, (b) oneself with other people and pets, and (c) oneself in different contexts or surroundings.

Similarly, as in the case with global narcissism, it is believed that the GE subscale will predict the frequency of an individual engaging in self-promotion by posting photos/videos of oneself, oneself with other people and pets, and oneself within various environments. The reason for this expectation is that this relationship has been empirically supported in the previously mentioned Carpenter (2012) and Weiser (2015) studies that found that GE predicted selfie-posting frequency. The LA subscale will also significantly predict self-promotion; however, it is thought to be a weaker predictor relative to GE due to its focus on interpersonal relationships and boldness as opposed to self-absorption (Ackerman et al., 2011). Lastly, the EE subscale is not likely to drive self-promotion on Facebook as those high in EE have been found to take advantage of and engage in anti-social communications with others, including retaliating against mean comments and seeking greater support than they are willing to give (Carpenter, 2012). Hence, the following two hypotheses are predicted:

> H2: Over and above status update frequency, GE and LA will significantly predict the frequency of posting photos/videos of (a) just oneself, (b) oneself with other people and pets, and (c) oneself in different contexts or surroundings.
>
> H3: Over and above status update frequency, EE will not significantly predict the frequency of posting photos/videos of (a) just oneself, (b) oneself with other people and pets, and (c) oneself in different contexts or surroundings.

In addition, it is believed that such demographic variables as age and gender could moderate the effect of narcissism and GE, LA, and EE on the posting of different types of visual content. As mentioned previously, narcissism levels within college student samples rose significantly prior to the Great Recession and are likely to surge again barring any major economic downturns (Twenge et al., 2021). In addition, 82% of those aged 18-34 have taken a selfie, which is significantly more than those aged 35-54 (63%) and those 55 years or older (44%) (Dixon, 2022c). In terms of posting selfies, Millennials have been found to engage in this sharing behavior to a substantially greater extent than older generations (Pew Research Center, 2014). Despite evidence for the differential effects of age, Weiser (2015) found no moderation effect of age on the relationship between total narcissism nor its facets on the frequency of posting selfies.

With respect to gender, some prior research indicates that women take and post more selfies than men (e.g., Valinksy, 2015) whereas other studies have found the opposite (e.g., Kutner, 2015). Sorokowski et al. (2015) considered the moderation effect of sex on the relationship between narcissism and the posting of different types of selfies. These researchers' results unveiled that men's overall narcissism and Leadership scores positively predicted the posting of selfies of only themselves, selfies with a romantic partner, and group selfies. Although women posted more selfies than men, their selfie-posting behavior was not related to narcissism. Moreover, there was no moderation effect for women high in Leadership, although the Leadership subscale used in the Sorokowski et al. (2015) study included components from two separate NPI factors, Authority and Exploitativeness. This conceptual difference will likely lead to an entirely different result in the current study simply because of the way that these factors belong to two distinct subscales (Authority with LA and Exploitativeness with EE). Given these results in conjunction with an overall lack of additional empirical evidence, it is necessary to assess age and gender as possible moderators of the hypothesized relationships between narcissism and its three components (GE, LA, and EE) on visual content posting behaviors. Thus, the following research question is posed:

> RQ1: Are there any interaction effects of narcissism and its components (GE, LA, and EE) with age and gender on the frequency of posting photos/videos of just oneself, oneself with other people and pets, and oneself in different contexts and surroundings?

Frequency of Sharing Content from Companies, Organizations, or Media Firms. Facebook provides users the opportunity to share content originally posted by companies or organizations (including community activist groups) in addition to content from news/media enterprises. Only one known prior study has investigated the relationship between narcissism and the reposting of content from companies and organizations. Turel and Gil-Or (2019) examined the role of narcissism in driving the way in which a user represents their Facebook-self. Relying on an assortment of signals that include both original content and that from a third-party source, users may represent a "true Facebook-self" or a "false Facebook-self." These researchers found that male users high in narcissism and false Facebook-self have a greater propensity to re-post advertisements for self-image

enhancing products, such as a new iPhone model or a boutique wine (Turel & Gil-Or, 2019). As demonstrated through this prior study, narcissists, and those high in GE are concerned with strengthening their image for an audience by any means possible. Content from third parties grants those people high in narcissism and GE with the opportunity to not only attach themselves to certain prestigious brands, but also offer their opinions on content and news originating from a company, organization, or media firm.

In addition to total narcissism and GE, individuals high in LA are motivated to share content from companies and news operations as it gives them a sense of power and authority in that they can attach their thoughts and opinions on content originally posted by these organizations. In other words, these high-LA individuals can channel their self-perceived leadership, authority, and dominance through the act of sharing this third-party content and acting as opinion leaders to their Facebook connections on a brand, company, topic, or news story. On the contrary, high-EE individuals tend to have unwarranted expectations of favorable treatment and they will take advantage of others to achieve what they want (Ackerman et al., 2011). Because the focus is on unreasonable expectations of social support from Facebook connections (Carpenter, 2012), EE will have a limited effect on the sharing of content from third-party sources.

Building upon the research of Turel and Gil-Or (2019), it was expected that narcissism and the GE and LA subscales would significantly predict the sharing of content, including photos/videos and news stories, from companies and media organizations over and above status update frequency. The EE subscale, however, is not expected to drive content sharing from third-party sources as it is centered upon the exploitation of others for achieving goals as opposed to the vanity and sense of authority that one may achieve through self-promotion on Facebook.

Thus, the following two hypotheses are predicted:

> H4: Over and above status update frequency, narcissism, GE, and LA will significantly predict the frequency of sharing (a) content from companies and organizations and (b) content from media firms.
>
> H5: Over and above status update frequency, EE will not significantly predict the frequency of sharing (a) content from companies and organizations and (b) content from media firms.

As in the case with the posting of photos and videos of oneself, age and gender can potentially act as moderators of the effects of narcissism and its components on the frequency of sharing content from companies, organizations, and media enterprises. As mentioned previously, narcissism levels rose steadily prior to the Great Recession (Twenge et al., 2021) and are likely to rise again insofar as economic conditions are favorable. Furthermore, younger SNS users are more likely to take and post selfies (Dixon, 2022c; Pew Research Center, 2014). Although Weiser (2015) found that age did not moderate the influence of total narcissism on the posting of selfies, the impact of age on the reposting of content from third parties has not been specifically explored. Therefore, the following research question is posed:

> RQ2: Are there any interaction effects of narcissism and its components (GE, LA, and EE) with age on the frequency of sharing (a) content from companies and organizations and (b) content from media firms?

Furthermore, gender has been found to impact the relationship between narcissism and the likelihood of re-posting advertisements for self-enhancing products (Turel & Gil-Or, 2019). The effect of narcissism on self-promoting behaviors is usually stronger for male SNS users (Arpaci et al., 2018), which may be partly due to men's aspirations to enhance their professional standing and social status. Women, on the other hand, have a desire for affinity and the development of social groups and bonds with other online users (English, 2016). To fulfill their needs for exhibition and to enhance their image as someone with authority, male Facebook users' sharing of content from companies and organizations will be driven by narcissism, GE, and LA. Contrarily, gender will not moderate the impact of EE on the sharing of content from corporations and organizations since this component of narcissism is focused on a proclivity for taking advantage of others (Ackerman et al., 2011). Hence, the following two hypotheses are proposed:

> H6: Over and above status update frequency, male Facebook users will be significantly more impacted than female users by narcissism, GE, and LA in their sharing of (a) content from companies and organizations and (b) content from media firms.

H7: Over and above status update frequency, gender will not moderate the effect of EE on the sharing of (a) content from companies or organizations nor (b) content from media firms.

METHODS

Sample and Procedure

After receiving Institutional Review Board approval, a total of 343 undergraduates were recruited from several mass communication courses at a sizeable, southeastern public American university to take the survey. The ages ranged from 18 to 26 ($M = 20.52$, $SD = 1.34$), 71% were female, and nearly all of them had a Facebook account (96%). They were offered extra credit as an incentive for participating in the online survey, which was administered using Qualtrics and delivered via a link using class listservs. The online survey began with the NPI-16, which was followed by questions regarding participants' frequency of engaging in certain Facebook usage behaviors. After answering the online behavioral questions, subjects were asked about their basic demographic characteristics.

Measures

Narcissism. The personality trait of narcissism was assessed using the NPI-16, a short measure of the trait useful in empirical research and found to have notable face, internal, discriminant, and predictive validity in a series of five studies (Ames et al., 2006). Participants were given 16 forced-choice dyads in which they were instructed to choose the option which best described them. Each item was coded as either 1 = Narcissistic and 0 = Non-narcissistic (e.g., *I like to be the center of attention* vs. *I prefer to blend in with the crowd.)* and then summed, providing for a score range of 0-16 for each subject. As shown in Table 1, the mean score was 7.21 for the scale, and it was confirmed to be a sufficient measure of narcissism ($\alpha = .76$).

GE, LA, and EE Subscales. The NPI subscales were used for measuring GE, LA, and EE. Each subscale consisted of the NPI-16 forced-choice dyads identified by Ackerman et al. (2011) as pertaining to each of the factors. The range for the GE subscale was 0-4 and the mean score was 1.73 while the LA subscale had a range of 0-9 and a mean of 4.58. The EE subscale had a range of 0-3 and a mean of 0.91. The GE ($\alpha = .65$) and LA ($\alpha = .67$) subscales were both found to be adequately reliable measures of these components of narcissism. However, the EE subscale was less reliable ($\alpha = .46$) as has been found in prior

research (e.g., Weiser, 2015) (Table 1). Yet, when evaluating the validity of personality scales, internal consistency has been found to be of limited utility (McCrae et al., 2011).

Table 1
Means, Standard Deviations, Scale Reliability, and Number of Items for Constructs

Measure	M	SD	Reliability	Number of items
Narcissism (NPI-16)	7.21	3.56	.76	16
GE	1.73	1.36	.65	4
LA	4.58	2.26	.67	9
EE	0.91	0.95	.46	3

Self-Promotion Through Personal Content Posting. There were several questions asked in the survey regarding Facebook usage. The frequency of self-promoting behaviors was measured using 11 items. The first measure asked respondents how often they updated their statuses and was on a 9-point scale ranging from 1 = *I never update my Facebook status* to 9 = *Several times per hour*. This single item measure was used in the Carpenter (2012) study and validated in prior research (e.g., Ryan & Xenos, 2011). The remaining 10 measures asked about the frequency with which respondents posted a photo/video with the following people/elements present: just you, you and family, you and significant other, you and friends, you and pets, you at parties, you with scenery, you at sporting events, you with art, and you with other. A 7-item scale was used for each of the people/elements, ranging from 1 = *Several times per year* to 7 = *Several times per hour*.

Self-Promotion Through Sharing of Corporate, Organizational, and Media Firm Content. There were two questions which inquired about how often the respondents shared a story or a photo/video from a company/organization and the frequency of sharing a story or a photo/video from a media organization. The sharing of content from a company or organization was measured using a 9-point scale from 1 = *I never share content or photos/videos from a company, organization, or community activist group Facebook page* to 9 = *Several times per hour*. For the sharing of media firm content, a 9-point scale anchored by 1 = *I never share news stories or photos/videos from media firms* and 9 = *Several times per hour* was employed.

RESULTS

Data were analyzed using SPSS 27.0. Table 2 shows the correlation matrix of the measured constructs pertaining to narcissism, the three narcissism subscales, status update frequency, sharing of content from companies and organizations, content sharing from media firms, gender, and age. Table 3, on the other hand, displays the correlation matrix of narcissism, the three narcissism subscales, status update frequency, and the frequencies of posting photos and videos of just oneself, oneself with people and pets, oneself in various contexts or surroundings as well as gender and age.

Table 2

Correlation Matrix of Measured Constructs Relating to Self-Promotion (Excluding Photo/Video Content) and Sharing from Other Sources

	1	2	3	4	5	6	7	8
1. Narcissism. GE	.72***							
3. LA	.90***	.43***						
4. EE	.59***	.25***	.36***					
5. Status update frequency	.15**	.17**	.09	.11*				
6. Sharing company/org. content or photo/video freq.	.22***	.19***	.15**	.18**	.46***			
7. Sharing media firm content or photo/video freq.	.14*	.14*	.08	.12*	.54***	.70***		
8. Gender	-.17**	-.13*	-.15**	-.08	.01	-.07	-.10	
9. Age	.04	.05	.04	-.01	.10	.11	.08	-.06

Note. * Statistically significant at $p < .05$. ** Statistically significant at $p < .01$. *** Statistically significant at $p < .001$.
Gender is coded male = 0 and female = 1.

Table 3
Correlation Matrix of Measured Constructs Relating to Self-Promotional Photo/Video Content

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Narcissism															
2. GE	.72***														
3. LA	.90***	.43***													
4. EE	.59***	.25***	.36***												
5. Freq. Only Self	.16**	.11*	.11*	.17**											
6. Freq. With Family	.20***	.17**	.15**	.18**	.62***										
7. Freq. With Significant Other	-.02	.00	-.02	-.04	.16**	.19***									
8. Freq. with Friends	.23***	.23***	.15**	.18**	.51***	.59***	.26***								
9. Freq. with Pets	.11*	.04	.11*	.11*	.25***	.29***	.27***	.23***							
10. Freq. at Parties	.05***	.01	.06	.06	.27***	.37***	.19***	.26***	.33***						
11. Freq. with Scenery	.20***	.17**	.15**	.15**	.47***	.59***	.16**	.43***	.41***	.52***					
12. Freq. at Sporting Events	.13*	.11*	.08	.08	.49***	.53***	.19***	.47***	.26***	.47***	.61***				
13. Freq. with Art	.01	-.02	.00	.06	.31***	.33***	.24***	.20***	.22***	.31***	.48***	.40***			
14. Freq. with Other	.06	.05	.04	.07	.30***	.29***	.29**	.31***	.32***	.29***	.43***	.33***	.59***		
15. Gender	-.17**	-.13*	-.15**	-.08	-.02	.01	-.01	.04	-.08	-.03	-.15**	-.08	-.07	.04	
16. Age	.04	.05	.04	-.01	.06	.10	.12	.07	.11	.10	.11	.07	-.01	.09	-.06

Note. * Statistically significant at $p < .05$. ** Statistically significant at $p < .01$. *** Statistically significant at $p < .001$.
Gender is coded male = 0 and female = 1.

Results for Self-Promotion Through Personal Content Posting

A hierarchical multiple regression analysis was performed to test the hypothesis that after accounting for status update frequency, narcissism will predict the posting of visual content of oneself, oneself with other people and pets, and oneself in different surroundings. Status update frequency, gender, and age served as covariates and were entered in Step 1. Narcissism was entered in Step 2, followed by the two-way interactions of gender, age, and narcissism in Step 3. In line with recommendations for testing interaction effects in multiple regression, each predictor variable was centered, and interaction terms were developed by multiplying the centered predictors together (Aiken & West, 1991). Multicollinearity was not a problem as indicated by assessing the variance inflation factors for each variable.

Table 4 summarizes the hierarchical regression model for the posting of visual content of just oneself and oneself with people and pets. In Step 1, age was found to be a significant predictor of posting photos and videos of oneself with family ($\beta = .15$, $p < .01$) and pets ($\beta = .12$, $p < .05$) while status update frequency significantly predicted the posting of photos/videos with friends ($\beta = .20$, $p < .001$). After controlling for status update frequency, gender, and age, narcissism was found to positively predict the frequency of posting photos/videos of just oneself ($\Delta R^2 = .02$, $\Delta F(1, 343) = 6.46$, $p < .05$, $\beta = .14$), oneself with family ($\Delta R^2 = .03$, $\Delta F(1, 343) = 11.92$, $p < .01$, $\beta = .19$), and oneself with friends ($\Delta R^2 = .04$, $\Delta F(1, 343) = 15.50$, $p < .001$, $\beta = .21$). Thus, H1a was supported while H1b was partially supported. Both interaction terms entered in Step 3 were nonsignificant across each photo/video type. This indicated that neither age nor gender moderated the effect of narcissism on the posting of oneself with people and pets.

Table 4

Standardized Regression Coefficients of Regressing Status Update Freq., Gender, Age, and Narcissism on Photo Posting Freq. with People and Pets

	Self	ΔR^2	ΔF	Family	ΔR^2	ΔF	Sign. Other	ΔR^2	ΔF	Friends	ΔR^2	ΔF	Pets	ΔR^2	ΔF
Step 1		.02	2.13		.03	3.94**		.02	1.71		.06	6.56***		.03	3.26*
Status Update Freq.	.10			.09			.10			.20***			.10		
Gender	-.05			-.04			.06			.01			-.04		
Age	.08			.15**			.01			.10			.12*		
Step 2		.02	6.46*		.03	11.92**		.00	0.35		.04	15.50***		.01	2.58
Narcissism	.14*			.19**			-.03			.21***			.09		
Step 3		00	0.70		.00	0.46		.00	0.63		.00	0.52		.00	0.65
Gender x Narcissism	-.01			.01			-.06			.01			.03		
Age x Narcissism	-.06			-.05			-.03			-.05			-.05		
Total R^2		.04			.07			.02			.10			.04	

Note. $N = 343$. * Statistically significant at $p < .05$. ** Statistically significant at $p < .01$. *** Statistically significant at $p < .001$.
Gender is coded male = 0 and female = 1.

The hierarchical regression model which assessed the relationship between narcissism and photo/video posting of oneself within different contexts and surroundings is displayed in Table 5. In Step 1, status update frequency was found to be a significant predictor of posting photos/videos of oneself at a sporting event ($\beta = .16$, $p < .01$) or in another context ("other" category) not specifically examined in this study ($\beta = .15$, $p < .01$). Gender predicted only the posting of photos/videos of oneself surrounded by scenery and the outdoors ($\beta = -.14$, $p < .01$). The negative Beta coefficient indicated being male predicted the frequency of posting photos/videos of this type. In Step 2, only the relationship between narcissism and the frequency of posting photos and videos of oneself in front of scenery was statistically significant ($\Delta R^2 = .03$, $\Delta F(1, 343) = 9.35$, $p < .01$, $\beta = .17$) over and above the covariates. Therefore, support was found for H1c. In Step 3, no interactions were found for narcissism and gender as well as narcissism and age on the posting frequency in different contexts and surroundings.

Table 5

Standardized Regression Coefficients of Regressing Status Update Frequency, Gender, Age, and Narcissism on Photo Posting Frequency in Different Contexts/Surroundings

	Parties	ΔR^2	ΔF	Scenery/ Outdoors	ΔR^2	ΔF	Sporting Events	ΔR^2	ΔF	Art	ΔR^2	ΔF	Other	ΔR^2	ΔF
Step 1		.02	1.75		.04	4.52**		.03	4.01**		.01	0.92		.03	3.83*
Status Update Freq.	.06			.09			.16**			.06			.15**		
Gender	-.03			-.14**			-.08			-.07			.04		
Age	.10			.09			.05			-.02			.08		
Step 2		.00	0.44		.03	9.35**		.01	3.39		.00	0.05		.00	0.52
Narcissism	.04			.17**			.10			-.01			.04		
Step 3		.01	1.23		.01	1.34		.00	0.18		.01	0.88		.01	1.04
Gender x Narcissism	-.08			-.04			-.02			-.05			-.06		
Age x Narcissism	-.04			-.08			-.03			-.06			-.05		
Total R^2		.02			.07			.05			.01			.04	

Note. $N = 343$. *Statistically significant at $p < .05$. ** Statistically significant at $p < .01$. *** Statistically significant at $p < .001$.
Gender is coded male = 0 and female = 1.

Table 6 highlights the hierarchical regression model for the impact of the narcissism subscales, GE, LA, and EE, on the frequency of posting photos/videos of oneself and oneself with people and pets. After the covariates were entered in Step 1, three of the regressions (ΔR^2_{self} = .03, $\Delta F(1, 343) = 3.20$, $p < .05$; ΔR^2_{family} = .04, $\Delta F(1, 343) = 4.81$, $p < .01$; $\Delta R^2_{friends}$ = .05, $\Delta F(1, 343) = 6.73$, $p < .001$) found at least one of the narcissism subscales to be predictive of the frequency of posting photos/videos of oneself with other people and pets included. EE predicted the frequency of posting photos of oneself ($\beta = .14$, $p < .05$), oneself with family ($\beta = .13$, $p < .05$), and oneself with friends ($\beta = .12$, $p < .05$). Thus, H2a, H3a, and H3b were not supported. GE was found to be a significant predictor of posting photos/videos of oneself with friends ($\beta = .16$, $p < .001$), a finding which partially supports H2b. In Step 3, interactions were found between LA and age on the posting of photos/videos of oneself with family ($\beta = -.17$, $p < .01$) and oneself with friends ($\beta = -.17$, $p < .01$). This finding revealed that age moderated the effect of LA on the posting of photos/videos including oneself with family and friends as younger respondents were more impacted by this narcissism component than older participants.

Table 6

Standardized Regression Coefficients of Regressing Status Update Frequency, Gender, Age, and the Narcissism Subscales (GE, LA, EE) on Photo Posting Frequency with People and Pets

	Self	ΔR^2	ΔF	Family	ΔR^2	ΔF	Sign. Other	ΔR^2	ΔF	Friends	ΔR^2	ΔF	Pets	ΔR^2	ΔF
Step 1		.02	2.13		.03	3.94**		.02	1.71		.06	6.56***		.03	3.26*
Control Variables[a]															
Step 2		.03	3.20*		.04	4.81**		.00	0.27		.05	6.73***		.01	1.25
GE	.04			.09			-.01			.16**			-.02		
LA	.03			.05			.00			.03			.08		
EE	.14*			.13*			-.05			.12*			.06		
Step 3		.01	0.66		.03	1.58		.01	0.82		.02	1.26		.02	0.96
Gender x GE	-.05			-.04			.00			.02			.00		
Age x GE	.05			.11			.06			.06			-.01		
Gender x LA	.04			.06			.01			.00			.10		
Age x LA	-.10			-.17**			-.03			-.17**			-.05		
Gender x EE	-.02			-.03			-.10			.00			-.10		
Age x EE	-.01			.04			-.06			.08			.00		
Total R^2		.06			.10			.03			.13			.06	

Note. $N = 343$. [a] Estimated values are same as in Table 4.

*Statistically significant at $p < .05$. ** Statistically significant at $p < .01$. *** Statistically significant at $p < .001$.

Gender is coded male = 0 and female = 1.

Table 7 summarizes the hierarchical regression model for the influence of the narcissism subscales on the frequency of posting photos/videos of oneself within different contexts and surroundings. After controlling for the covariates, EE positively predicted the posting of photos/videos of oneself at sporting events ($\beta = .14$, $p < .05$). Hence, H2c and H3c were not supported. No significant interactions were found for the narcissism subscales with gender or age on the frequency of posting photos/videos of oneself in different contexts or surroundings.

Table 7

Standardized Regression Coefficients of Regressing Status Update Frequency, Gender, Age, and the Narcissism Subscales (GE, LA, EE) on Photo Posting Frequency in Different Contexts/Surroundings

	Parties	ΔR^2	ΔF	Scenery/ Outdoors	ΔR^2	ΔF	Sporting Events	ΔR^2	ΔF	Art	ΔR^2	ΔF	Other	ΔR^2	ΔF
Step 1		.02	1.75		.04	4.52**		.03	4.01**		.01	0.92		.03	3.83*
Control Variables[a]															
Step 2		.00	0.30		.03	3.47*		.02	2.62		.01	0.57		.00	0.36
GE	-.02			.09			.04			-.06			.01		
LA	.05			.06			-.01			-.01			.00		
EE	.02			.09			.14*			.06			.05		
Step 3		.01	0.57		.02	0.95		.01	0.49		.01	0.64		.01	0.84
Gender x GE	-.02			.00			-.04			-.03			-.08		
Age x GE	.02			.01			.08			-.06			.01		
Gender x LA	-.03			.00			.00			-.01			.00		
Age x LA	-.03			-.11			-.08			-.07			-.11		
Gender x EE	-.07			-.09			.01			.03			-.02		
Age X EE	-.04			.02			-.02			.07			.05		
Total R^2		.03			.08			.05			.02			.05	

Note. $N = 343$. [a] Estimated values are same as in Table 5.

*Statistically significant at $p < .05$. ** Statistically significant at $p < .01$. *** Statistically significant at $p < .001$.

Gender is coded male = 0 and female =1.

Results for Self-Promotion Through Sharing of Corporate, Organizational, and Media Firm Content

The results for the hierarchical regression model for the relationship between narcissism and the posting of content from companies, organizations, and media firms is presented in Table 8. In Step 1, status update frequency was found to predict a substantial proportion of the variance in sharing content from corporations and organizations ($\beta = .46$, $p < .001$) as well as media firms ($\beta = .54$, $p < .001$). In addition, being male predicted the frequency of sharing content from media companies ($\beta = -.11$, $p < .05$). After accounting for the covariates, narcissism was found to be a positive predictor of sharing content from companies and organizations ($\Delta R^2 = .02$, $\Delta F(1, 342) = 8.19$, $p < .01$, $\beta = .14$) in Step 2. However, narcissism did not significantly predict the frequency of sharing content from a media firm. Additionally, both interaction terms entered in Step 3 were nonsignificant for both companies and media firms. This indicated that neither age nor gender moderated the effect of narcissism on the sharing of content from corporations and media organizations.

Table 8.

Standardized Regression Coefficients of Regressing Status Update Frequency, Gender, Age, and Narcissism on Story or Photo/Video Sharing from Companies, Organizations, and Media Firms

	Companies/ Organizations	ΔR^2	ΔF	Media Firms	ΔR^2	ΔF
Step 1		.22	32.50***		.30	49.81***
Status Update Freq.	. 46***			.54***		
Gender	-.08			-.11*		
Age	.06			.02		
Step 2		.02	8.19**		.00	0.75
Narcissism	.14**			.04		
Step 3		.01	1.68		.00	0.19
Gender x Narcissism	.04			.00		
Age x Narcissism	.08			.01		
Total R^2		.25			.31	

Note. N = 342. *Statistically significant at $p < .05$. ** Statistically significant at $p < .01$. *** Statistically significant at $p < .001$.
Gender is coded male = 0 and female = 1.

Lastly, the results for the hierarchical regression model examining the effects of GE, LA, and EE on the posting of content from companies, organizations, and media firms is presented in Table 9. After the covariates were entered in Step 1, the narcissism subscales were not found to predict the sharing of content from companies and media firms ($\beta_{GE} = .07$, $p > .05$; $\beta_{LA} = .04$, $p > .05$; $\beta_{EE} = .10$, $p > .05$. This result in conjunction with the above finding regarding narcissism as a global measure indicated partial support for H4a. H4b and H5, however, were not supported.

In Step 3, an interaction of age and GE on the sharing of content from companies and media organizations was found ($\beta = .13$, $p < .05$). This suggested that age moderated the effect of GE on the sharing of content from companies and media enterprises as the predictive impact of GE was stronger among older participants. No significant interactions were observed for any of the narcissism subscales with gender or age on the sharing of news stories and other content from media firms. Due to the lack of moderation by the gender variable, H6 was not supported while support was found for H7.

Table 9.

Standardized Regression Coefficients of Regressing Status Update Frequency, Gender, Age, and the Narcissism Subscales (GE, LA, EE) on Story or Photo/Video Sharing from Companies, Organizations, and Media Firms

	Companies/ Organizations	ΔR^2	ΔF	Media Firms	ΔR^2	ΔF
Step 1		.22	32.50***		.30	49.81***
Control Variables[a]						
Step 2		.02	3.38*		.00	0.60
GE	.07			.03		
LA	.04			-.01		
EE	.10			.05		
Step 3		.02	1.59		.01	0.62
Gender x GE	.06			-.02		
Age x GE	.13*			.00		
Gender x LA	-.04			-.04		
Age x LA	-.03			.00		
Gender x EE	.05			.09		
Age x EE	.01			.01		
Total R^2		.27			.32	

Note. N = 342. [a] Estimated values are same as in Table 8.
*Statistically significant at $p < .05$. ** Statistically significant at $p < .01$. *** Statistically significant at $p < .001$.
Gender is coded male = 0 and female = 1.

DISCUSSION

The purpose of this study was to investigate the link between narcissism and its three components, GE, LA, and EE, on personal visual posting and corporate content sharing behaviors on Facebook. This study was unique in that it specifically examined different types of photos instead of exclusively assessing the frequencies of posting selfies, which has been the aim of nearly every other study concerning the personality variable's impact on photo posting. It also analyzed videos in conjunction with photos, and it explored the effect of narcissism on the frequency of sharing content from the Facebook pages of corporations, organizations, and media firms. Overall, the findings of this investigation suggest that posting certain types of photos/videos which include oneself in addition to sharing content from companies provide narcissists with increased opportunities for self-promotion.

Narcissism predicted a higher frequency of posting photos and videos of just oneself over and above status update frequency. While the current study does not specifically examine selfies, it is believed that the majority of self-only photos and videos posted on Facebook or any social media platform are likely to be selfies. Therefore, findings of this study confirm those of Moon et al. (2016) and Fox and Rooney (2015) who, respectively, observed a positive correlation between narcissism and selfie posting in addition to a predictive effect of the personality factor on the number of selfies posted. GE and LA were not significant predictors of the posting of photos or videos including only oneself; however, EE was. This result was surprising, and it refutes that of Carpenter (2012), who found that GE predicted the posting of photos of oneself as opposed to EE. It is reasonable to assume that individuals high in EE would seek out respect and admiration through the posting of photos/videos including only themselves as they are then assured of being the focal point in the frame.

Furthermore, global narcissism was found to predict a higher frequency of posting photos and videos of oneself with family and friends over and above status update frequency. This result contradicts that of Scott et al. (2018) as these prior researchers did not find such a relationship. However, one possible reason for this difference could be that the current research specifically defined these photos as including oneself along with family and friends in the frame while the Scott et al. (2018) study did not. In terms of the

subscales, only EE significantly predicted the posting of photos/videos of oneself with family while both GE and EE predicted photo/video posts including friends. Nevertheless, GE was a stronger predictor than EE in this latter photo/video category. The current study supports the research of Buffardi and Campbell (2008) in that narcissists were found to frequently upload photos/videos showing themselves having fun, which often occurs in the company of family and friends.

Another potential driver of this self-promoting behavior is the level of extraversion possessed by those who post visual content with these other people present. Prior research has suggested that narcissists tend to be high in extraversion and, thus, many of their experiences with others may be captured on camera. Also, the fact that GE was found to predict the posting of photos/videos with friends as opposed to family may be explained by the fact that the study's sample may have felt more empowered when out with friends as opposed to family to take and post photos and videos showcasing their exhibitionist tendencies. Additionally, while Scott et al. (2018) found that narcissism significantly predicted the posting of photos with pets, this same effect was not found in this current study. Yet, in line with the Scott et al. (2018) study, narcissism did not predict the posting of photos/videos of oneself with a significant other. Perhaps narcissists do not wish to compete with their significant others and pets for attention and comments realizing that they will have to share the spotlight.

With respect to different contexts and settings, only the frequency of posting visual content of oneself surrounded by scenery was predicted by narcissism. This finding is logical given the importance for narcissists to seek the attention of others by uploading attractive photos of themselves (Wang et al., 2012). When people take photos/videos of themselves with backdrops including beautiful scenery like mountains or waterfalls, it helps to enhance their attractiveness within the visual frame. Hence, this result is also consistent with Taylor (2020) and Scott et al. (2018) who found narcissism to be a factor in people posting travel-related selfies and photos as these photos with nature often occur when traveling. Surprisingly, none of the individual narcissism subscales were found to significantly predict photo/video posting of oneself surrounded by scenery and the outdoors. Given the importance for narcissists to showcase themselves enjoying life (Buffardi & Campbell, 2008), it was unexpected for total narcissism to not significantly

predict the posting of oneself at parties or sporting events. While Scott et al. (2018) also found that narcissism did not predict the posting of photos at parties, they did find a relationship between narcissism and the posting of sports photos. Yet, different results in the Scott et al. (2018) study may be partly because "sports" was defined more broadly whereas in the current research study, "sporting events" were specifically examined. Despite the lack of an effect resulting from global narcissism, the EE subscale was a significant predictor of posting photos and videos of oneself at sporting events. Photos of this nature may be an attempt to make others envious as an individual high in EE may be able to be attend a prominent sporting event that most of his or her Facebook connections cannot.

In terms of sharing content from corporate Facebook pages and non-media organizations, narcissism was found to be a significant predictor above and beyond status update frequency. This finding is partially consistent with that of Turel and Gil-Or (2019), who found that male Facebook users high in narcissism had a greater propensity for frequently re-posting ads for self-enhancing products. Although this prior study focused specifically on advertisements instead of all content types like the current research, the value of utilizing narcissists to help sell a product or service appears to be a plausible marketing strategy. If a company can identify and target potential narcissists with their content, it is likely that many of these individuals will share these corporate posts with their own SNS connections. In turn, the firm can reap the rewards of earned media, such as increased views and engagement, as these narcissists share this third-party content to further promote themselves by including their own commentary on these posts. In addition to producing quality editorial content, it is also prudent for ad managers to develop effective banner, interactive, and online video ads for these companies and their products to optimally capture the attention of these narcissistic SNS users. This strategy would be especially effective for products and brands that are self-enhancing in nature (Turel & Gil-Or, 2019), particularly those that allow an individual to achieve certain goals or those specifically related to diets and exercise routines (Marshall et al., 2015). By providing a person with the ability for self-improvement, he or she can realize their ideal self-concept (Sirgy, 1982), a construct that in itself could be used in identifying auspicious opinion leaders or influencers for a brand. Considering recent research demonstrating that

86% of people aged 18-38 would like to be a social media influencer (Min, 2019), companies and organizations will have their choice of willing participants with which they can potentially partner.

Remarkably, none of the narcissism subscales significantly predicted the posting of corporate or organizational content. It appears that all aspects of the narcissism construct collectively drive this sharing behavior as opposed to GE, LA, and EE, specifically. In terms of content from media operations, narcissism nor its components predicted sharing of this news-oriented content. Why this occurred in the case of products/services from companies, but not from media firms warrants further research.

Surprisingly, age nor gender moderated the predictive impact of total narcissism on posting photos of just oneself, with other people and pets, nor within certain surroundings or contexts. This finding is in line with that of Sorokowski et al. (2015) in terms of age, but not gender. In their study, they found a stronger link between narcissism and selfie posting among men than women, particularly in the case of selfies taken with a partner and group selfies (Sorokowski et al., 2015). Additionally, in the current study, there were no interactions between gender and narcissism on the posting of content from companies or media enterprises. Perhaps, the 71% female composition of the sample attenuated the effects of being male on the influence of narcissism on selfie and corporate content sharing.

Nevertheless, age was found to moderate the relationship between LA and the posting of pictures of oneself with family and friends. In this case, the predictive effect of LA was stronger for younger respondents. While narcissism levels increased significantly before falling in the wake of the Great Recession (Twenge et al., 2021), the levels of the three narcissism components have not been specifically examined to determine if some of them have increased or decreased more relative to others. In addition, this current study considered those that were between the ages of 18-26. The fact that an interaction effect of LA and age occurred with a sample of limited age variability is noteworthy and should be further explored. Perhaps those that are younger have stronger needs for boldness and optimism (Emmons, 1984), key traits for people high in LA, as they are of an age where uncertainty may exist in their lives. These needs drive these Facebook users to post photos of themselves with family and friends to reduce their anxieties and to feel more positive about themselves and their futures.

Moreover, age was found to moderate the impact of GE as older respondents were found to be especially prone to sharing corporate and organizational content. When sharing content from a company's Facebook page, these individuals can include their own thoughts in an effort to show that they themselves are an authority on the topic discussed. Thus, the content is essentially used as an additional conduit through which these individuals can channel their vanity and self-absorption (Ackerman et al., 2011). Although this study used a college student sample, older students may have felt a level of superiority over their younger classmates. As with total narcissism, why this moderation effect did not also happen in the case of sharing content from media companies warrants future research. Perhaps content from media firms does not provide those high-GE Facebook users with the same capability for expressing superiority as this news-oriented content may be relatively more accessible to others. In other words, stories and content released by non-media companies can help a person high in GE to better accomplish their exhibitionist goals since the content is more unique and less likely to have been previously seen or shared by their Facebook connections.

Limitations, Future Research, and Conclusions

There are several limitations to the study which, if addressed, will allow for a more meaningful analysis in the future. First, the sample was limited to a group of undergraduate students. Future research should incorporate a more diverse sample so that the results could be better generalized to a larger group. Given the moderation effect of age on the impact of LA and GE on the posting of photos/videos of oneself with family and friends and sharing of corporate content, a broader sample in terms of age should be employed in future research. Younger and older people have been found to differ with respect to their levels of narcissism (Foster et al., 2003) so it would be expected for a multigenerational sample to yield more dramatic moderation effects. Second, the wording used in the 9-point scale to indicate the greatest level of frequency of engaging in various sharing behaviors, 9 = *Several times per hour*, may not have been sufficiently operationalized. The word "several" invites subjectivity into the scale as participants may have had different conceptualizations as to what the word entails. Third, other personality factors should be considered in future research. Past studies have indicated a close relationship between extraversion and narcissism. Therefore, future research should

investigate the unique variance attributed to narcissism after accounting for extraversion (Ong et al., 2011). Furthermore, such factors as neuroticism and even competence in using computer-media communication could be considered and then compared to narcissism in terms of the influence of each on Facebook usage behaviors.

In closing, given the confluence of increasing levels of narcissism during stable economic periods in our society and the current popularity of SNS sites, an examination of the impact of the personality factor on self-promoting behaviors is of critical importance. As evidenced in this study, narcissists appear to be highly active Facebook users who are inclined to share content from companies and organizations and to showcase themselves through certain photos and videos. The visual content with which those high in narcissism are prone to posting include photos/videos of oneself, oneself with family and friends, and oneself surrounded by natural scenery. The EE component of narcissism was found to be the strongest predictor of the posting of photos/videos of oneself, oneself with family, and at sporting events. On the other hand, GE most strongly predicted the sharing of visual content including oneself with friends. Younger participants were more impacted by LA when posting of photos/videos of themselves with family and friends. Age was also a moderator of GE on the sharing of content from a company or organization Facebook page. This study's findings contribute to our understanding as to which Facebook self-promotional behaviors are most strongly driven by narcissism and its facets. In addition, these results have compelling implications for identifying potential opinion leaders and social media influencers, which has increased relevance given the increasing popularity of social media influencing as a career option.

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