

Narcissism and “Likes”:
Entitlement/Exploitativeness Predicts Both Desire for and Dissatisfaction with Responses on
Facebook

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Abstract: We surveyed participants ($N = 311$) about the responses they had received to their Facebook status updates over the last two weeks. Higher (vs. lower) narcissistic Entitlement/Exploitativeness was associated with desiring responses from others, trying to make oneself appear popular on Facebook, being dissatisfied with the responses received, and becoming angry at and retaliating against individuals who did not respond to one’s status updates. Higher (vs. lower) narcissistic Leadership/Authority was associated with claiming that one typically received more response than others did--an assertion that did not appear to be based in reality.

Keywords: narcissism; NPI; entitlement; popularity; Facebook; likes; anger

1. Introduction

People's level of narcissism may shape their outlook vis-à-vis receiving responses on their Facebook status updates. Narcissism as measured by the Narcissistic Personality Inventory includes 1) Leadership/Authority involving self-confidence about one's leadership ability, 2) Grandiose Exhibitionism involving vanity and showing off, and 3) Entitlement/Exploitativeness involving a sense that one deserves more than others (Ackerman et al., 2011). We believed the Entitlement/Exploitativeness dimension, more so than the other two dimensions, would dispose people to problematic attitudes toward responses on Facebook.

1.1 Desire for responses. Receiving responses from others seems important to narcissists. Narcissism is associated with saying that one uses Facebook to attract friends and admiration (Davenport et al., 2014) and show off (Marshall, Lefringhausen, & Ferenczi, 2015; Wang & Stefanone, 2013) and that one expects friends to respond to one's status updates (Wang & Stefanone, 2013). Narcissistic entitlement especially has been linked with a need for popularity (Utz, Tanis, & Vermeulen, 2012) and with a tendency to engage in social comparison (Bogart, Benotsch, & Pavlovic, 2004) and to monitor what others are saying about them on Facebook (Carpenter, 2012). Supporting and extending this work, we hypothesized that narcissism, chiefly the Entitlement/Exploitativeness facet, would be associated both with caring more about receiving responses to one's Facebook status updates and with actively endeavoring to make oneself appear popular.

1.2 Amount of response claimed vs. actually received. Existing research is equivocal regarding the relationship between narcissism and the amount of response people receive on their status updates. Narcissistic people do come across to others on Facebook as being narcissistic (Buffardi & Campbell, 2008), and blatantly narcissistic statements are perceived negatively by others on Facebook (Kauten et al., 2015). So perhaps people are annoyed by those who are high in narcissism—especially the Entitlement/Exploitativeness facet—and consequently respond less to narcissists' Facebook status updates (Choi, Panek, Nardis, & Toma, 2015). On the other hand, perhaps narcissists engage in self-promotion on Facebook mainly in a way that adheres to social norms and successfully elicits positive responses. Consistent with that idea, Marshall et al. (2015) found that higher narcissism participants reported that they receive more responses from others, mediated by their higher reported frequency of posting about achievements. We are cautious in interpreting Marshall et al.'s (2015) finding, however, because it was based on participants' self-report of how many responses they generally received on their status updates, and narcissism might be associated with a self-inflating bias. Thus, we hypothesized that narcissism would be associated with *claiming* to get more response to their status updates than others do. How narcissism might be related to *actual* amount of responses received we left an open research question.

1.3 Dissatisfaction, anger, and retaliation. Krizan and Johar (2012) suggested that narcissists' excessive sense of entitlement leads them to expect to be treated better than others are, and when this does not happen, they tend to react with hostility. Accordingly, we

hypothesized that narcissistic Entitlement/Exploitativeness would predict dissatisfaction with the amount of response received from one's Facebook community.

Furthermore, the Entitlement/Exploitativeness facet of narcissism has been associated with aggression (Washburn, McMahon, King, Reinecke, & Silver, 2004; Reidy, Zeichner, Foster, & Martinez, 2008) and with reportedly becoming angry if others do not comment on one's Facebook status updates (Carpenter, 2012). Thus, we hypothesized that the Entitlement/Exploitativeness facet of narcissism would be associated with reporting that one has become angry and retaliated against those who failed to respond to one's updates.

2. Method

2.1 Participants

With IRB approval, we emailed a link to the survey (on SurveyMonkey) to people at a college in the Midwestern U.S. and posted it on Facebook and on study-listing websites. Participants could enter a gift card raffle. Between April 2 and May 2, 2015, the survey was completed by 311 participants, 77.4% female, 63.5% affiliated with the college, $M_{age} = 26.46$, $SD = 11.45$.

2.2 Procedure and Measures

Variables relevant to this paper's hypotheses are listed in the order in which they occurred. Participants completed the NPI-13 (Gentile et al., 2013), chosen for being brief yet including the three subscales: Leadership/Authority, $M = 1.51$, $SD = 1.38$, $\omega = .83$; Grandiose Exhibitionism, $M = 1.05$, $SD = 1.19$, $\omega = .74$; and Entitlement/Exploitativeness, $M = 0.72$, $SD = 0.93$, $\omega = .65$. Because the NPI-13 uses a forced-choice format between a narcissistic and a non-narcissistic response, reliability was measured by ω , computed using tetrachoric correlations, following the procedure recommended by Napolitano, Callina, and Mueller (2013).

Participants logged in to their Facebook account and reported their number of Facebook friends, $M = 611.24$, $SD = 424.38$, median = 549, range = 12-2711. Next, participants were asked to look at their Facebook page and list/briefly describe all of their own status updates (up to 24, arbitrarily limited by the survey form) from present to two weeks ago, $M_{\#ofupdates} = 3.41$, $SD = 4.84$, median = 7. For each status update, participants reported the following:

- The positivity of its subject, on a scale from 1 (*very negative*) to 10 (*very positive*); $M = 8.52$, $SD = 2.15$
- The importance of its subject, on a scale from 1 (*not at all*) to 10 (*very*); $M = 6.24$, $SD = 3.05$
- The date they posted it
- How many likes it received; $M = 12.87$, $SD = 20.11$, median = 5, range = 0-175
- How many positive comments it received; $M = 2.12$, $SD = 5.55$, median = 0, range = 0-67
- How many neutral or negative comments it received; $M = 0.23$, $SD = 1.12$, median = 0, range = 0-18
- How many comments they made on it; $M = 0.59$, $SD = 2.17$, median = 0, range = 0-32

- How satisfied they were with the response they received on it, on a scale from 1 (*very unsatisfied*) to 10 (*very satisfied*); $M = 7.26$, $SD = 2.51$

Participants rated their agreement with a series of statements on a 1 (*disagree strongly*) to 7 (*agree strongly*) scale, while thinking about the last two weeks. Caring about responses to one's status updates was measured by averaging agreement with three statements: "I have felt disappointed or sad that one of my posts did not receive more likes or comments", "I don't usually pay much attention to how popular my posts are" (reverse scored), and "I have felt angry or irritated that one of my posts did not receive more likes or comments than it did", $\alpha = .66$, $M = 1.87$, $SD = 1.30$.

Trying to appear popular on Facebook was measured by averaging agreement with two statements: "I have changed or deleted a post because it did not receive enough likes or comments" and "I have instructed a friend to like or comment on one of my posts in order to make my post seem more liked", $r = .51$, $M = 2.88$, $SD = 1.38$.

Claiming to receive more likes than others do was measured by agreement with, "I typically get more likes on my posts than other people do", $M = 3.12$, $SD = 1.46$.

Becoming angry at and retaliating against those who fail to respond was measured by averaging agreement with two statements: "I have felt angry or hostile toward a specific person for not clicking like on or commenting on my post" and "I have deliberately chosen NOT to like or comment on someone's post because they did not like or comment on one of my posts", $r = .52$, $M = 1.86$, $SD = 1.30$.

3. Results

3.1 Narcissism and Desire for Responses

As Table 1 shows, narcissistic Entitlement/Exploitativeness correlated with reporting that in the last two weeks one had cared about the response received on Facebook, tried to look popular on Facebook, and become angry at and retaliated against people who did not respond to one's status updates. Narcissistic Grandiose Exhibitionism also correlated with reporting having cared about responses and tried to look popular, but not with reporting anger and retaliation against those who failed to respond. To test the robustness of these associations, we entered the NPI-13 subscales and control variables as predictors in three simultaneous regressions, results shown in Table 1. Entitlement/Exploitativeness and Grandiose Exhibitionism both uniquely predicted reporting having cared about responses and tried to appear popular. Entitlement/Exploitativeness also uniquely predicted reporting having become angry and retaliated against those who did not respond to one's status updates.

Table 1

Simultaneous regressions predicting attitudes about receiving (or not receiving) responses to one's status updates on Facebook

Predictor	Cared about response		Tried to appear popular		Became angry, retaliated	
	Zero-order correlation	β	Zero-order correlation	β	Zero-order correlation	β
Gender (female = 1, male = 0)	-.02	.04	-.07	.01	-.01	.06
Age	-.11	-.03	-.20***	-.12	-.10	-.07
# of Facebook friends	.05	.09	.02	.10	-.02	.06
# of status updates posted in last 2 weeks	-.04	-.01	-.20***	-.13*	-.15**	-.10
NPI-13 Leadership/Authority	.12*	-.13	.11	-.10	.11*	<-.01
NPI-13 Grandiose Exhibitionism	.23***	.16*	.21***	.16*	.04	-.06
NPI-13 Entitlement/ <u>Exploitativeness</u>	.23***	.22**	.27***	.19**	.26***	.20**
Mean # of "likes"	-.08	-.08	.07	.08	-.01	-.06
Mean # of positive comments	-.07	-.06	-.02	-.11	<-.01	.01
Mean # of neutral/negative comments	.08	.08	-.01	-.04	-.04	-.09
Mean # of participant's own comments	.08	.11	.19**	.25**	.14*	.19*
	$F(11, 206) = 2.44^{**}$		$F(11, 206) = 4.52^{***}$		$F(11, 206) = 2.75^*$	

Note. For correlations involving responses to status updates posted in the two weeks prior, N ranges from 219-222; $n = 307$ for all other correlations.

* $p < .05$, ** $p < .01$, *** $p < .001$

3.2 Narcissism and Amount of Responses Claimed and Received

Asserting that one typically receives more likes on their status updates than other people do correlated with narcissistic Leadership/Authority ($r = .21, p < .001$) but not significantly with Grandiose Exhibitionism ($r = .11, p = .060$) or Entitlement/Exploitativeness ($r = .06, p = .281$). With a simultaneous regression analysis we confirmed that claiming that one receives more likes than others do was uniquely predicted by narcissistic Leadership/Authority ($\beta = .21, t(206) = 2.95, p = .004$) even while accounting for mean number of likes received (which was also a significant predictor, $\beta = .23, t(206) = 2.48, p = .014$) and all of the other variables in Table 1 ($F(11, 206) = 3.05, p = .001$).

Do people higher in narcissistic Leadership/Authority actually receive more response? Narcissistic Leadership/Authority was not significant associated with the mean number of likes received per status update ($r = .02, p = .760$) or with the mean number of positive comments received per status update ($r = -.01, p = .902$) or with the total number of likes and positive comments received on one's most popular post ($r < -.01, p = .948$). Correlations with the other narcissism subscales were also not significant.

3.3. Narcissism and Satisfaction with the Response Received

We used linear mixed modeling (LMM) to test the hypothesis that narcissistic Entitlement/Exploitativeness predicts satisfaction with the responses to one's status updates, even when accounting for the actual number of likes and comments a status update received. We used LMM because status updates varied in number and were nested within participants. First we tested each potential predictor individually and found that satisfaction with the response received to a status update was significantly predicted by Entitlement/Exhibitionism (Estimate = $-0.646, SE = .158, t(209.56) = -4.09, p < .001, 95\% CI [-.958, -.335]$), number of likes received (Estimate = $0.036, SE = .003, t(1034.19) = 10.69, p < .001, 95\% CI [0.030, 0.043]$), and number of positive comments received (Estimate = $0.066, SE = .012, t(924.57) = 5.63, p < .001, 95\% CI [.043, .088]$), but not by Leadership/Authority or Grandiose Exhibitionism (p 's $> .20$),

Next, we simultaneously entered all of the variables listed in Table 1 plus status update days old, importance, and positivity in a linear mixed model to evaluate Entitlement/Exploitativeness's robustness as a predictor of satisfaction. Results revealed that satisfaction with the response received was still significantly uniquely predicted by Entitlement/Exploitativeness (Estimate $-0.648, SE = 0.165, t(200.64) = -3.92, p < .001, 95\% CI [-.974, -.322]$) even when accounting for the other factors. Number of likes also remained a significant predictor (Estimate = $0.035, SE = 0.004, t(994.38) = 8.71, p < .001, 95\% CI [0.017, 0.042]$).

3.4. Aside

Analyses relating narcissism to number of Facebook friends and frequency of posting status updates are available in Supplemental Materials.

4. Discussion

Consistent with our hypotheses, participants higher in narcissistic Entitlement/Exploitativeness and Grandiose Exhibitionism reported caring more about receiving responses to their status updates and taking steps to make them appear popular. Narcissistic Entitlement/Exploitativeness also predicted being less satisfied with the actual responses received on one's status updates of the two previous weeks, and this dissatisfaction was not due to their having received less response. Furthermore, participants higher in narcissistic Entitlement/Exploitativeness were more likely to report that they had become angry at someone for not responding to their post in the last couple weeks and had retaliated by deliberately not responding to the other person's posts. This gives a picture of entitled narcissists on Facebook as greatly desiring to receive many likes and comments in order to seem popular, but perpetually dissatisfied with the amount of response they receive, and perceiving and retaliating to slights from people who do not respond to their posts.

Participants higher in the Leadership/Authority facet of narcissism were more likely to say that they get more responses to their Facebook status updates than other people do. However we found no evidence that actual amount of likes and comments participants reported receiving on their status updates was related to participants' level of narcissism. Thus, narcissists' claims about their relative popularity on Facebook may not be reliable.

4.1 Limitations

Limitations include use of a convenience sample with unequal gender distribution and reliance upon our participants' honesty and accuracy in reporting. We also found the Entitlement/Exploitativeness subscale to have somewhat low reliability. Prior researchers (Ackerman et al., 2011, Gentile et al., 2013, Pechorro et al., 2016, Weiser, 2015) have defended the Entitlement/Exploitativeness subscale as having good criterion validity despite its relatively low internal consistency. Still, given limitations of the NPI, it would be advantageous and informative to include alternative measures such as the Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013) in future studies.

4.2 Conclusion

This study adds to the growing body of research findings (e.g., Pechorro et al., 2016) demonstrating the importance of examining the facets of narcissism separately and elucidating ways the entitled/exploitative dimension can be particularly problematic. Participants high in narcissistic Entitlement/Exploitativeness more intensely desired responses from others and even engaged in manipulative tactics to make their posts appear popular. However they still ended up feeling dissatisfied with the amount of response they received and angry at individuals in their Facebook community to the extent of engaging in passive-aggressive retaliation. Thus, people high in narcissistic Entitlement/Exploitativeness seem to have an outsized desire for responses on Facebook that sets them up for dissatisfaction and possible relationship strain.

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Supplemental Analyses

The data we collected can speak to a couple of additional research questions that are slightly outside our paper’s main focus. For any researchers who may be interested, we report the relevant findings here.

How is narcissism related to the number of Facebook friends?

Prior research has found that number of Facebook friends is correlated with narcissism (Davenport et al, 2014; Garcia & Sikstrom, 2014) but has not examined the narcissism subscales separately, to our knowledge. In this study, number of Facebook friends correlated significantly only with the Grandiose Exhibitionism subscale of the NPI-13 ($r = .16, p = .005$), not with the Leadership/Authority subscale ($r = .11, p = .067$) or the Entitlement/Exploitativeness subscale ($r = -.05, p = .366$). Controlling for gender and age reduced the relationship between Grandiose Exhibitionism and number of Facebook friends to nonsignificance ($pr = .11, p = .064$).

How is narcissism related to frequency of posting on Facebook?

In some research narcissism has been linked with more use of social networking sites (Weiser, 2015) and more frequent updates (Lee, Ahn, & Kim, 2014), but in other research it has not (große Deters, Mehl, & Eid, 2014). In this study, none of the narcissism subscales showed a significant relationship with frequency of posting status updates over the last two weeks (NPI-13 Leadership/Authority $r = -.02, p = .714$; NPI-13 Grandiose Exhibitionism $r = -.04, p = .509$; NPI-13 Entitlement/Exploitativeness $r = -.09, p = .109$). Does this absence of association imply that narcissism is not connected with urges to show off or gain attention on Facebook? Not necessarily. Perhaps narcissists would like to post frequent status updates but restrain themselves out of concern that if they post too often, they will end up with posts that have no or few responses, and that this would cause them to appear to be unpopular. This speculative explanation is consistent with three findings: First, narcissism was associated with caring about responses and trying to appear popular such as by deleting a post if it did not receive many likes (see Table 1, main manuscript). Second, posting status updates less often but commenting on them more often is associated with reporting that one tries to appear popular on Facebook (see Table 1, main manuscript). Third, participants did receive more likes and comments when they posted less frequent status updates (Estimate = $-0.720, SE = 0.206, t(120.41) = -3.49, p = .001$) and commented on their own status updates more (Estimate = $2.684, SE = 0.324, t(1006.27) = 8.28, p < .001$), in an LMM model including age, number of Facebook friends, gender, post days old, post positivity and importance. Or, to take a simpler analytic approach, posting a greater number of status updates was correlated with receiving fewer likes per update ($r = -.16, p = .020$).

How do the three narcissism subscales correlate?

The correlation between the Leadership/Authority subscale and the Grandiose Exhibitionism subscale was $r = .28, p < .001$. The correlation between the Grandiose Exhibitionism subscale and the Entitlement/Exploitativeness subscale was $r = .36, p < .001$. The correlation between Grandiose Exhibitionism subscale and the Entitlement/Exploitativeness subscale was $r = .18, p = .001$.

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