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Understanding Narcissistic Personality Traits and Aggression: The Roles of Self-Esteem and Gender

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RUNNING HEAD: THE EFFECTS OF NARCISSISM ON AGGRESSION

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Understanding narcissistic personality traits and aggression:

The roles of self-esteem and gender

by

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Abstract

The present study investigated the established relationship between narcissistic personality traits and aggression (e.g., Barnet & Powell, 2016; Baumeister et al., 2000; Bushman & Baumeister, 1998). Specifically, the study aimed to understand this relationship in a more nuanced fashion and proposed that 1) the relationship is indirect through self-esteem (mediation) and 2) the relationship is stronger in males than in females (moderation). Participants were 269 undergraduate students from the University of Southern Mississippi. A battery of self-report measures [Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), Pathological Narcissism Inventory (PNI; Pincus et al., 2009), Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), and Reactive-Proactive Aggression Questionnaire (RPQ; Raine, Dodge, Loeber, Gatzke-Kopp, Lynam, Reynolds, Stouthamer-Loeber, & Liu, 2006)] was administered online to participants. Results suggest that low self-esteem mediated the relationship between narcissism and aggression, but only as measured by the NPI. The gender moderation hypothesis was not supported. These findings suggest a pathway for predicting aggression in individuals high in narcissistic personality traits through self-esteem.

Key terms: narcissism, aggression, self-esteem mediation, gender moderation

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Aggression is a common facet of civilized, human interaction, lending itself to the security and maintenance of one's wellbeing. Due to the relative benefits of using aggression (e.g., instrumental aggression for personal gain), it is greatly incentivized (Anderson & Bushman 2002). In addition, aggression can be impulsive or a hostile response to threatening stimuli. The causes and risk factors of aggressive behavior, therefore, need to be given serious consideration. Personality traits such as those characterizing narcissism (e.g., grandiosity, entitlement, low empathy) have been associated with aggression (e.g., Bushman & Baumeister 1998; Twenge & Campbell, 2003); however, research demonstrating the significance of self-esteem to both narcissism and aggression outcomes raise questions about a potentially mediating role of self-esteem (e.g., Baumeister, Bushman, & Campbell, 2000; Bushman & Baumeister, 1998; Bushman, Baumeister, Thomaes, Ryu, Begeer, & West, 2009; Donnellan, Trzesniewski, Robins, Moffitt, 2005; Fossati, Borroni, Eisenberg, & Maffei, 2010; Wink, 1991). Additionally, gender differences in the relationship between narcissistic personality traits and aggression have not been adequately explored. Thus, the present study aims to clarify these associations by examining the influences of self-esteem and gender on the relationship between narcissistic traits and aggressive behavior.

Aggression

Aggression in humans is defined as any behavior towards another individual with clear intent to cause harm (Anderson & Bushman, 2002). It is commonly conceptualized as having two forms: reactive and proactive (Crick & Dodge, 1996). Reactive aggression is a form of

aggression that is a direct response to threatening stimuli. It is a provoked response, based on the impulsivity, frustration, and/or anger of the individual (e.g., Koolen et al., 2012; Pang, Ang, Kom, Tan, & Chiang, A. M. et al., 2013). Proactive (or instrumental) aggression is planned; it may be done in advance of the realization of a threat or in the total absence of a threat as a goal-oriented behavior. This difference in expression is the main distinction between proactive and reactive aggression (Pang et al., 2013). Aggression is important in providing defense for an individual or group, as demonstrated by its evolutionary necessity (e.g., Buss & Shackelford, 1997), but human aggression is obviously harmful for both victim and aggressor. It has many negative consequences for both parties, such bodily harm, property damage, guilt, and legal or professional trouble (Deffenbacher, Oetting, Lynch, & Morris, 1996).

Narcissism

Narcissism is characterized by exaggerated self-image, poor self-regulation, and poor relational functioning (Twenge & Campbell, 2003). Narcissistic traits are considered to be individual difference variables that can be adaptive or maladaptive. From the adaptive perspective, narcissism helps individuals to thrive and increases their sense of personal agency (Pincus, Ansell, Pimentel, Cain, Wright, & Levy, 2009), thereby increasing personal well-being. Studies of narcissism as potentially adaptive and existing in the community often utilize the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) as the preferred index of narcissistic traits. In contract, pathological narcissism (e.g., Pincus & Lukowitsky, 2010) is maladaptive and is associated with outcomes such as aggression, lack of empathy, and exploitative behavior. One maladaptive variant of narcissistic traits is represented by Narcissistic Personality Disorder in the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-5*; American Psychiatric Association, 2013). Roche, Pincus, Lukowitsky, Ménard, & Conroy (2013)

argue that the distinction between adaptive (or "normal") and pathological narcissism lies in the maturity of regulatory mechanisms related to development of self-enhancement strategies (i.e., how individuals motivate themselves and maintain their self-image). For example, while adaptive narcissism would feature attempts by the individual to improve themselves in order to meet their self-image, primitive or immature regulatory mechanisms that feature maladaptive strategies to meet needs for admiration and recognition may result in pathological narcissism. Further, such an individual may develop a grand self-image that is inconsistent with the feedback they receive from peers and develop maladaptive coping strategies to deal with these disappointments (Roche et al., 2013).

Pathological narcissism can be further divided into vulnerable and grandiose facets, as indicated by the Pathological Narcissism Inventory (PNI; Pincus et al., 2009). Grandiose narcissism is characterized by an exaggerated self-image, alongside exploitive and exhibitionist behavior (Zeigler-Hill & Besser, 2013), whereas vulnerable narcissism is characterized by poor self-image, negative affect, interpersonal sensitivity, and social withdrawal (Zeigler-Hill & Besser, 2013). Notably, these two facets of pathological narcissism have some divergence regarding their relationships with aggression. Fossati et al. (2010) reported an association between vulnerable narcissistic personality traits and reactive aggression but not proactive aggression. However, grandiose narcissistic personality traits were associated with both reactive and proactive aggression (Fossati et al., 2010). Additionally, Lobbestael, Baumeister, Fiebig, and Eckel (2014) reported that grandiose narcissism predicted behavioral and self-reported aggression, while vulnerable narcissism only seems to predict self-reported aggression.

Common risk factors of aggression, such as provocation, frustration, or incentivization (Anderson & Bushman, 2002), may be inflated by the possession of narcissistic personality

traits, as characterized by the NPI or PNI, and attendant poor methods of self-enhancement. Furthermore, individuals high in narcissistic personality traits, as characterized by the NPI, are reported to respond to ego-threat (i.e., any stimuli that threatens an individual's self-image or evaluation) with anger, hostility, and aggression (Vazire & Funder, 2006). Even in the absence of ego-threat, however, these individuals are still more likely to aggress. These tendencies are attributed to narcissistic traits such as grandiosity, poor relational functioning, and poor self-regulation (e.g., Twenge & Campbell, 2003; Vazire & Funder, 2006; Zeigler-Hill & Besser, 2013). Despite the significant amount of research regarding the relationship between narcissistic traits and aggression (e.g., Baumeister et al.,2000; Bushman & Baumeister, 1998; Bushman et al., 2009; Fossati et al., 2010, there is insufficient research on potential moderators and mediators of this relationship.

The Potential Role of Self-Esteem

Self-esteem is one factor that may help explain the relationship between narcissistic personality traits and aggression. While previous research has demonstrated a relationship between self-esteem, narcissistic personality traits, and aggression (e.g., Baumeister et al., 2000; Bushman & Baumeister, 1998; Bushman et al., 2009; Donnellan et al., 2005; Fossati et al. 2010; Wink, 1991), the findings are not conclusive. Previous findings have demonstrated the existence of both aggressive and non-aggressive high self-esteem individuals (e.g., Baumeister, Smart, & Boden, 1996; Bushman & Baumeister, 1998) among psychology undergraduates, criminals, and abusive partners. Donnellan et al. (2005) reported that low self-esteem was a risk factor for violence in adolescents and college students from both the United States and New Zealand. Bushman et al. (2009) found that, when both narcissistic personality traits and self-esteem were

high, aggression scores were significantly greater. However, when self-esteem was low, it was unrelated to aggression even when associated with narcissistic personality traits.

Fossati et al.'s (2010) study focused on self-esteem differences, considering overt (i.e., outgoing, sociable, high self-esteem) and covert (i.e., shy, introverted, low self-esteem) expressions of narcissism. Their findings demonstrated that individuals who expressed overt narcissistic personality traits were prone to both proactive and reactive aggression, while individuals with covert narcissistic personality traits reported only reactive aggression. These findings are similar to those of Wink (1991), reaffirming that the relationship between narcissism and self-esteem is distinct and that the two must be considered together. Barnett & Powell (2016) offer additional insight on the role of self-esteem through their report of self-esteem as a mediator between pathological narcissism and aggression in females only. In consideration of these findings and observations, the present study thus seeks to fill the gap in the literature through the investigation of self-esteem mediation models between both pathological and adaptive narcissism and aggression.

Gender

Gender differences are important to consider in evaluating the relationship between narcissistic personality traits and aggression. Several studies have reported significant gender differences in the expression of and beliefs about aggression. For example, men indicate a higher tendency toward instrumental (i.e., proactive) aggression while women report a higher tendency toward expressive (i.e., reactive) aggression (Campbell & Muncer, 2008; Driscoll, Zinkivskay, Evans, & Campbell, 2006). Other research demonstrates differences in aggressive behavior, as males are more likely to express their aggressive behavior through overt, physical violence, while females tend to express aggression through indirect and relational methods (e.g., Crick,

Bigbee, & Howes, 1996). These differences in both aggressive behavior and general beliefs about aggression highlight the importance of considering gender in the study of aggression. While less research has focused on potential gender differences in narcissistic traits, a recent meta-analysis demonstrated that males score a full standard deviation higher on the NPI, largely due to their higher scores on the facets of Exploitative/Entitlement and Leadership/Authority (Grijalva, Newman, Tay, Donnellan, Harms, Robins, & Yan, 2015). In consideration of gender differences in both aggression and narcissism, the present study proposes that gender may moderate the relationship between narcissism and aggression, such that this relationship is stronger for males than females.

The Present Study

The study explored the connections between narcissistic personality traits, self-esteem, gender, and aggression. I predicted that narcissistic personality traits would be associated with higher levels of aggression. Furthermore, I predicted that the two pathological narcissism dimensions would have different associations with aggression: higher levels of grandiose narcissism would be related to higher levels of aggression, while higher levels of vulnerable narcissism would be related to lower levels of aggression. I also predicted that self-esteem would mediate the relationship between narcissism and aggression, and that this would be the case for both conceptualizations of narcissism. Finally, I predicted that gender would moderate the relationship between narcissism and aggression. Specifically, I hypothesized that the relationship between narcissism and overall aggression would be stronger for males than females.

Methods

Participants

Eighteen participants were excluded from the sample for the following reasons: failure to pass Quality Assurance (QA) checks (*n*=16); failure to accurately report gender (*n*=13). The resulting sample consisted of 269 undergraduate participants from the University of Southern Mississippi (USM). Participant demographics are reported in Table 1. The sample was 47.2% Male (*n* = 127) and 52.8% Female (*n* = 142). The average age of the sample was 19.9 (range from 18-31). Regarding racial/ethnic identification, the sample largely identified as White (66.2%, *n* = 178), with the remainder identifying as Black (26.4%, *n* = 71), Asian (5.6%; *n* = 15), Hispanic (2.6%; *n* = 7), and Pacific Islander/Native Hawaiian (0.4%; *n* = 1). Participants were allowed to select all racial/ethnicity groups with which they identify. The participants completed the study either voluntarily, as a class requirement, or for extra-credit purposes.

Measures

Descriptive statistics for all study measures are reported in Table 2.

Narcissistic Personality Traits. Two measures of narcissistic personality traits were used in the study.

The Pathological Narcissism Inventory (PNI; Pincus et al., 2009) is a 52-item self-report measure of pathological narcissism. Each item is scored on a 0-5 scale, with 0 indicating "not at all like me" and 5 indicating "very much like me." Pincus et al. (2009) used factor analysis to identify seven dimensions of pathological narcissism (Pincus et al., 2009): Contingent Self-Esteem (CSE, 12 items); Exploitative (EXP, 5 items); Self-Sacrificing Self-Enhancement (SSSE, 6 items); Hiding the Self (HS, 7 items); Grandiose Fantasy (GF, 7 items); Devaluing (DEV, 7 items); and Entitlement Rage (ER, 8 items). The PNI has an overarching two-factor structure

consisting of grandiose narcissism (ER, EXP, GF, and SSSE) and vulnerable narcissism (CSE, HS, and DEV). Overall pathological narcissism scores are based on scores across all seven dimensions. Excellent internal consistency reliability has been found in undergraduate samples (Pincus et al., 2009). The present study demonstrated excellent internal reliability for PNI total scores (α = .95), in addition to its grandiose and vulnerable dimensions (grandiose, α =.86; vulnerable, α =.95).

The Narcissistic Personality Inventory-40 (NPI-40; Raskin & Terry, 1988) is a 40-item self-report measure that conceptualizes total scores for NPI narcissism across seven components: Authority, Self-Sufficiency, Superiority, Exhibitionism, Exploitativeness, Vanity, and Entitlement (Raskin & Terry, 1998). The NPI is a multiple-choice response questionnaire, where the participant chooses which of two options best describes them. One study of a sample of 1,018 undergraduates (479 men, 529 women) demonstrated good internal consistency reliability (Raskin & Terry, 1988). The NPI demonstrated good internal consistency reliability in the present study (α =.82)

Aggression. The Reactive/Proactive Aggression Questionnaire (RPQ; Raine, Dodge, Loeber, Gatzke-Kopp, Lynam, Reynolds, Stouthamer-Loeber, & Liu, 2006) is a 23-item self-report measure assessing reactive (12 items) and proactive (11 items) aggression. The RPQ also produces an overall aggression score based on all 23 items. Responses range from 0 (“never”) to 2 (“often”). The scale was originally developed using a sample of 503 male sixteen-year-old adolescents (Raine et al., 2006). Adequate internal consistency reliability has been demonstrated for the total score and the two subscales (Raine et al., 2006). Total aggression scores in the present study had excellent internal consistency reliability (α =.96), in addition to the reactive and proactive dimensions (reactive, α =.87; proactive, α =.98)

Self-Esteem. The Rosenberg Self-Esteem Scale (RSES; Rosenberg 1965) is a 10-item self-report measure assessing self-esteem. Responses choices range from 1 ("strongly disagree") to 4 ("strongly agree"). The RSES is the most widely used measure of self-esteem in the psychological literature (Donnellan, Ackerman, & Brecheen, 2016). Previous studies have reported good internal consistency reliability for the RSES (e.g., Schmitt & Allik, 2005; Supple, Su, Plunkett, Peterson, & Bush, 2013). In the current sample, Cronbach's alpha for RSES scores was excellent (α = .89)

Gender. Participants completed a demographics form in which they reported a large amount of descriptive information, including their identification as male (=1) and female (=2).

Procedures

The study was conducted online via Qualtrics. The participants signed up for the study through the USM Psychology Research Participation System (SONA). All procedures were approved by the university Institutional Review Board, and participants completed an informed consent procedure prior to taking the survey. Participants were allowed to start the survey and complete it at a later date. Following the demographic information, the order of the self-report measures was counterbalanced to control for order effects.

Statistical Analyses

SPSS Statistics was utilized to analyze the data. Pearson's product-moment correlations was used to determine the size of the zero-order relationships between variables. Analysis of variance (ANOVA) was used to identify gender differences for each measure. Hayes' PROCESS macro (Hayes, 2013), which uses bootstrapping to estimate indirect effects, was used to test the hypothesis that self-esteem mediates the relationship between narcissism and aggression. The

hypothesis that gender would moderate the relationship between narcissism and aggression, overall and separate (i.e., reactive and proactive types), was tested through two hierarchical linear regressions using the PROCESS macro.

Results

Descriptive statistics for all variables are displayed in Table 2.

Mean Gender Differences. *F*-statistics for ANOVAs examining gender differences on mean scores are displayed in Table 2. Results identified statistically significant gender differences in NPI scores, $F(1,257) = 14.90$, $p = .000$, such that males were higher in NPI narcissism [males, *M(SD)* = 17.52(6.64); females, *M(SD)* = 14.51(5.89)]. Gender differences were also observed for reactive aggression, $F(1,263) = 6.65$, $p = .010$, such that males reported higher levels of reactive aggression than females [males, *M(SD)* = 8.40(4.91); females, *M(SD)* = 6.96(4.15)]. Mean differences were not observed for PNI total scores, $F(1,262) = .02$, $p = .903$; self-esteem, $F(1,260) = 1.62$, $p = .204$; total aggression, $F(1,263) = 2.89$, $p = .090$; or proactive aggression, $F(1,263) = .75$, $p = .388$.

Zero-Order Relationships. Bivariate correlations for study variables are displayed in Table 3. The data demonstrate a statistically significant relationship between total aggression scores and both NPI ($r = .17$, $p = .008$) and PNI ($r = .38$, $p = .000$) total scores. Furthermore, there was support for the hypothesis that both measures of narcissism will be related to higher reactive aggression (NPI: $r = .20$, $p < .001$; PNI: $r = .42$, $p < .001$). Females reported lower scores on NPI narcissism ($r = -.24$, $p < .001$) and reactive aggression ($r = -.16$, $p = .010$), relative to males, inconsistent with our hypotheses regarding gender. Self-esteem was negatively related to NPI narcissism ($r = -.21$, $p = .001$) but positively related to PNI total scores ($r = .28$, $p = .000$).

Regarding PNI subscales, grandiose and vulnerable narcissism were both positively associated with aggression. Contrary to hypothesis, vulnerable narcissism appears to have a stronger correlation with aggression (r = .37, p = .000), compared to grandiose narcissism (r = .31, p = .000), although the size of the correlations were not statistically significantly different (t = 1.17, p = .242). It is of note that the relationship between vulnerable narcissism and self-esteem is statistically significant with a medium-large effect size (r = .42, p = .000), while there is no relationship between grandiose narcissism and self-esteem (r = .06, p = .358).

Gender as a Potential Moderator. The findings for gender moderation are displayed in Tables 4 and 5. Overall, the results did not support the gender moderation hypothesis. The interactions between participant gender and both conceptualizations of narcissism were not statistically significant (NPI: b = -0.27, p = .174, 95% CI [-0.66, 0.12]; PNI: b = -0.81, p = .600, 95% CI [-3.81, 2.19]). Similarly, there were no significant interactions found with reactive aggression as the outcome (NPI: b = -.15, p = .099, 95% CI [-.32, .03]; PNI: b = -.30, p = .656, 95% CI [-1.62, 1.02]).

Self-Esteem as a Potential Mediator. Results from the mediation analyses are displayed in Table 6. There were significant direct effects between NPI narcissism and overall aggression (b = .31, p = .002), as well as pathological narcissism and overall aggression (b = 4.99, p < .001). Mediation analyses indicated that the indirect effect of self-esteem on the relationship between NPI and total aggression was significant (b = -0.05, p = .001, 95%, CI [-0.12, -0.01]); however, this was not the case for pathological narcissism (b = -0.00, p < .001, 95% CI [-0.49, 0.50]). Two additional analyses, in which grandiose and vulnerable narcissism were entered as predictors, likewise found no indirect effect of self-esteem (grandiose; b = .07, 95% CI [-.05, .38], vulnerable; b = -.25, 95% CI [-.98, .32])

Discussion

The current study aimed to identify factors explaining the relationship between narcissism and aggression. This would inform future research and aid in the goal of effectively predicting aggression in individuals high in narcissistic personality traits. As hypothesized, the correlation results indicate that both NPI and PNI narcissistic personality traits are significantly related to aggression. However, there is no support for the hypothesis that PNI grandiose narcissism would have a stronger relationship with aggression. Additionally, analyses did not show support for the gender moderation hypotheses, or the prediction that females would demonstrate higher reactive aggression than males. Analyses examining hypotheses that self-esteem would mediate the relationship between narcissism and aggression were partially supported.

Self-esteem was negatively correlated with NPI narcissism in the present study. This is inconsistent with previous research (e.g., Locke, 2009) indicating that self-esteem is positively correlated with NPI-measured narcissism. This difference is outside expectations, but could be explained through masking (i.e., an individual masking feelings of doubt or inferiority with grandiose expressions of narcissism) or unstable self-esteem (i.e., self-esteem that easily fluctuates with the occurrence of internal or external events; Bosson, Lakey, Campbell, Zeigler-Hill, Jordan, & Kernis 2008). These factors might also explain why self-esteem was positively correlated with PNI total scores and PNI vulnerable narcissism, but had no relationship with PNI grandiose narcissism. Self-esteem was also significantly correlated with reactive aggression, such that higher self-esteem indicated higher reactive aggression. Additionally, despite being non-significant, PNI grandiose narcissism had a weaker relationship with each facet of

aggression compared to PNI vulnerable narcissism. Thus, no support was provided for the hypothesis that grandiose narcissism would result in higher aggression.

In the present study, self-esteem successfully mediated the relationship between narcissism and aggression, but only when NPI narcissism was the predictor. In the self-esteem mediation model, the direct effect between NPI and aggression was moderately sized, corroborating prior results indicating that NPI narcissism has a significant, positive relationship with aggression. The results further indicated that the relationship between NPI and total aggression was indirect through low self-esteem, affirming previous findings which suggested that self-esteem is negatively correlated with aggression (e.g., Barnett & Powell, 2016; Donnellan et al., 2005, Locke, 2009). Additionally, in comparison with the present study, Barnett and Powell (2016) indicated potentially meaningful differences between PNI and NPI narcissism, regarding self-esteem mediation. They found that self-esteem mediated the relationship between PNI narcissism and aggression, but only among females (Barnett & Powell, 2016).

Cain, Pincus, & Ansell (2008) observed that the NPI had unstable factor structure across research studies. Like Wink (1991), Cain et al. proposed a grandiose-exhibition and vulnerability-sensitivity distinction. They noted that the NPI was a greater indicator of grandiose traits than vulnerable, and could not fully represent pathological narcissism. However, regarding the PNI, findings showed support for the validity of both grandiose and vulnerable narcissism dimensions (e.g., Thomas, Wright, Lukowitsky, Donnellan, Hopwood, 2012). Other research identified differences and similarities between the NPI and PNI and found that the dimensions of entitlement and exploitativeness were convergent (Maxwell, Donnellan, Hopwood, & Ackerman, 2011). Considering that entitlement and exploitativeness were both factors of grandiose

narcissism and that the NPI was more limited to the indication of grandiose narcissistic personality traits, I tested whether the grandiose traits captured by the PNI could demonstrate either self-esteem mediation or gender moderation using the current dataset. However, the findings were not conclusive; neither self-esteem mediation nor gender moderation were significant with grandiose traits as the predictor.

Gender correlations in the present study revealed a significant relationship between male gender and reactive aggression. ANOVA results, accordingly, revealed that males had significantly higher mean levels of reactive aggression, in addition to NPI narcissism, compared to females. While gender differences in NPI scores are consistent with previous research (e.g., Grijalva et al., 2015), the reactive aggression results contradict previous research findings that women are more likely than men to engage in reactive aggression (e.g., Driscoll et al., 2006). Further, the hypothesis that gender would moderate the relationship between narcissistic traits and aggression was not supported. Gender did not interact with narcissism to predict aggression (total or reactive) for either conceptualization of narcissism in the present study. These results, overall, indicate that our current understanding of gender and aggression may be limited, and alternative factors influencing gender differences must be considered.

The findings must be considered with regard to study limitations. The present study is cross-sectional, so it does not account for any changes that may be the result of time or shifting individual differences. The study was distributed as an online questionnaire, consisting completely of self-report measures; thus, it is difficult to account for self-report bias or identify causal relationships. Finally, the participant pool consisted of undergraduate students in the southeastern United States; thus, the results may not generalize to other populations.

Further research in the area would benefit from the use of alternative mediators or moderators such as anger, hostility, or impulsivity. Experimental designs would be preferable, as well. Future studies could also employ a repeated-measures design in which participants complete self-report measures (i.e., NPI, PNI, self-esteem, and aggression) two or more weeks in advance of a controlled laboratory experiment (and vice-versa to account for order effects) testing the same traits. Overall, future studies might look to incorporate laboratory paradigms of aggression (e.g., Warburton, Williams, & Cairns 2005) and alternative methods for measuring narcissism and self-esteem (e.g., Thomaes, Bushman, De Castro, Cohen, & Denissen, 2009).

Still, that is not to diminish the findings of cross-sectional and correlational studies. The present study yielded effects for self-esteem mediation between NPI-characterized narcissism and aggression. This finding suggests that there is potential for self-esteem to offer explanation for the relationship between narcissism and aggression. Additionally, the direction of that effect size prompts further consideration as to how each measured trait interacts. The results of the present study thus provide further groundwork for investigating and identifying the relationship between narcissism, self-esteem, and aggression. Future research must take care to account for the self-esteem distinctions in expressions of narcissistic personality traits, higher male scores on the NPI, and possible differences in the traits that narcissism measures such as the PNI and NPI measure. The present study provides affirmation for the results of some studies and brings ambiguity to others, helping to mark the limitations of our understanding of the relationship between narcissism, self-esteem, and aggression.

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Tables

Table 1. Demographic Information of Study Participants

		N=269	%
Gender			
Male		127	47.2
Female		142	52.8
Age			
M	19.9		
SD	2.1		
Range	18–31		
Ethnicity			
Black		71	26.4
Asian		15	5.6
White		178	66.2
Latinx/Hispanic		7	2.6
Pacific Islander/Native Hawaiian		1	0.4

Table 2. Descriptive Statistics of Study Measures (Full Sample and Gender Differences).

	Full Sample		*Males*		*Females*		
Measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*
NPI	15.94	6.42	17.52	6.64	14.51	5.89	14.90***
PNI Total	3.50	0.76	3.49	0.76	3.50	.75	0.02
PNI Grandiose	3.82	0.76	3.88	0.84	3.76	.68	1.78
PNI Vulnerable	3.18	0.92	3.10	0.88	3.25	.95	1.71
RSES	19.23	5.90	19.72	5.61	18.79	6.13	1.62
RPQ Total	17.73	10.09	18.84	10.99	16.74	9.14	2.89
RPQ Proactive	10.09	6.28	10.44	6.86	9.77	5.71	0.75
RPQ Reactive	7.64	4.57	8.40	4.91	6.96	4.15	6.65*

Note: *** p <.001, ** p <.01, *p< .05. NPI = Narcissistic Personality Inventory; PNI = Pathological Narcissism Inventory; RSES = Rosenberg Self-Esteem Scale; RPQ = Reactive-Proactive Aggression Questionnaire. F = the variation between means for Males and Females.

Table 3. Zero-Order Correlations between Study Variables.

	1	2	3	4	5	6	7	8
1. Gender	-							
2. NPI Total	-.24**							
3. PNI Total	.01	.13*						
4. PNI-Grandiose	-.08	.20**	.88**					
5. PNI-Vulnerable	.07	.05	.92**	.61**				
6. Self-esteem	-.08	-.21**	.28**	.06	.42**			
7. Total Aggression	-.11	.17**	.38**	.30**	.37**	.12		
8. Reactive Aggression	-.16**	.20**	.42**	.35**	.41**	.15*	.90**	
9. Proactive Aggression	-.06	.12	.30**	.24**	.29**	.08	.95**	.72**

Note: * $p < .05$. ** $p < .01$.

Table 4. Moderating effect of Gender on the Relationship between NPI and Aggression (Total and Reactive).

						$CI_{95\%}$ for *b*	
Predictor	R^2	ΔR^2	*B*	SE	*p*	Lower	Upper
			Overall Aggression				
	.04	.01					
Gender			2.75	3.40	.419	-3.94	9.44
NPI			.63	.31	.042	0.02	1.23
Gender x NPI			-0.27	.20	.174	-0.66	0.12
			Reactive Aggression				
	.07	.01					
Gender			1.16	1.52	.444	-1.83	4.16
NPI			.34	.14	.015	.07	.61
Gender x NPI			-.15	.09	.099	-.32	.03

Note: NPI = Narcissistic Personality Inventory

Table 5. Moderating effect of Gender on the Relationship between PNI and Aggression (Total and Reactive).

Predictor	R^2	ΔR^2	*B*	$CI_{95\%}$ for *b*			
				SE	*p*	Lower	Upper
			Overall Aggression				
	.16	.00					
Gender			.64	5.45	.907	-10.11	11.37
PNI			6.30	2.44	.010	1.48	11.11
Gender x PNI			-0.81	1.52	.597	-3.81	2.19
			Reactive Aggression				
	.20	.00					
Gender			-.45	2.40	.852	-5.17	4.27
PNI			3.01	1.08	.006	.89	5.12
Gender x PNI			-.30	.67	.656	-1.62	1.02

Note: PNI = Pathological Narcissism Inventory.

Table 6. Indirect Effects of Self-Esteem on the relationship between narcissistic traits and total aggression.

			95% CI	
Effect	R^2	*B*	Lower	Upper
NPI	.05			
Direct		0.31**		
Indirect		-0.05**	-0.12	-0.01
PNI	.14			
Direct		4.99***		
Indirect		-0.00***	-0.49	0.50

Note: *** p <.001, ** p <.01, *p<.05. NPI = Narcissistic Personality Inventory; PNI = Pathological Narcissism Inventory.

Appendix

IRB Approval Letters

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI.

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the “Adverse Effect Report Form”.
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 16082203
PROJECT TITLE: Personality, Self-Esteem, and Behavior
PROJECT TYPE: New Project
RESEARCHER(S): Regis Junearick
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Psychology
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 08/26/2016 to 08/25/2017
Lawrence A. Hosman, Ph.D.
Institutional Review Board

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- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: CH16082203
PROJECT TITLE: Personality, Self-Esteem, and Behavior
PROJECT TYPE: Change to a Previously Approved Project
RESEARCHER(S): Regis Junearick
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Psychology
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 08/26/2016 to 08/25/2017

Lawrence A. Hosman, Ph.D.
Institutional Review Board