Personality and Individual Differences

The two faces of Narcissus? An empirical comparison of the Narcissistic Personality Inventory and the Pathological Narcissism Inventory

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ABSTRACT

Areas of convergence and divergence between the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) and the Pathological Narcissism Inventory (PNI; Pincus et al., 2009) were evaluated in a sample of 586 college students. Summary scores for the NPI and PNI were not strongly correlated ($r = .22$) but correlations between certain subscales of these two inventories were larger (e.g., $r = .71$ for scales measuring Exploitativeness). Both measures had a similar level of correlation with the Narcissistic Personality Disorder scale from the Personality Diagnostic Questionnaire-4 (Hyler, 1994) ($r = .40$ and $.35$, respectively). The NPI and PNI diverged, however, with respect to their associations with Explicit Self-Esteem. Self-esteem was negatively associated with the PNI but positively associated with the NPI ($r = −.34$ versus $r = .26$). Collectively, the results highlight the need for precision when discussing the personality characteristics associated with narcissism.

1. Introduction

The appropriate conceptualization and measurement of narcissism generates intense debate (e.g., Brown, Budzek, & Tamborski, 2009; Cain, Pincus, & Ansell, 2008; Miller & Campbell, 2008; Pincus & Lukowitsky, 2010; Rosenthal & Hooley, 2010). One contentious issue concerns the distinction between normal and pathological narcissism. Normal narcissism reflects seemingly healthy expressions of self-enhancement whereas pathological narcissism reflects clinically significant impairments stemming from a brittle sense of self (Pincus et al., 2009). Pincus and his colleagues suggest the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), the most popular measure of the construct in social/personality psychology (Cain et al., 2008), assesses normal narcissism whereas their newly developed Pathological Narcissism Inventory (PNI; Pincus et al., 2009) assesses pathological narcissism. The objective of the present study is to provide additional data on these two approaches for measuring narcissistic attributes. In particular, we evaluate how these inventories are related to each other and how these inventories relate to criterion-related variables including symptoms of narcissistic personality disorder (NPD) and Explicit Self-Esteem.

1.1. Background and measurement issues

Arrogance, feelings of entitlement, and grandiosity are key manifestations of narcissism across different theoretical accounts (e.g., Millon, 1996; Pincus & Lukowitsky, 2010; Rhodewalt & Peterson, 2009). There are disagreements, however, regarding other attributes associated with narcissism. One such disagreement concerns whether narcissistic individuals are emotionally brittle and insecure. In particular, there are differing perspectives concerning the connections between self-esteem and narcissism (e.g., Horvath & Morf, 2010). For instance, some have argued that the construct of narcissism itself involves high self-esteem (e.g., Miller & Campbell, 2008) whereas other scholars disagree (see Rosenthal & Hooley, 2010). Empirically, self-report self-esteem measures tend to be positively associated with the NPI summary score (e.g., $r = .29$; Trzesniewski, Donnellan, & Robins, 2008). However, it is sometimes overlooked that Explicit Self-Esteem appears to have different relations with the various aspects of personality measured by the NPI (see Trzesniewski et al., 2008).

To be sure, some researchers have argued the NPI contains a "confusing mix of adaptive and maladaptive content" (Cain et al., 2008, p. 643). This criticism is supported by factor analytic research showing there are multiple dimensions of personality embedded within the NPI (e.g., Ackerman et al., in press; Corry, Merritt, Mrug, & Pamp, 2008; Emmons, 1987). The competing factor solutions for the NPI create practical concerns in terms of which solution should be used in research. There is no consensus on this issue so we use two of the proposed structures for this inventory –

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the original 7-component solution identified by the creators of the NPI (Authority, Exhibitionism, Superiority, Entitlement, Exploitativeness, Self-Sufficiency, and Vanity; Raskin & Terry, 1988) and the newly identified 3-factor solution forwarded by Ackerman and his colleagues (in press) (Leadership/Authority, Grandiose Exhibitionism, and Entitlement/Exploitativeness).

Both factor solutions separate NPI content related to leadership and social potency from feelings of entitlement and a willingness to manipulate others. This can help to distinguish the adaptive NPI content from the maladaptive content (see Barry, Frick, & Killian, 2003). The Raskin and Terry solution is more established in the literature whereas the Ackerman et al. solution is more recent. The Ackerman et al. solution is perhaps more useful because it is simpler and still preserves distinctions between grandiosity and entitlement. This is important in light of recent theoretical arguments suggesting a difference between interpersonal manifestations of narcissism related to feelings of entitlement and intrapersonal manifestations of narcissism related to feelings of self-importance (Brown et al., 2009). The former might be especially socially toxic and Ackerman et al. (in press) found their Entitlement/Exploitativeness scale was consistently linked with maladaptive outcomes such as roommate dissatisfaction and psychopathic tendencies. This scale was also related to low self-esteem.

Accordingly, low self-esteem may help identify pathological manifestations of narcissism. Indeed, pathological narcissism is thought to be rooted in psychological vulnerabilities related to maladaptive self-regulation processes. Further, there are grandiose and vulnerable expressions of this construct (Pincus & Lukowitsky, 2010; Pincus et al., 2009; Wright, Lukowitsky, Pincus, & Conroy, 2010). Narcissistic grandiosity, strongly emphasized in the DSM-IV description of NPD (American Psychiatric Association, 1994), is characterized by feelings of entitlement, a sense of superiority, and exploitative behaviors. Narcissistic vulnerability, in contrast, "…involves the conscious experience of helplessness, emptiness, low self-esteem, and shame" (Pincus et al. 2009, p. 367). Pincus and his colleagues (2009) developed the self-report PNI to assess seven dimensions of personality associated with pathological narcissism. Wright et al. (2010) recently confirmed a structure for the PNI that distinguishes elements of pathological narcissism related to themes of grandiosity (indicated by the subscales of Exploitativeness, Self-Sacrificing Self-Enhancement, and Grandiose Fantasy subscales) from those related to vulnerability (indicated by the Entitlement Rage, Contingent Self-Esteem, Hiding the Self, and Devaluing subscales).

1.2. Present study

As it stands, more information is needed to better understand the areas of convergence and divergence between the NPI and PNI. The NPI is widely used in social/personality psychology and researchers have articulated the nomological network for the NPI summary score (for a recent review, see Ackerman et al., in press). For instance, the NPI summary score is correlated with Extraversion, low Agreeableness, and counterproductive behaviors (Ackerman et al., in press). The recently developed PNI is not as well established in the literature as the NPI but there is emerging evidence for the validity of this measure. For example, PNI summary scores predicted the use of primitive defenses, identity diffusion, and impaired reality testing, consistent with the prediction that the measure is sensitive to clinically relevant personality pathology (Pincus et al., 2009). Moreover, scores on the PNI were associated with clinically related outcomes such as suicide attempts and the use of psychiatric medications in a small clinical sample (Pincus et al., 2009).

Consistent with previous work, we expect only a small to modest association between summary scores for the NPI and PNI (around $r = .13$; Pincus et al., 2009). In contrast, we expect stronger overlap between the NPI and the PNI for those scales that reflect more socially toxic elements of personality. In addition to evaluating convergence across inventories, we provide further insight into the connections between the NPI and PNI by embedding both inventories in a nomological net that includes symptoms of narcissistic personality disorder, Explicit Self-Esteem, and Counter Productive School Behavior. The use of a measure of NPD symptoms will help us evaluate whether the NPI measures pathological content. In the present study, these symptoms are measured by the self-report NPD scale from the Personality Diagnostic Questionnaire-4 (Hyler, 1994), a well-used assessment tool in the clinical literature modeled on DSM-IV criteria (see Miller & Campbell, 2008). Here we expect to find both the NPI and the PNI relate to the NPD scale. In terms of connections with Explicit Self-Esteem, we expect a modest positive association for the NPI and a negative association for the PNI. Further, we expect the association between the PNI and low self-esteem will be driven by vulnerable manifestations of pathological narcissism given research and theoretical claims by Pincus et al. (2009). For counterproductive behavior, we expect generally positive associations for the NPI and PNI subscales reflecting entitlement and exploitation.

2. Method

2.1. Participants

Data were drawn from the responses of 597 college students from a large Midwestern University who completed questionnaires in exchange for course credit or extra credit during the fall semester of 2009. Data from 10 participants were discarded because they failed to answer affirmatively to a final question "I answered all of these questions honestly." Moreover, 1 participant did not complete any of the narcissism items and was removed from the analyses. The final sample of 586 college students (50.3% women) consisted primarily of European American participants (83.8%), the majority of whom were 18 (28.2%), 19 (25.6%), 20 (21.3%), or 21 (14.7%) years of age. Questionnaires were completed online through a secure web site. We collected approximately equal numbers of women and men by designating separate but identical questionnaires through the online subject pool software that restricted participation by gender (e.g., only women were eligible to complete the survey for women). Each study had a maximum cap of 300 participants.

2.2. Measures

Descriptive statistics and information about internal consistency for each scale are reported in Table 1. Space limitations prevent us from providing sample items but a complete list of item content is available upon request. Gender differences were quantified using Cohen's d (negative scores indicated men scored higher than women). These are included because mean-level differences in narcissism are often reported for men versus women (e.g., Corry et al., 2008).

2.2.1. NPI (Raskin & Terry, 1988)

The NPI consists of 40 forced-choice items in which one point is scored for each narcissistic response. To create summary scores for the NPI scales, we averaged responses for the relevant items so that each scale mean reflected the proportion of narcissistic items endorsed. We created a summary NPI variable as well as variables for the seven Raskin and Terry scales and the three Ackerman

Table 1
Descriptive statistics for primary measures.

	Mean	SD	Number of items	Alpha	Average inter-item r	d_{gender}
NPI total score	0.41	0.16	40	.81	.10	−.19[*]
Raskin & Terry NPI scales						
Authority	0.56	0.27	8	.73	.25	.04
Exhibitionism	0.28	0.23	7	.57	.16	−.02
Superiority	0.44	0.28	5	.55	.19	−.25[*]
Entitlement	0.31	0.23	6	.46	.13	−.27[*]
Exploitativeness	0.40	0.28	5	.53	.18	−.21[*]
Self-sufficiency	0.46	0.24	6	.37	.09	−.15
Vanity	0.40	0.36	3	.63	.36	−.03
Ackerman et al. NPI scales						
Leadership/Authority	0.49	0.26	11	.75	.21	−.11
Grandiose Exhibitionism	0.37	0.24	10	.70	.19	−.06
Entitlement/Exploitativeness	0.25	0.26	4	.43	.16	−.23[*]
PNI total score	2.59	0.63	52	.94	.22	−.12
PNI scales						
Contingent Self-Esteem	2.32	0.98	12	.92	.49	−.01
Exploitativeness	2.65	0.92	5	.76	.38	−.30[*]
Self-Sacrificing Self-Enhancement	3.19	0.75	6	.74	.33	.14
Hiding the Self	2.89	0.82	7	.73	.28	−.09
Grandiose fantasy	3.11	0.91	7	.84	.43	−.17[*]
Devaluing	1.93	0.93	7	.84	.43	−.10
Entitlement rage	2.38	0.90	8	.84	.39	−.09
Criterion-variables						
NPD symptoms (PDQ-4)	0.29	0.21	9	.59	.15	−.25[*]
Explicit Self-Esteem	3.84	0.62	10	.88	.43	.10
Counter-Productive School Behaviors	2.28	0.56	11	.82	.30	−.65[*]

Note: NPI = Narcissistic Personality Inventory. PNI = Pathological Narcissism Inventory. d_{gender} = standardized gender difference such that negative scores reflect higher scores for men than women.
[*] Gender difference statistically significant at $p < .05$.

et al. (in press) scales. A complete description of these scales is available in these respective publications.

2.2.2. PNI (Pincus et al., 2009)

This inventory consists of 52 items scored on a 6-point scale ranging from "*Not at all like me*" (0) to "*Very much like me*" (5). High scores reflect higher levels of pathological narcissism. There are seven primary PNI scales: *Contingent Self-Esteem* (feeling fluctuating levels of self-esteem), *Exploitativeness* (manipulativeness), *Self-Sacrificing Self-Enhancement* (committing altruistic acts to bolster a positive self-image), *Hiding the Self* (keeping flaws and interpersonal needs hidden from others), *Grandiose Fantasy* (fantasies of success and admiration), *Devaluing* (lack of interest in others who will not bolster the self-image), and *Entitlement Rage* (anger in response to unmet desires). These scales can be aggregated into composites for narcissistic grandiosity (the average of the *Exploitativeness, Self-Sacrificing Self-Enhancement,* and *Grandiose Fantasy* scales) and narcissistic vulnerability (the average of the *Contingent Self-Esteem, Self-Sacrificing Self-Enhancement, Hiding the Self,* and *Entitlement Rage* scales) (Wright et al., 2010). These composites were positively correlated in these data ($r = .50$, $p < .05$) so we also report respective partial correlations that control for the other higher-order dimension in our tables.

2.2.3. NPD symptoms

The nine item NPD scale from the PDQ-4 (Hyler, 1994) was used to assess symptoms of the DSM-IV characterization of this disorder. Participants answered using a True/False response format.

2.2.4. Explicit Self-Esteem

The 10-item Rosenberg scale (1965) was used to measure self-esteem. Participants responded using a 5-point scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*).

2.2.5. Counter-Productive School Behaviors

A modified version of the 11-item Bennett and Robinson (2000) work-place deviance measure was used to assess Counter-Productive School Behaviors. We replaced the word "work" with "school" in the relevant items and modified the item "Made an ethnic, religious, or racial remark at work" to "Made a derogatory ethnic, religious, or racial remark at school." Participants responded to each item on a 5-point scale ranging from 1 (*Never*) to 5 (*Frequently*).

3. Results

3.1. Initial comments

Given the number of correlations computed, we emphasize effect sizes rather than statistical significance. Following Cohen, 1988), we regarded correlations around |.10| as small, correlations around |.30| as medium, and correlations around |.50| as large. We primarily focused on medium effects or larger given space constraints. We also report some tests of differences between dependent correlations in the text and we quantified those differences by taking the absolute value of the difference in the two correlations. We repeated all reported analyses controlling for gender and those partial correlations were within .01 of the reported coefficients in Table 2 and .04 for Table 3 (results available upon request). Although we had no a priori hypotheses about gender differences, we calculated the associations in Tables 2 and 3 separately for men versus women and compared the correlations. Seven comparisons were statistically significant at $p < .05$ but this is a number that would be expected by chance alone (results available upon request). Thus, we do not further discuss gender differences.

Table 2
Correlations between the PNI and NPI.

| | Pathological narcissism inventory | | | | | | | | | | | |
| | | Grandiosity | | Vulnerability | | Specific scales | | | | | | |
	Total Score	Zero-order	Partial	Zero-order	Partial	CSE	EXP	SSSE	HS	GF	DEV	ER
NPI Total	.22[*]	**.43**[*]	**.44**[*]	.11[*]	−.13[*]	.02	**.57**[*]	.09[*]	−.04	.27[*]	.10[*]	.26[*]
Raskin & Terry scales												
Authority	.04	.28[*]	**.35**[*]	−.05	−.22[*]	−.14[*]	**.39**[*]	.06	−.07	.14[*]	−.01	.07
Exhibitionism	.19[*]	.26[*]	.23[*]	.13[*]	.00	.15[*]	**.34**[*]	.09[*]	−.05	.14[*]	.10[*]	.19[*]
Superiority	.13[*]	.26[*]	.27[*]	.04	−.10[*]	.06	.27[*]	.05	−.11[*]	.24[*]	.00	.17[*]
Entitlement	**.30**[*]	.29[*]	.19[*]	.26[*]	.14[*]	.17[*]	**.30**[*]	.05	.09[*]	.28[*]	.23[*]	.33[*]
Exploitativeness	.25[*]	**.44**[*]	**.42**[*]	.16[*]	−.08	.06	**.71**[*]	.04	.13[*]	.17[*]	.09[*]	.22[*]
Self-sufficiency	−.05	.09[*]	.15[*]	−.08	−.14[*]	−.18[*]	.20[*]	−.01	−.04	.01	.00	−.01
Vanity	.12[*]	.20[*]	.20[*]	.06	−.04	.06	.18[*]	.11[*]	−.11[*]	.15[*]	.06	.17[*]
Ackerman et al. NPI Scales												
Leadership/Authority	.09[*]	**.33**[*]	**.38**[*]	.00	−.20[*]	−.11[*]	**.44**[*]	.07	−.06	.20[*]	.03	.12[*]
Grandiose Exhibitionism	.18[*]	.27[*]	.25[*]	.11[*]	−.03	.13[*]	**.31**[*]	.11[*]	−.12[*]	.18[*]	.07	.24[*]
Entitlement/Exploitativeness	**.31**[*]	.24[*]	.10[*]	**.31**[*]	.23[*]	.21[*]	**.35**[*]	−.04	.14[*]	.18[*]	.28[*]	**.35**[*]

Note. Zero-Order = Zero-order correlation; Partial = Partial Correlation controlling for the other higher-order dimension of the Pathological Narcissism Inventory. NPI = Narcissistic Personality Inventory. CSE = Contingent Self-Esteem; EXP = Exploitativeness; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage. **Correlations above |.29| highlighted in boldface.**
[*] $p < .05$.

3.2. What are the associations between the NPI and PNI?

Correlations between the NPI and PNI scales are reported in Table 2. The correlation between the NPI and PNI composites was .22. In terms of overlap for the higher-order PNI composites, we found indications of convergence between the NPI total score and the Grandiosity composite of the PNI. This also held for the

Table 3
Correlations with criterion variables.

	Narcissistic personality disorder	Explicit self-esteem	Counter productive school behaviors
NPI Total	**.40**[*]	**.26**[*]	.16[*]
PNI Total	**.35**[*]	**−.34**[*]	.21[*]
PNI Grandiosity	**.30**[*]	.01	.11[*]
Partial	.18[*]	.27[*]	.00
PNI Vulnerability	**.32**[*]	**−.41**[*]	.22[*]
Partial	.20[*]	**−.48**[*]	.19[*]
Raskin and Terry NPI Scales			
Authority	.13[*]	**.31**[*]	−.01
Exhibitionism	**.33**[*]	.04	.19[*]
Superiority	.29[*]	.22[*]	.08[*]
Entitlement	**.32**[*]	−.03	.18[*]
Exploitativeness	.28[*]	.01	.27[*]
Self-Sufficiency	.13[*]	**.33**[*]	−.06
Vanity	.24[*]	.12[*]	.05
Ackerman et al. NPI Scales			
Leadership/Authority	.20[*]	**.31**[*]	.06
Grandiose Exhibitionism	**.36**[*]	.14[*]	.12[*]
Entitlement/Exploitativeness	**.34**[*]	−.14[*]	.25[*]
PNI Scales			
Contingent Self-Esteem	.27[*]	**−.51**[*]	.17[*]
Exploitativeness	**.32**[*]	.09[*]	.22[*]
Self-Sacrificing Self-Enhancement	.13[*]	.02	−.08
Hiding the Self	.11[*]	−.25[*]	.08
Grandiose Fantasy	.21[*]	−.09[*]	.08
Devaluing	.26[*]	**−.33**[*]	.18[*]
Entitlement Rage	**.34**[*]	−.19[*]	.26[*]

Note. PNI = Pathological Narcissism Inventory. NPI = Narcissistic Personality Inventory. Partial = Partial Correlation controlling for the other higher-order dimension of the Pathological Narcissism Inventory. **Correlations above |.29| highlighted in boldface.**
[*] $p < .05$.

partial correlation between the NPI and PNI Grandiosity composite controlling for the Vulnerability composite. In terms of PNI subscales, the PNI Exploitativeness scale had medium sized or larger correlations with several NPI scales. Other notable associations were observed between the PNI Entitlement Rage and the Raskin and Terry (1988) Entitlement scale and between the PNI Entitlement Rage and the Ackerman et al. (in press) Entitlement/Exploitativeness scale.

3.3. Do the NPI and PNI have similar links with NPD symptoms?

As seen in Table 3, both the NPI and PNI were related to symptoms of DSM-IV NPD as represented by the PDQ-4 scale with approximately the same level of association ($r = .40$ and $r = .35$, respectively). The test of the difference for dependent correlations was not statistically significant ($t(583) = 1.08$). Moreover, both composites had independent associations with the NPD scale in a regression model ($\beta = .34$ and $\beta = .27$ for the NPI and PNI, respectively). However, not all subscales associated with these inventories had similar levels of association with NPD symptoms. For example, the correlation for the NPI Authority scale from the Raskin and Terry (1988) solution was .13 whereas the correlation for the NPI Entitlement scale was .32. This .19 difference was significant ($t(583) = 4.07$, $p < .05$) and it is perhaps even more noteworthy in light of the differences in the alpha coefficients for these respective scales. Likewise, there was divergence across the PNI subscales. For instance, the correlation with NPD symptoms for the Hiding the Self scale was .11 whereas the correlation was .34 for the Entitlement Rage scale, a .23 difference that was also significant ($t(583) = 5.16$, $p < .05$). Such differences might be expected given that the DSM seems to emphasize features of grandiose narcissism (Pincus & Lukowitsky, 2010).

3.4. Do the NPI and PNI have similar links with Explicit Self-Esteem and Counter-productive School Behavior?

As seen in Table 3, one of the more substantial areas of divergence for the NPI and PNI occurred for self-esteem. Consistent with our expectations, the PNI total score had a negative association with global self-esteem whereas the NPI total score had a positive association. The .60 difference was statistically significant ($t(583) = 13.24$, $p < .05$). Moreover, the PDQ scale had a slightly

negative association with self-esteem ($r = -.12$, $p < .05$). Collectively, these findings support the contention that certain pathological manifestations of narcissism are related to low self-esteem.

As anticipated, the links between self-esteem and constructs associated with narcissism fluctuated across the NPI and PNI subscales. For instance, the Raskin and Terry (1988) NPI Entitlement scale had virtually no connection with self-esteem whereas their Authority scale had a medium sized correlation with self-esteem. This .34 difference was significant ($t(583) = 7.35$, $p < .05$). For the PNI, there was a strong negative correlation between the Contingent Self-Esteem scale and global self-esteem and a medium sized negative correlation between the Devaluing scale and global self-esteem. This .18 difference was significant ($t(583) = 5.55$, $p < .05$).

Last, Counter-Productive School Behaviors had a similar correlation with both the NPI and PNI ($r = .16$ for the NPI and $r = .21$ for the PNI; $t(583) = 0.99$). Incidentally, the correlation between Explicit Self-Esteem and Counter-Productive School Behaviors was $-.21$ ($p < .05$) and the correlation between NPD and Counter-Productive School Behaviors was .29 ($p < .05$). As expected, the associations between measures of narcissism and Counter-Productive School Behaviors were strongest for scales associated with entitlement and exploitation. For example, the NPI Exploitativeness scale had a near medium sized correlation with Counter-Productive School Behaviors whereas the Authority scale was not significantly associated with this variable. This .28 difference was statistically significant ($t(583) = 5.95$, $p < .05$). Likewise, the PNI Entitlement Rage scale was positively associated with Counter-Productive School Behaviors whereas the Self-Sacrificing Self-Enhancement scale was positively but not significantly associated with the variable. This .34 difference was also significant ($t(583) = 7.46$, $p < .05$).

4. Discussion

One proposal in recent discussions about the measurement of narcissism is to distinguish normal narcissism from pathological narcissism (Pincus & Lukowitsky, 2010). The NPI is thought to assess normal narcissism whereas the newly developed PNI is thought to assess pathological narcissism (Pincus et al. 2009). In light of these arguments, the current study helped to shed light on areas of overlap and divergence between the NPI and PNI. Three findings were particularly noteworthy.

First, the observed correlation between the NPI and PNI was .22. A correlation of this size is typically considered to be a small to moderate association. One possible standard of comparison for this correlation is the level of association for different Big Five measures. John, Naumann, and Soto (2008) reported the average convergent validity correlation across three different measures was .75. The correlation between the NPI and PNI observed across this and other studies is considerably lower than this potential benchmark. Nonetheless, despite a fairly low level of overall convergence, certain NPI and PNI scales involving exploitativeness and entitlement were more strongly correlated.

Second, both the summary NPI and PNI scales were similarly correlated with the symptoms of narcissistic personality disorder as assessed by the PDQ-4. Likewise, both the NPI and PNI had significant independent associations with the NPD scale suggesting that they share non-overlapping variance with this criterion variable. To the degree that the PDQ-4 is a valid representation of narcissistic personality disorder, these findings suggest that both measures have some pathological content. Researchers may of course criticize the DSM operationalization of NPD but the PDQ-4 appears to be a content valid measure of the DSM-IV description of NPD. The overlap between the PDQ-4 and the NPI is perhaps expected given that the inventory was developed from DSM criteria (see Raskin & Terry, 1988). However, as we have noted, an issue

that complicates generalizations about the NPI is the fact the inventory assesses a broad range of personality constructs. Not all of these attributes are uncontroversial manifestations of narcissism. For example, the NPI has considerable content linked with leadership and social potency and it is debatable whether these attributes are central to clinical perspectives on the disorder (see e.g., Rosenthal & Hooley, 2010). Moreover, Samuel and Widiger (2008) reported the overall connection between clinical measures of NPD and Extraversion was .09. This suggests to us that certain clinical measures of narcissism are not strongly linked to these kinds of attributes. Nonetheless, these attributes are emphasized on the NPI.

Third, the NPI was positively correlated with Explicit Self-Esteem whereas the PNI was negatively correlated with Explicit Self-Esteem. As expected, the associations with self-esteem fluctuated for various scales within each inventory. Such differences further underscore the importance of evaluating correlates at the subscale level when using omnibus measures of narcissism. In general, the correlation between Explicit Self-Esteem and the NPI is apparently driven by the adaptive dimensions of the NPI (see e.g., Ackerman et al., in press; Barry et al., 2003) rather than dimensions like entitlement and Exploitativeness. This pattern of results provides little support for arguments regarding a dark side of global self-esteem (see Trzesniewski et al., 2008). Moreover, the fact that low Explicit Self-Esteem is linked with certain ways of conceptualizing narcissism will be overlooked by researchers who exclusively measure narcissism with the total NPI composite score.

Although the present study provides important data concerning the measurement of narcissism, there are limitations to the current work. Chief among these are the exclusive reliance on a college student sample and the use of self-report data to establish the network of criterion-related associations surrounding the NPI and PNI. Self-reports are potentially susceptible to concerns over faking, socially desirable responding, and self-deceptive responding. Given that much of the literature on narcissism in social/personality psychology is based on self-reports from convenience samples of college students, future work should use more diverse samples. Future studies should also strive to obtain data using a multi-method strategy and consider including measures of impression management to partially address concerns with self-report measures.

In sum, the NPI and PNI appear to capture relatively distinct attributes with the exception of common content focused on entitlement and exploitative tendencies. Fortunately, these dimensions seem to be the manifestations of narcissism that are common to both lay and clinical definitions of the construct. Nonetheless, the two inventories are not interchangeable and this fact highlights the need for precision when discussing the attributes of personality associated with various conceptualizations of narcissism. At this point, we recommend researchers use both the NPI and the PNI to gain a clearer perspective of the diverse range of personality constructs associated with narcissism.

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