

A Comparison of the Criterion Validity of Popular Measures of Narcissism and Narcissistic Personality Disorder via the Use of Expert Ratings

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The growing interest in the study of narcissism has resulted in the development of a number of assessment instruments that manifest only modest to moderate convergence. The present studies adjudicate among these measures with regard to criterion validity. In the 1st study, we compared multiple narcissism measures to expert consensus ratings of the personality traits associated with narcissistic personality disorder (NPD; Study 1; $N = 98$ community participants receiving psychological/psychiatric treatment) according to the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association, 2000) using 5-factor model traits as well as the traits associated with the pathological trait model according to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; American Psychiatric Association, 2013). In Study 2 ($N = 274$ undergraduates), we tested the criterion validity of an even larger set of narcissism instruments by examining their relations with measures of general and pathological personality, as well as psychopathology, and compared the resultant correlations to the correlations expected by experts for measures of grandiose and vulnerable narcissism. Across studies, the grandiose dimensions from the Five-Factor Narcissism Inventory (FFNI; Glover, Miller, Lynam, Crego, & Widiger, 2012) and the Narcissistic Personality Inventory (Raskin & Terry, 1988) provided the strongest match to expert ratings of *DSM-IV-TR* NPD and grandiose narcissism, whereas the vulnerable dimensions of the FFNI and the Pathological Narcissism Inventory (Pincus et al., 2009), as well as the Hypersensitive Narcissism Scale (Hendin & Cheek, 1997), provided the best match to expert ratings of vulnerable narcissism. These results should help guide researchers toward the selection of narcissism instruments that are most well suited to capturing different aspects of narcissism.

Keywords: narcissism, grandiose, vulnerable, expert ratings, validity

Despite nearly being deleted from the most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*, American Psychiatric Association [APA], 2013; Miller, Widiger, & Campbell, 2010), the study of narcissism and narcissistic personality disorder (NPD) has never been more popular. A search of PsycINFO for peer-reviewed publications with the stem *narciss* in the title yielded 2,415 total publications, with 678 publications in just the last 6 years. In recent years, the field has seen publications of handbooks (Campbell & Miller, 2011) and special issues of journals devoted to the topic (e.g., the May 2013 issue of *Journal of Personality Assessment*). One can now find research on narcissism in a host of areas of psychology, including clinical psychology/psychiatry and social-personality, develop-

mental, and industrial-organizational psychology, to name just a few.

This growing interest is linked to a number of issues. First, there is a body of literature suggesting that Western societies like the United States may be becoming increasingly narcissistic (e.g., Twenge, Konrath, Foster, Campbell, & Bushman, 2008a, 2008b); the debate surrounding this issue has generated a great deal of attention in the empirical literature and lay media and may have helped spur further study of these constructs. Second, there is an increased recognition that there are at least two different dimension or variants of narcissism (e.g., Miller & Campbell, 2008; Pincus & Lukowitsky, 2010; Russ, Shedler, Bradley, & Westen, 2008; Wink, 1991), most commonly referred to as *grandiose* and *vulnerable* narcissism. Wink (1991) described grandiose narcissism as being characterized by “extraversion, aggressiveness, self-assuredness, and the need to be admired by others,” whereas vulnerable narcissism is characterized by “introversion, hypersensitivity, defensiveness, anxiety, and vulnerability” (p. 596). With the increased recognition of the heterogeneity of narcissism has come a subsequent increase in research that examines the manner in which these dimensions converge and diverge, with numerous studies demonstrating that these dimensions manifest widely diverging nomological networks (Dickinson & Pincus, 2003; Miller, Dir, et al., 2010; Miller, Hoffman, et al., 2011; Pincus et al., 2009).

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Although most narcissism experts conceptualize NPD as comprising primarily grandiose narcissism (e.g., Cain, Pincus, & Ansell, 2008; Miller & Campbell, 2008), it is notable that the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; *DSM-IV*; APA, 2000) and *DSM-5* include descriptive text relevant to vulnerable narcissism.

As a result of the growth in the interest in narcissism and the push to conceptualize narcissism in a more nuanced, heterogeneous manner, a variety of assessment-related issues have arisen. First, the most frequently used measure of narcissism, the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), which is typically used in narcissism research conducted from a social-personality perspective, has been criticized on several grounds, including (a) inclusion of content that is putatively tangential to narcissism such as leadership or extraversion, (b) the NPI's tendency to demonstrate positive correlations with self-esteem and certain adaptive outcomes, and (c) the notion that the NPI assesses normal but not pathological variants of narcissism (e.g., Brown, Budzek, & Tamborski, 2009; Pincus & Lukowitsky, 2010; Rosenthal & Hooley, 2010). Although one can debate the legitimacy of these criticisms (e.g., Miller, Lynam, & Campbell, 2014; Miller, Maples, & Campbell, 2011; Miller, Price, & Campbell, 2012), there remain doubts regarding the NPI's validity. Second, commonly used measures of narcissism have shown only modest convergence and demonstrate divergent patterns of correlations with basic personality traits (e.g., Samuel & Widiger, 2008). Third, the recognition of the existence of different dimensions or variants of narcissism has led to the development of new measures that attempt to capture both grandiose and vulnerable content (e.g., Five-Factor Narcissism Inventory [FFNI]; Glover, Miller, Lynam, Crego, & Widiger, 2012; Narcissistic Admiration and Rivalry Questionnaire [NARQ]; Back et al., in press; Pathological Narcissism Inventory [PNI]; Pincus et al., 2009). In addition, there are also measures that focus entirely on grandiose (e.g., Narcissistic Grandiosity Scale; Rosenthal, Hooley, & Steshenko, 2007) or vulnerable (Hypersensitive Narcissism Scale; Hendin & Cheek, 1997) narcissism, as well as measures that capture *DSM-IV-TR*/*5*-based descriptions of NPD (e.g., Personality Diagnostic Questionnaire-4; Hyler, 1994).

The growing interest in the assessment of narcissism has resulted in a corresponding debate as to which of these measures of narcissism works best. Unfortunately, adjudicating between the validity of various measures of narcissism is a difficult task because there are substantial differences among researchers as to how the construct is conceptualized. That is, researchers conceptualize narcissism and NPD in disparate ways that produce diverging empirical networks. For instance, whether one believes that measures of narcissism should be correlated with measures of self-esteem depends on one's underlying conceptualization of narcissism (i.e., grandiosity as a façade or as a genuine reflection of high self-esteem). Similarly, one might debate whether measures of grandiose narcissism should be positively correlated with measures of negative emotionality or neuroticism and traits such as submissiveness (e.g., Miller et al., 2014; Wright et al., 2013).

One way to minimize the problem of subjectivity in evaluating individual narcissism assessments is to compare the relations manifested by various measures of narcissism to a more objective nomological network, such as one derived from expert ratings. In such an approach, a number of experts are asked to describe the

construct of interest (e.g., narcissism or NPD) using a standard personality assessment (e.g., Revised NEO Personality Inventory [NEO PI-R]; Costa & McCrae, 1992). These expert ratings, in the form of trait profiles, can then be systematically compared to the trait profiles observed using measures of the construct of interest. The stronger the agreement or similarity between the observed profile and the expert-rated profile, the more confidence one can have in a measure's criterion validity. In addition, the obtained profile correlations can be compared across measures, allowing for a direct, empirical comparison of the degree to which various measures of a given construct are consistent with expert conceptualizations. There is much to recommend this approach. First, this approach specifies a priori the relevant variables that are to be included in the comparison; if one uses the 30 facets of the NEO PI-R, one cannot simply cherry-pick a handful of results that support a particular measure over others. Second, the approach makes very specific point predictions about the directions and relative sizes of the effects that are expected; it moves well beyond testing of the null hypothesis. Third, this approach quantifies the similarity with the full nomological network simultaneously, eliminating the temptation to focus on single relations that support one's theory and ignore those relations that do not.

Expert ratings have been used in several studies to examine the criterion validity of various narcissism measures. For instance, Samuel and Widiger (2008) compared the five-factor model (FFM) profiles of five measures of narcissism and NPD to clinicians' ratings of NPD on the traits of the FFM and found that the trait profile produced by the NPI manifested the greatest similarity with the clinician-rated trait profile (i.e., $r = .77$). Miller, Price, and Campbell (2012) used a similar strategy but used researchers' ratings of *DSM-IV-TR* NPD (Lynam & Widiger, 2001) on the 30 facets of the FFM. These authors found that, of all the scales tested, the NPI manifested the greatest similarity with the expert-rated FFM profile of *DSM-IV-TR* NPD ($r = .74$). Miller et al. (2014) compared trait profiles based on the *DSM-5*'s alternative diagnostic approach to personality disorders (PDs; presented in Wright et al., 2013) to expert ratings of prototypical cases of NPD using the *DSM-5* trait model of PD (Samuel, Lynam, Widiger, & Ball, 2012). Again, the NPI manifested the greatest similarity to the expert ratings of NPD, despite being measured with an abbreviated version of this measure (NPI-16; Ames, Rose, & Anderson, 2006; $r = .80$). Finally, Thomas, Wright, Lukowitsky, Donnellan, and Hopwood (2012) examined the degree to which the grandiose and vulnerable dimensions of the PNI matched both expert and nonexpert ratings of expected correlational profiles for grandiose and vulnerable narcissism on three sets of external criteria: the five domains of the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991), 14 clinical scales included in the Personality Assessment Inventory (PAI; Morey, 1991), and the 15 traits of the Schedule for Nonadaptive and Adaptive Personality (2nd ed.; SNAP-2; Clark, Simms, Wu, & Casillas, in press). These authors found that both the PNI grandiose and vulnerable dimensions provided significant matches to the ratings for all three criteria.

In the current studies, we tested the criterion validity of several popular measures of narcissism by comparing the similarities between observed and expert-predicted correlations with external criteria. In both Studies 1 and 2, profile agreement was measured using Westen and Rosenthal's (2003) *r*-contrast statistic, which provides an index of agreement that takes into account both the

variability among the correlations between the scale and the external criteria and the intercorrelations among the external criteria.¹ In Study 1, we computed the correlations manifested by four narcissism measures—the FFNI, the PNI, the NPI-16, and the Hypersensitive Narcissism Scale (HSNS; Hendin & Cheek, 1997)—with the traits from the FFM and the *DSM-5* pathological trait model and compared these obtained correlational profiles to expert-generated profiles of NPD (FFM: Lynam & Widiger, 2001; *DSM-5*: Samuel et al., 2012, respectively). Because Lynam and Widiger (2001) and Samuel et al. (2012) collected expert ratings for all 10 *DSM-IV-TR/5* PDs, we were also able to examine the discriminant validity of the trait profiles derived from the narcissism measures, by testing how well they converged and diverged with the nine other *DSM-IV-TR/5* PDs as well. In Study 2, we used expert ratings of grandiose and vulnerable narcissism compiled by Thomas et al. (2012) to test an even wider array of narcissism measures based on their correlations with 34 scales related to general and pathological personality traits, as well as a variety of psychopathological constructs (e.g., anxiety, substance use). These two studies, taken together, enabled us to directly compare the validity of several of the most popular narcissism measures.

Study 1

Method

Participants and procedures. Participants included 110 community adults who were currently receiving psychological or psychiatric treatment. In order to participate, individuals had to be currently receiving psychiatric/psychological care, be between the ages of 18 and 65, have a minimum of an eighth grade education, and use a computer 3 or more days a week (to ensure that they were sufficiently familiar to complete portions of the study that involved answering questions on the computer). Individuals were not eligible to participate if they were currently experiencing psychotic symptoms. Individuals completed a semistructured interview for *DSM-IV-TR* personality disorder symptoms as well as a number of self-report measures. Of the original 110 participants, 98 (72 females; mean age = 36.6 [*SD* = 12.7]; 91% White, 6% Black) completed the series of narcissism-related measures described later. Individuals were compensated \$40. Institutional review board approval was obtained for all aspects of the study.

Self-report measures.

Five-Factor Narcissism Inventory (FFNI). The FFNI (Glover et al., 2012) is a 148-item self-report inventory of 15 traits related to vulnerable and grandiose narcissism. Each scale was created to assess a more maladaptive variant of an FFM trait found to be an important component of either or both forms of narcissism. In the current study, the higher order grandiose and vulnerable composites were used. The alphas for the grandiose and vulnerable scores were .95 and .93, respectively.

Pathological Narcissism Inventory (PNI). The PNI (Pincus et al., 2009) is a 52-item self-report measure of traits related to vulnerable and grandiose narcissism. We used the higher order grandiose ($\alpha = .90$) and vulnerable ($\alpha = .92$) dimensions in the current study.

Narcissistic Personality Inventory-16 (NPI-16). The NPI-16 (Ames et al., 2006) is a 16-item, forced-choice, self-report measure of grandiose narcissism that was created as a brief measure of the

longer 40-item measure (Raskin & Terry, 1988). The 16-item short version manifested good internal consistency in the current study ($\alpha = .82$).

Hypersensitive Narcissism Scale (HSNS). The HSNS (Hendin & Cheek, 1997) is a 10-item self-report measure that reflects hypersensitivity, vulnerability, and entitlement ($\alpha = .78$).

Criterion measures.

Revised NEO Personality Inventory (NEO PI-R). The NEO PI-R (Costa & McCrae, 1992) is a 240-item measure of the five broad domains of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness, as well as the 30 lower order facets. The alphas ranged from .56 to .91 for the facets (median $\alpha = .80$).

Personality Inventory for DSM-5 (PID-5). The PID-5 (Krueger, Derringer, Markon, Watson, & Skodol, 2012) is a 220-item self-report measure designed to assess the 25 personality traits proposed for inclusion in the *DSM-5*. The alphas ranged from .79 to .95 for the facets (median $\alpha = .88$).

Results and Discussion

The correlations among the narcissism scales ranged from .00 (NPI-16–FFNI Vulnerable) to .79 (FFNI Vulnerable–PNI Vulnerable) with a median of .44.² The median correlation among the grandiose scales (i.e., FFNI Grandiose, PNI Grandiose, NPI-16) was .44; the median correlation among the vulnerable scales (i.e., FFNI Vulnerable, PNI Vulnerable, HSNS) was .70.

Correspondence of narcissism measures and expert ratings of NPD using the FFM and PID-5. Next, we computed correlations between the narcissism scales and the 30 facets of the NEO PI-R and compared these obtained correlations to the expert ratings of the prototypical individual with *DSM-IV-TR* NPD on the same NEO PI-R traits. These expert ratings ($n = 12$; Lynam & Widiger, 2001) were completed using a scale that ranged from 1 (prototypic person with NPD would be very low on the trait) to 5 (prototypic person with NPD would be extremely high on the trait). Both the original expert ratings collected by Lynam and Widiger (2001) and the full correlational profile for each narcissism measure are presented in Table 1. The same procedure was then conducted using the 25 facets of the PID-5, which provides scores on the *DSM-5* model of pathological personality traits (see Table 2). These expert ratings ($n = 29$; Samuel et al., 2012) were conducted on a scale ranging from 0 (*trait is not at all or very little descriptive of a prototypic case of NPD*) to 3 (*trait is extremely descriptive of a case of NPD*).³ The agreement between the ob-

¹ The findings were the same if other measures of profile agreement were used, including Westen and Rosenthal's (2003) *r*-alerting or the double-entry *q*-correlation (r_{ICC}) that is commonly used in these studies (McCrae, 2008). The correlations between the *r*-contrast values with the values for *r*-alerting ($r = .99$) and r_{ICC} ($r = .97$) were nearly identical.

² The correlations among the narcissism scales used in Studies 1 and 2 are available from the first author upon request.

³ Samuel, Lynam, Widiger, and Ball (2012) asked active personality disorder researchers to rate the prototypical case of a specific PD for the 37 traits originally articulated for use in the *DSM-5*. Since the collection of these ratings, the *DSM-5* trait model was shortened from 37 traits to 25, but most of the traits remained exactly the same, and the ones that were culled were typically combined with another facet in a manner clearly articulated by Krueger and colleagues (2012).

Table 1
Narcissism—NEO PI-R Profiles With Expert Ratings of NPD From Study 1

| NEO PI-R trait | Expert rating NPD | Grandiose scale | | | Vulnerable scale | | |
|---------------------|----------------------|-----------------|-------|--------|------------------|-------|------|
| | | FFNI G | PNI G | NPI-16 | FFNI V | PNI V | HSNS |
| Anxiety | 2.33 | -.34 | .28 | -.30 | .65 | .61 | .54 |
| Angry hostility | 4.08 | .13 | .30 | .15 | .70 | .59 | .54 |
| Depression | 2.42 | -.30 | .29 | -.32 | .67 | .61 | .52 |
| Self-consciousness | 1.50 | -.39 | .21 | -.38 | .59 | .57 | .58 |
| Impulsiveness | 3.17 | .11 | .33 | .02 | .46 | .43 | .48 |
| Vulnerability | 2.92 | -.24 | .28 | -.23 | .65 | .60 | .63 |
| Warmth | 1.42 | .11 | -.07 | .14 | -.45 | -.32 | -.48 |
| Gregariousness | 3.83 | .30 | -.03 | .25 | -.29 | -.24 | -.36 |
| Assertiveness | 4.67 | .51 | .04 | .50 | -.33 | -.35 | -.34 |
| Activity | 3.67 | .46 | .05 | .41 | -.33 | -.25 | -.30 |
| Excitement seeking | 4.17 | .38 | .31 | .14 | .07 | .17 | .06 |
| Positive emotions | 3.33 | .23 | -.14 | .19 | -.53 | -.39 | -.48 |
| Fantasy | 3.75 | -.07 | .09 | .01 | -.19 | -.04 | .07 |
| Aesthetics | 3.25 | .09 | -.02 | .06 | -.16 | -.15 | -.20 |
| Feelings | 1.92 | -.04 | .19 | .11 | .00 | .04 | -.02 |
| Actions | 4.08 | .19 | -.20 | .09 | -.46 | -.36 | -.40 |
| Ideas | 2.92 | .03 | -.07 | .04 | -.19 | -.17 | -.15 |
| Values | 2.67 | -.21 | -.05 | -.15 | -.29 | -.19 | -.21 |
| Trust | 1.42 | -.08 | -.25 | -.08 | -.61 | -.43 | -.43 |
| Straightforwardness | 1.83 | -.52 | -.43 | -.32 | -.42 | -.35 | -.43 |
| Altruism | 1.00 | -.33 | -.13 | -.25 | -.33 | -.24 | -.43 |
| Compliance | 1.58 | -.38 | -.21 | -.26 | -.34 | -.21 | -.23 |
| Modesty | 1.08 | -.60 | -.28 | -.60 | -.13 | -.04 | -.23 |
| Tendermindedness | 1.50 | -.19 | -.04 | -.13 | -.27 | -.20 | -.25 |
| Competence | 3.25 | .05 | -.19 | .22 | -.45 | -.43 | -.44 |
| Order | 2.92 | .10 | .11 | .15 | -.08 | -.01 | -.13 |
| Dutifulness | 2.42 | -.06 | -.05 | .12 | -.20 | -.15 | -.22 |
| Achieve. striving | 3.92 | .35 | .11 | .33 | -.20 | -.19 | -.25 |
| Self-discipline | 2.08 | .21 | .01 | .26 | -.23 | -.25 | -.39 |
| Deliberation | 2.25 | -.38 | -.25 | -.12 | -.24 | -.23 | -.20 |

Note. Correlations greater than .26 are significant at $p < .01$. NPD expert ratings taken from [Lynam and Widiger \(2001\)](#). NEO PI-R = Revised NEO Personality Inventory; NPD = narcissistic personality disorder; G = Grandiose; V = Vulnerable; FFNI = Five-Factor Narcissism Inventory; PNI = Pathological Narcissism Inventory; NPI-16 = 16-item version of the Narcissistic Personality Inventory; HSNS = Hypersensitive Narcissism Scale; Achieve. = achievement.

tained correlational profiles (e.g., NPI-16's correlation with 30 NEO PI-R traits and 25 PID-5 traits) and the expert ratings were then examined using the r -contrast coefficients (see [Table 3](#)). Of the 12 narcissism-related r -contrast coefficients (i.e., the first two rows of [Table 3](#)), only six were significantly positively related to the expert ratings of NPD across the FFM and PID-5 criteria. Both the FFNI Grandiose scale ($r_s = .91$ and $.88$) and the NPI-16 scale ($r_s = .82$ and $.83$) produced correlational profiles that were extremely similar to the profiles expected based on expert ratings. The similarity for the PNI Grandiose scale ($r_s = .42$ and $.41$) was also statistically significant but more moderate in size.

We also examined the discriminant validity of the narcissism measures by testing the degree to which their trait profiles were correlated with the expert-rated trait profiles for the other nine *DSM-IV-TR/5* PDs. The measures of grandiose narcissism-generated trait profiles were also correlated with the expert-rated profiles for other Cluster B PDs, including antisocial and histrionic, as well as borderline PD, albeit to a lesser extent. In general, the convergent correlations were typically larger than the discriminant correlations, although there were some exceptions (e.g., PNI Grandiose manifested a larger correlation with the FFM profile for borderline PD than the profile for NPD). In contrast, the measures

of vulnerable narcissism typically manifested stronger profile matches with a variety of *DSM-IV-TR/5* PDs other than NPD, including borderline, paranoid, schizoid, schizotypal, avoidant, and dependent PD.

Study 2

Method

Participants and procedures. Participants were recruited through the psychology department subject pool at a large state university and participated in exchange for class credit. After providing informed consent, these participants completed all measures online via a survey-hosting website. The measures of narcissism and the BFI ([John et al., 1991](#)) were completed in Session 1, while the PAI ([Morey, 1991](#)) and the SNAP-2 ([Clark et al., in press](#)) were completed in a second session 1 week later. Participants were debriefed upon completion of the second session. Two hundred seventy-six individuals completed both Sessions 1 and 2. Individuals' data were excluded if they had significantly elevated scores on the PAI Inconsistency Scale or were missing 20% or more of the individual data points; these criteria resulted in the

Table 2
Narcissism—DSM-5 Trait Profiles With Expert Ratings of NPD From Study 1

| Trait profile | Expert rating DSM-5 | Grandiose scale | | | Vulnerable scale | | |
|------------------------------------|------------------------|-----------------|-------|--------|------------------|-------|------|
| | | FFNI G | PNI G | NPI-16 | FFNI V | PNI V | HSNS |
| Submissiveness | 0.14 | -.20 | .29 | -.18 | .43 | .48 | .41 |
| Depressivity | 0.62 | -.23 | .31 | -.28 | .70 | .65 | .58 |
| Separation insecurity | 0.62 | .00 | .42 | .02 | .55 | .59 | .47 |
| Anxiousness | 0.83 | -.18 | .42 | -.18 | .69 | .70 | .60 |
| Emotional lability | 1.28 | -.09 | .46 | -.03 | .58 | .61 | .56 |
| Suspiciousness | 1.45 | .10 | .39 | .02 | .67 | .56 | .46 |
| Restricted affectivity | 0.86 | .00 | .13 | -.15 | .18 | .20 | .35 |
| Withdrawal | 0.36 | -.18 | .14 | -.27 | .50 | .41 | .52 |
| Intimacy avoidance | 1.14 | -.08 | -.09 | -.16 | .27 | .18 | .19 |
| Anhedonia | 0.41 | -.25 | .21 | -.30 | .63 | .53 | .54 |
| Manipulativeness | 2.38 | .57 | .60 | .41 | .34 | .38 | .45 |
| Deceitfulness | 1.59 | .35 | .52 | .16 | .53 | .55 | .55 |
| Hostility | 1.69 | .16 | .39 | .17 | .64 | .58 | .53 |
| Callousness | 2.07 | .35 | .31 | .28 | .40 | .43 | .40 |
| Attention seeking | 1.83 | .47 | .54 | .34 | .21 | .35 | .21 |
| Grandiosity | 3.00 | .53 | .46 | .49 | .23 | .30 | .41 |
| Irresponsibility | 0.86 | .17 | .30 | -.04 | .41 | .42 | .48 |
| Impulsivity | 0.93 | .33 | .39 | .12 | .32 | .37 | .36 |
| Distractibility | 0.17 | -.06 | .24 | -.12 | .46 | .45 | .52 |
| Perseveration | 0.38 | -.05 | .41 | -.12 | .45 | .57 | .52 |
| Rigid perfectionism | 1.05 | .04 | .40 | .07 | .35 | .52 | .41 |
| Risk taking | 1.85 | .49 | .39 | .18 | .03 | .21 | .18 |
| Eccentricity | 0.18 | -.01 | .29 | -.07 | .33 | .42 | .47 |
| Cognitive/perceptual dysregulation | 0.07 | .15 | .43 | .03 | .45 | .48 | .51 |
| Unusual beliefs and experiences | 0.14 | .31 | .38 | .16 | .26 | .34 | .33 |

Note. Correlations greater than .26 are significant at $p < .01$. NPD expert ratings taken from Samuel et al. (2012). DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; American Psychiatric Association, 2013); NPD = narcissistic personality disorder; G = Grandiose; V = Vulnerable; FFNI = Five-Factor Narcissism Inventory; PNI = Pathological Narcissism Inventory; NPI-16 = 16-item version of the Narcissistic Personality Inventory; HSNS = Hypersensitive Narcissism Scale.

exclusion of data from two individuals. Complete and valid data were collected for 274 participants (184 females; 90 males; mean age = 19.38, $SD = 1.74$; 77% Caucasian, 12% African American, 8% Asian, 3% other).

Narcissism measures.

Five-Factor Narcissism Inventory (FFNI). The FFNI (Glover et al., 2012) is a 148-item self-report inventory of 15 traits related to vulnerable and grandiose narcissism. In the current study, we used the higher order grandiose ($\alpha = .95$) and vulnerable ($\alpha = .90$) narcissism scales.

Pathological Narcissism Inventory (PNI). The PNI (Pincus et al., 2009) is a 52-item self-report measure of traits related to vulnerable and grandiose narcissism. In the current study, we used the higher order grandiose ($\alpha = .89$) and vulnerable ($\alpha = .95$) narcissism dimensions.

Narcissistic Personality Inventory (NPI). The NPI (Raskin & Terry, 1988) is a 40-item, forced-choice, self-report measure of grandiose narcissism. In the current study, we used these three NPI subscales identified by a series of factor analyses (Ackerman et al., 2011): Leadership/Authority (LA: 11 items; $\alpha = .81$), Grandiose Exhibitionism (GE: 10 items; $\alpha = .77$), Entitlement/Exploitativeness (EE: four items; $\alpha = .41$).

Narcissistic Admiration and Rivalry Questionnaire (NARQ). The NARQ (Back et al. in press) is an 18-item measure that was created to assess two interrelated dimensions of admiration and rivalry. In the current study, we used the Admiration ($\alpha = .88$) and Rivalry ($\alpha = .88$) dimensions.

Narcissistic Grandiosity Scale (NGS). The NGS (Rosenthal et al., 2007) asks participants to rate themselves on 16 adjectives such as “superior” and “omnipotent” on a 1 (*not at all*) to 7 (*extremely*) scale ($\alpha = .96$).

Hypersensitive Narcissism Scale (HSNS). The HSNS (Hendin & Cheek, 1997) is a 10-item self-report measure that reflects hypersensitivity, vulnerability, and entitlement ($\alpha = .78$).

Personality Inventory for DSM-5 (PID-5). The PID-5 (Krueger et al., 2012) is a 220-item self-report measure designed to assess the 25 personality traits proposed for inclusion in the DSM-5. In the current study, only the items used to measure Attention Seeking ($\alpha = .88$) and Grandiosity ($\alpha = .84$) were included, as they are the two traits that are specified for use in diagnosing DSM-5 NPD, the alternative model contained in Section III.

Structured Clinical Interview for DSM-IV Personality Disorders—Personality Questionnaire (SCID-II/PQ)—NPD. The SCID-II/PQ (First, Gibbon, Spitzer, Williams, & Benjamin, 1997) is a 119-item self-report questionnaire designed to assess PDs according to the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; DSM-IV; American Psychiatric Association, 1994). In the current study, we administered only the 17 items used to score the NPD scale ($\alpha = .73$).

Personality Diagnostic Questionnaire-4 (PDQ-4+). The PDQ-4+ (Hyler, 1994) is a 99-item self-report measure of DSM-IV PDs. In the current study, we use the NPD scale, which uses nine items to create an NPD symptom count ($\alpha = .63$).

Table 3
Correspondence Between Narcissism Trait Profiles and Expert Ratings of PDs From Study 1 Using *r*-Contrast Coefficients

| Trait and measure | Grandiose scale | | | Vulnerable scale | | |
|-------------------|-----------------|-------|--------|------------------|-------|------|
| | FFNI G | PNI G | NPI-16 | FFNI V | PNI V | HSNS |
| Cluster B | | | | | | |
| Narcissistic | | | | | | |
| NEO PI-R | .91 | .42 | .82 | .19 | .09 | .21 |
| PID-5 | .88 | .41 | .83 | -.32 | -.27 | -.26 |
| Antisocial | | | | | | |
| NEO PI-R | .88 | .46 | .71 | .28 | .22 | .31 |
| PID-5 | .86 | .25 | .72 | -.37 | -.39 | .22 |
| Borderline | | | | | | |
| NEO PI-R | .48 | .75 | .20 | .97 | .93 | .94 |
| PID-5 | -.10 | .29 | .06 | .34 | .37 | .14 |
| Histrionic | | | | | | |
| NEO PI-R | .72 | .45 | .48 | .22 | .27 | .36 |
| PID-5 | .77 | .52 | .69 | -.36 | .16 | -.20 |
| Cluster A | | | | | | |
| Paranoid | | | | | | |
| NEO PI-R | .15 | .56 | .22 | .95 | .86 | .89 |
| PID-5 | -.22 | -.33 | -.15 | .30 | -.07 | .10 |
| Schizoid | | | | | | |
| NEO PI-R | -.79 | -.09 | -.66 | .72 | .60 | .66 |
| PID-5 | -.69 | -.68 | -.65 | -.15 | -.37 | -.17 |
| Schizotypal | | | | | | |
| NEO PI-R | -.73 | .35 | -.69 | .95 | .90 | .94 |
| PID-5 | -.47 | -.50 | -.52 | -.13 | -.29 | -.14 |
| Cluster C | | | | | | |
| Avoidant | | | | | | |
| NEO PI-R | -.90 | .17 | -.80 | .88 | .82 | .82 |
| PID-5 | -.86 | -.48 | -.77 | .46 | .25 | .16 |
| Dependent | | | | | | |
| NEO PI-R | -.91 | -.10 | -.83 | .63 | .63 | .58 |
| PID-5 | -.50 | .21 | -.31 | .40 | .45 | .01 |
| OCPD | | | | | | |
| NEO PI-R | -.32 | -.08 | -.08 | .42 | .26 | .22 |
| PID-5 | -.41 | -.12 | -.24 | .09 | .21 | .13 |

Note. Correlations greater than .26 are significant at $p < .01$. For NEO PI-R rows, PD expert ratings were taken from Lynam and Widiger (2001). For PID-5 rows, ratings were from Samuel et al. (2012). PD = personality disorder; G = Grandiose; V = Vulnerable; FFNI = Five-Factor Narcissism Inventory; PNI = Pathological Narcissism Inventory; NPI-16 = 16-item version of the Narcissistic Personality Scale; HSNS = Hypersensitive Narcissism Scale; NEO PI-R = Revised NEO Personality Inventory; PID-5 = Personality Inventory for DSM-5; OCPD = obsessive-compulsive personality disorder.

Criterion measures.

Big Five Inventory (BFI). The BFI (John et al., 1991) is a 44-item measure of the Big Five domains that are largely congruent with those posited in FFM. In the current study, alpha coefficients ranged from .78 (Agreeableness) to .85 (Extraversion), with a median of .79.

Schedule for Nonadaptive and Adaptive Personality (2nd ed.; SNAP-2). The SNAP-2 (Clark et al., in press) is a 390-item, true-false format, self-report inventory designed to assess traits (i.e., 12 lower order primary traits and three higher order temperament dimensions) associated with personality pathology. In the current study, coefficient alphas ranged from .75 (Dependency) to .92 (Negative Temperament), with a median of .83.

Personality Assessment Inventory (PAI). The PAI (Morey, 1991) is a self-report instrument that uses 344 items to assess psychopathological constructs such as depression, anxiety, treatment rejection, and antisocial and borderline personality disorders, to name just a few. We used the same 14 PAI variables rated by experts in relation to grandiose and vulnerable narcissism as were used by Thomas et al. (2012). Alphas ranged from .69 (Treatment Rejection) to .91 (Anxiety, Depression), with a median of .88.

Results and Discussion

We first examined the correlations among the narcissism measures and their lower order composites. The correlations among these scales ranged from .07 (NPI LA, FFNI Vulnerable) to .72 (FFNI Grandiose, NGS), with a median correlation of .44. The median correlation among the grandiose scales (i.e., FFNI Grandiose, PNI Grandiose, NPI LA, NPI GE, NPI EE, NARQ Admiration, NGS) was .47; the median correlation among the vulnerable scales (i.e., FFNI Vulnerable, PNI Vulnerable, HSNS, NARQ Rivalry) was .54. The median correlation among the DSM-based NPD scales (PID-5, PDQ, SCID-II P/Q) was .56.

Profile agreement with the expert ratings on the Big Five, PAI, and SNAP-2. In Study 2, the correlational profiles obtained for the narcissism measures in relation to three sets of criteria—Big Five personality domains, PAI clinical scales, and SNAP-2 personality traits—were compared to predictions based on expert ratings of grandiose and vulnerable narcissism (see Thomas et al., 2012).⁴ The correlations expected based on expert ratings of grandiose and vulnerable narcissism and those obtained by the narcissism scales are presented in Tables 4 and 5. The similarities between predicted and obtained correlational profiles, assessed by the *r*-contrast coefficients, are presented in Table 6.

Correspondence of narcissism measures with expert ratings of grandiose and vulnerable narcissism.

Grandiose narcissism. We examined 14 individual narcissism scales or composites in relation to the expert ratings of grandiose narcissism. Of the 14 scales, 10 manifested significant positive relations (see Table 6). Six of these manifested strong similarities: FFNI Grandiose ($r = .79$), NPI Grandiose Exhibitionism ($r = .78$), NPI Leadership/Authority ($r = .72$), Narcissistic Grandiosity Scale ($r = .61$), PID-5 NPD composite ($r = .58$), and the Admiration scale of the NARQ ($r = .53$); the other four scales showed more moderate similarities: SCID-II/PQ NPD ($r = .35$), NPI Entitlement/Exploitativeness ($r = .33$), PNI Grandiose ($r = .31$), and the Rivalry scale of the NARQ ($r = .25$). Three of the four scales whose profiles were not significantly correlated with the expert ratings of grandiose narcissism were measures designed explicitly to capture the vulnerable aspects of narcissism, including the HSNS, PNI Vulnerable dimension, and FFNI Vulnerable dimension. The final scale that was uncorrelated with the grandiose narcissism ratings was the PDQ-4+ measure of NPD.

Vulnerable narcissism. We next examined the 14 scales in relation to the expert ratings of vulnerable narcissism. Of the 14 scales, eight manifested significant positive correlations (see

⁴For the sake of space, we report on the agreement between the narcissism measures and the expert ratings from only Thomas et al. (2012) and exclude the nonexpert ratings.

Table 4
Correlations Among Narcissism Subscales and Three Sets of External Criteria From Study 2

| Measure and criteria | Expert rating | | Grandiose scale | | | | | | |
|-----------------------|---------------|------|-----------------|----------|-----------|-----------|-----------|--------------------|------|
| | G | V | FFNI G | PNI G | NPI LA | NPI GE | NPI EE | NARQ Admiration | NGS |
| BFI | | | | | | | | | |
| Neuroticism | -.03 | .45 | -.20 | .03 | -.19 | -.02 | .09 | -.13 | -.10 |
| Extraversion | .25 | -.20 | .30 | .21 | .44 | .34 | .07 | .21 | .23 |
| Openness | .18 | -.03 | .16 | .28 | .15 | .19 | -.11 | .25 | .13 |
| Agreeableness | -.28 | -.30 | -.32 | -.03 | -.13 | -.16 | -.41 | -.09 | -.16 |
| Conscientiousness | .00 | -.15 | .02 | .04 | .22 | -.05 | .00 | .02 | .07 |
| PAI | | | | | | | | | |
| Somatic complaints | -.03 | .11 | .23 | .13 | .17 | .08 | .23 | .20 | .23 |
| Anxiety | .01 | .33 | .07 | .13 | .02 | .00 | .29 | .11 | .12 |
| Anxiety disorders | .01 | .22 | .14 | .15 | .10 | -.01 | .27 | .21 | .22 |
| Depression | -.12 | .36 | .06 | .06 | -.03 | -.13 | .24 | .09 | .12 |
| Mania | .27 | -.02 | .51 | .37 | .44 | .39 | .39 | .50 | .48 |
| Paranoia | .04 | .24 | .38 | .14 | .20 | .04 | .39 | .25 | .31 |
| Schizophrenia | -.16 | .17 | .23 | .12 | .11 | .00 | .32 | .21 | .25 |
| Borderline | -.04 | .43 | .20 | .21 | .08 | .10 | .31 | .17 | .23 |
| Antisocial | .30 | .14 | .49 | .28 | .25 | .29 | .34 | .29 | .37 |
| Alcohol | .15 | .20 | .36 | .18 | .14 | .21 | .29 | .20 | .29 |
| Drugs | .15 | .20 | .32 | .13 | .13 | .16 | .24 | .17 | .23 |
| Aggression | .25 | .27 | .42 | .15 | .35 | .28 | .45 | .25 | .33 |
| Suicide | .08 | .33 | .12 | .07 | .01 | .03 | .18 | .09 | .10 |
| Treatment rejection | .60 | -.23 | .09 | -.11 | .16 | .08 | -.06 | .00 | .09 |
| SNAP-2 | | | | | | | | | |
| Negative temperament | .10 | .50 | -.01 | .17 | .01 | .01 | .21 | .06 | .06 |
| Positive temperament | .23 | -.33 | .26 | .28 | .32 | .19 | -.02 | .25 | .29 |
| Disinhibition | .25 | .00 | .43 | .27 | .22 | .34 | .31 | .29 | .33 |
| Mistrust | .15 | .38 | .24 | .21 | .13 | .07 | .36 | .21 | .27 |
| Manipulative | .40 | .18 | .42 | .29 | .24 | .21 | .38 | .27 | .32 |
| Aggression | .20 | .30 | .41 | .15 | .28 | .23 | .46 | .25 | .30 |
| Self-harm | -.08 | .30 | .04 | .05 | -.06 | -.08 | .16 | .00 | .00 |
| Eccentric perceptions | -.13 | .20 | .31 | .29 | .23 | .08 | .21 | .28 | .31 |
| Dependency | -.20 | .23 | -.13 | .09 | -.20 | .00 | .08 | .01 | .00 |
| Exhibitionism | .33 | -.13 | .48 | .30 | .44 | .69 | .19 | .41 | .41 |
| Entitlement | .35 | .30 | .65 | .35 | .55 | .49 | .42 | .60 | .67 |
| Detachment | -.20 | .30 | .02 | .01 | -.10 | -.17 | .18 | -.01 | -.01 |
| Impulsivity | .20 | .10 | .31 | .20 | .15 | .25 | .19 | .19 | .22 |
| Propriety | .00 | -.05 | .06 | .15 | .16 | .01 | .08 | .14 | .21 |
| Workaholism | .08 | -.08 | .27 | .22 | .22 | .02 | .26 | .23 | .26 |

Note. Correlations greater than .17 are significant at $p < .01$. G = Grandiose; V = Vulnerable; FFNI = Five-Factor Narcissism Inventory; PNI = Pathological Narcissism Inventory; NPI = Narcissistic Personality Inventory; LA = Leadership/Authority; GE = Grandiose Exhibitionism; EE = Entitlement/Exploitativeness; NARQ = Narcissistic Admiration and Rivalry Questionnaire; NGS = Narcissistic Grandiosity Scale; BFI = Big Five Inventory; PAI = Personality Assessment Inventory; SNAP-2 = Schedule for Nonadaptive and Adaptive Personality (2nd ed.).

Table 6). Seven of these correlations were quite strong: FFNI Vulnerable ($r = .93$), HSNS ($r = .92$), PNI Vulnerable dimension ($r = .85$), the Rivalry scale of the NARQ ($r = .84$), PDQ-4+ NPD ($r = .71$), NPI Entitlement/Exploitativeness ($r = .64$), and the SCID-II/PQ NPD ($r = .60$); the similarity for the eighth scale, the PID-5 NPD, was significant but small ($r = .23$). All six of the scales whose profiles were not significantly correlated with the expert ratings of vulnerable narcissism were created to assess grandiose aspects of narcissism: FFNI Grandiose dimension, PNI Grandiose dimension, NPI LA and GE, NARQ-Admiration, and the NGS.

General Discussion

With the growing interest in the study of narcissism and its various components has come a corresponding increase in the

development of assessments aimed at capturing these constructs. In the two current studies, we tested a variety of measures of narcissism and NPD in relation to expert ratings of *DSM-IV-TR/5* NPD using the FFM and *DSM-5* traits as the external criteria (Study 1) and in relation to expert ratings of grandiose and vulnerable narcissism using a mixture of general and pathological traits, as well clinical constructs, as criteria (Study 2). This approach allowed us to directly compare the validity of these narcissism instruments against each other using a strong criteria-based approach (i.e., expert ratings) that eliminated the possibility of cherry-picking results, made actual point predictions, and assessed agreement holistically.

Results from Studies 1 and 2 yield several conclusions. First, despite many published critiques of the NPI (e.g., Brown et al., 2009; Cain et al., 2008; Rosenthal & Hooley, 2010) and the

Table 5
Correlations Among Individual Narcissism and NPD Scales and Three Sets of External Criteria From Study 2

| Measure and criteria | Expert rating | | Vulnerable scale | | | | DSM-IV/DSM-5 NPD | | |
|-----------------------|---------------|------|------------------|-------|------|--------------|------------------|--------|------------|
| | G | V | FFNI V | PNI V | HSNS | NARQ Rivalry | PID-5 | PDQ-4+ | SCID-II/PQ |
| BFI | | | | | | | | | |
| Neuroticism | -.03 | .45 | .46 | .34 | .37 | .11 | -.01 | .20 | .11 |
| Extraversion | .25 | -.20 | -.14 | -.11 | -.19 | -.10 | .29 | .03 | .06 |
| Openness | .18 | -.03 | -.08 | -.04 | .05 | -.07 | .15 | .10 | .07 |
| Agreeableness | -.28 | -.30 | -.52 | -.35 | -.39 | -.53 | -.31 | -.36 | -.36 |
| Conscientiousness | .00 | -.15 | -.22 | -.14 | -.17 | -.24 | -.08 | -.12 | -.09 |
| PAI | | | | | | | | | |
| Somatic complaints | -.03 | .11 | .31 | .24 | .26 | .41 | .28 | .29 | .27 |
| Anxiety | .01 | .33 | .50 | .43 | .48 | .35 | .23 | .36 | .29 |
| Anxiety disorders | .01 | .22 | .49 | .38 | .47 | .38 | .24 | .38 | .29 |
| Depression | -.12 | .36 | .41 | .38 | .37 | .39 | .18 | .30 | .22 |
| Mania | .27 | -.02 | .42 | .42 | .41 | .46 | .50 | .51 | .49 |
| Paranoia | .04 | .24 | .49 | .38 | .38 | .51 | .33 | .44 | .40 |
| Schizophrenia | -.16 | .17 | .39 | .36 | .44 | .47 | .25 | .40 | .30 |
| Borderline | -.04 | .43 | .54 | .51 | .45 | .42 | .29 | .41 | .36 |
| Antisocial | .30 | .14 | .27 | .29 | .30 | .45 | .38 | .40 | .36 |
| Alcohol | .15 | .20 | .20 | .26 | .25 | .43 | .31 | .31 | .27 |
| Drugs | .15 | .20 | .16 | .17 | .17 | .39 | .25 | .25 | .23 |
| Aggression | .25 | .27 | .38 | .31 | .35 | .43 | .33 | .40 | .37 |
| Suicide | .08 | .33 | .29 | .26 | .28 | .36 | .13 | .25 | .11 |
| Treatment rejection | .60 | -.23 | -.34 | -.33 | -.37 | -.14 | -.08 | -.16 | -.19 |
| SNAP-2 | | | | | | | | | |
| Negative temperament | .10 | .50 | .48 | .42 | .45 | .22 | .11 | .31 | .26 |
| Positive temperament | .23 | -.33 | -.06 | .02 | -.18 | -.06 | .17 | .06 | .09 |
| Disinhibition | .25 | .00 | .26 | .31 | .27 | .49 | .39 | .35 | .45 |
| Mistrust | .15 | .38 | .47 | .46 | .40 | .42 | .26 | .46 | .39 |
| Manipulative | .40 | .18 | .36 | .38 | .39 | .52 | .38 | .39 | .47 |
| Aggression | .20 | .30 | .38 | .33 | .34 | .49 | .35 | .37 | .42 |
| Self-harm | -.08 | .30 | .26 | .32 | .29 | .32 | .09 | .21 | .15 |
| Eccentric perceptions | -.13 | .20 | .29 | .31 | .27 | .36 | .30 | .37 | .29 |
| Dependency | -.20 | .23 | .26 | .32 | .32 | .16 | .08 | .15 | .18 |
| Exhibitionism | .33 | -.13 | .11 | .15 | .07 | .25 | .51 | .26 | .32 |
| Entitlement | .35 | .30 | .31 | .27 | .31 | .46 | .58 | .49 | .50 |
| Detachment | -.20 | .30 | .32 | .28 | .40 | .28 | -.02 | .25 | .18 |
| Impulsivity | .20 | .10 | .19 | .21 | .14 | .29 | .33 | .20 | .29 |
| Propriety | .00 | -.05 | .14 | .12 | .07 | .07 | .09 | .17 | .09 |
| Workaholism | .08 | -.08 | .27 | .28 | .21 | .20 | .24 | .27 | .24 |

Note. Correlations greater than .17 are significant at $p < .01$. NPD = narcissistic personality disorder; G = Grandiose; V = Vulnerable; FFNI = Five-Factor Narcissism Inventory; PNI = Pathological Narcissism Inventory; HSNS = Hypersensitive Narcissism Scale; NARQ = Narcissistic Admiration and Rivalry Questionnaire; DSM-IV/DSM-5 = Diagnostic and Statistical Manual of Mental Disorders (4th and 5th eds.); PID-5 = Personality Inventory for DSM-5; PDQ-4+ = Personality Diagnostic Questionnaire-4; SCID-II/PQ = Structured Clinical Interview for DSM-IV Axis II Personality Disorders–Personality Questionnaire; BFI = Big Five Inventory; PAI = Personality Assessment Inventory; SNAP-2 = Schedule for Nonadaptive and Adaptive Personality (2nd ed.).

frequent assertion that it measures *normal narcissism* (e.g., Pincus & Lukowitsky, 2010), the data from Studies 1 and 2 demonstrate that the NPI serves as a strong measure of the construct captured by DSM-IV-TR/5 NPD, as well as the more specific construct of grandiose narcissism. In fact, the NPI subfactor often deemed least relevant to pathological narcissism (e.g., Ackerman et al., 2011)—Leadership/Authority—manifested the third highest agreement with the expert ratings of grandiose narcissism provided by Thomas et al. (2012). Despite the claim by some that this specific scale assesses healthy aspects of narcissism, its top five correlates in Study 2 suggest that this is not the case (listed in order of size): SNAP-2 Entitlement, SNAP-2 Exhibitionism, PAI Mania, BFI Extraversion, and PAI Aggression.

Second, of the comprehensive measures of narcissism (i.e., those that were created to assess both grandiose and vulnerable narcissism: FFNI, NARQ, PNI), the FFNI produced correlations that most closely matched expert ratings of grandiose narcissism, vulnerable narcissism, and NPD-based conceptualizations.⁵ Consistent with previous findings, the PNI Grandiose dimension manifested more limited agreement with expert ratings of grandiose narcissism and DSM-IV-TR/5 NPD. This is not surprising, as the PNI Grandiose dimension does not load with other measures of grandiose narcissism in factor analyses

⁵ The NARQ was not included in Study 1, so we do not know how well it would have done in relation to the expert ratings of DSM-IV-TR/5 NPD.

Table 6
 Profile Matching Between Observed and Predicted Correlations
 With Three Sets of Criteria From Study 2 Using *r*-Contrast

| Scale and measure | Match with expert rating | |
|------------------------|--------------------------|-----------------------|
| | Grandiose narcissism | Vulnerable narcissism |
| Grandiose scale | | |
| FFNI G | .79 | -.07 |
| PNI G | .31 | -.07 |
| NPI LA | .72 | -.43 |
| NPI GE | .78 | -.32 |
| NPI EE | .33 | .64 |
| NARQ-A | .53 | -.11 |
| NGS | .61 | -.07 |
| Vulnerable scale | | |
| FFNI V | -.24 | .93 |
| PNI V | -.25 | .85 |
| HSNS | -.33 | .92 |
| NARQ-R | .25 | .84 |
| DSM-IV/DSM-5 NPD scale | | |
| PID-5 | .58 | .23 |
| PDQ-4+ | .18 | .71 |
| SCID-II/PQ | .35 | .60 |

Note. Correlations greater than .23 are significant at $p < .01$. FFNI = Five-Factor Narcissism Inventory; G = Grandiose; PNI = Pathological Narcissism Inventory; NPI = Narcissistic Personality Inventory; LA = Leadership/Authority; GE = Grandiose Exhibitionism; EE = Entitlement/Exploitativeness; NARQ = Narcissistic Admiration and Rivalry Questionnaire; A = Admiration; NGS = Narcissistic Grandiosity Scale; V = Vulnerable; HSNS = Hypersensitive Narcissism Scale; R = Rivalry; DSM-IV/DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders* (4th and 5th eds.); NPD = narcissistic personality disorder; PID-5 = Personality Inventory for DSM-5; PDQ-4+ = Personality Diagnostic Questionnaire-4; SCID-II/PQ = Structured Clinical Interview for DSM-IV Axis II Personality Disorders–Personality Questionnaire.

(e.g., Miller, Few, et al., 2013; Miller, Hoffman, et al., 2011; Miller, Price, Gentile, Lynam, & Campbell, 2012). Moreover, the PNI Grandiose dimension manifests a trait profile that differs in important ways from other measures of grandiosity in emphasizing negative emotionality/fragility and underemphasizing antagonism-related traits (Miller, Hoffman, et al., 2011). Interpersonally, unlike other measures of grandiose narcissism (Miller, Price, et al., 2012), none of the PNI Grandiose scales fall squarely in the BC quadrant (i.e., Vindictive) of the interpersonal circumplex, which is marked by high interpersonal agency and low communion (Pincus et al., 2009).

The aforementioned differences are likely due in part to the manner in which the PNI was developed, in that its creation was informed by its developers' clinical experiences and understanding of narcissism, which suggest that most narcissistic individuals oscillate between narcissistic grandiosity and vulnerability (see Pincus et al., 2009, for a review of the development of the PNI).⁶ The conceptualization of narcissism based on its manifestation in clinical settings may have skewed the PNI conceptualization of grandiose narcissism, as purely grandiose individuals are less likely to seek psychotherapy. Thus, the PNI Grandiose dimension focuses on a type of grandiosity that is likely restricted to clinical settings—a variant that blends grandiosity with concurrent vulnerability, as it is the vulnerability that most frequently leads to treatment seeking. Ultimately, the PNI Grandiose dimension is an

admixture of both grandiosity and vulnerability and thus results in trait profiles that are more consistent with other PDs such as borderline than with DSM-IV NPD or the specific expert-generated profiles for grandiose and vulnerable narcissism. In fact, the only subscale of the PNI Grandiose dimension that serves as a strong marker of DSM-based conceptualizations of NPD is the Exploitativeness subscale (Miller et al., 2014), and it is noteworthy that all of the items on this PNI subscale were derived from the NPI.

Third, a number of measures of vulnerable narcissism exist that do an excellent job of capturing vulnerable narcissism—measures including the Hypersensitive Narcissism Scale, the vulnerable dimensions from the FFNI and PNI, as well as the Rivalry scale from the recently developed NARQ. These scales are similar in that they assess content related to neuroticism/negative emotionality (e.g., anxiety, depression, borderline personality disorder symptoms), antagonism (e.g., mistrust, manipulativeness, aggression), and disinhibition, to a lesser degree. The nature of vulnerable narcissism and how it should be conceptualized, however, remains an open question. Consistent with findings from previous studies (e.g., Miller et al., 2010, 2011), vulnerable narcissism manifested trait profiles more consistent with several other DSM-5 PDs, including borderline, paranoid, schizotypal, avoidant, and dependent. In general, narcissistic vulnerability is a much broader construct associated with a wide array of psychopathological traits; some have even suggested that this construct may represent an underlying component of all PDs (Morey et al., 2011). Given vulnerable narcissism's lack of specificity, one might ask whether vulnerable narcissism is best conceived of as narcissism at all. We believe that grandiosity should be at the center of all conceptualizations of narcissism. Furthermore, while vulnerability may also be present, it is neither necessary nor sufficient for pathological narcissism (Miller, Widiger, & Campbell, in press).

In the current data, the vulnerable narcissism scales manifested small but positive correlations with grandiosity-related scales (NEO PI-R Modesty: mean $r = -.13$; PID-5 Grandiosity: mean $r = .32$) and other traits associated with narcissism such as SNAP-2 Entitlement (mean $r = .34$), but these correlations were substantially smaller than the correlations found for the grandiose scales with these same traits (NEO PI-R Modesty: mean $r = -.50$; PID-5 Grandiosity: mean $r = .49$; SNAP-2 Entitlement: mean $r = .52$). In addition, these correlations are much smaller than the correlations manifested by the vulnerable scales with other traits such as NEO Anxiety and Depression (mean $r_s = .60$), PID-5 Anhedonia (mean $r = .57$), PID-5 Separation Insecurity (mean $r = .54$), and PID-5 Submissiveness (mean $r = .44$), to name just a few. Notably, none of these latter traits are considered prototypical of pathological narcissism (Lynam & Widiger, 2001; Samuel et al., 2012). Ultimately, measures of vulnerable narcissism bear small but significant relations to a few of the traits considered central to narcissism but bear more and larger relations to traits that are

⁶ It should be noted that there are limited empirical data suggesting that narcissistic individuals oscillate between periods of substantial grandiosity and substantial vulnerability.

considered less central (e.g., neuroticism, introversion). We suggest that vulnerable narcissism be used as a diagnostic specifier for situations where an individual manifests problematic levels of grandiosity *and* narcissistic vulnerability (Miller, Gentile, Wilson, & Campbell, 2013). By itself (i.e., when not paired with substantial grandiosity), narcissistic vulnerability might best be considered a broad, transdiagnostic construct composed of multiple traits, only some of which bear much resemblance to most conceptualizations of narcissism.

Fourth, as expected, measures designed to capture *DSM-IV-TR* NPD appear to be a blend of both grandiose and vulnerable features and are thus only moderately consistent with expert ratings of either. Although the *DSM-IV-TR* and *DSM-5* NPD criteria mostly reflect grandiosity (Fossati et al., 2005; Miller, Hoffman, Campbell, & Pilkonis, 2008), the corresponding *DSM-IV-TR* and *DSM-5* text also emphasizes narcissistic vulnerability. In addition, the wording of items on these self-report *DSM-IV-TR* NPD measures often emphasizes vulnerability to a greater degree than is specified in the actual criteria. For instance, *DSM-5* NPD Criterion 3 states that the individual “believes he or she is special and unique and can only be understood by, or should associate with, other special or high status people (or institutions),” whereas Criterion 4 states that the individual “requires excessive admiration” (APA, 2013, p. 669). The PDQ-4+ NPD scale assesses these two criteria with items: “Only certain special people can really appreciate and understand me” and “I very much need other people to take notice of me or compliment me” (Hyler, 1994). In both cases, the PDQ-4+ wording emphasizes fragility (e.g., “I very much need”) that is not included in the actual criteria. Miller, Campbell, Pilkonis, and Morse (2008) demonstrated that these two PDQ-4+ NPD items manifested trait profiles that diverged from expert consensus ratings of these specific criteria by emphasizing neuroticism-related traits and de-emphasizing extraversion-related traits. Consistent with the current results, previous studies have found that the diagnostic approach used to assess NPD in Section 3 (i.e., emerging measures and models) of the *DSM-5* emphasizes grandiosity to a much greater extent than vulnerability (Miller, Gentile, et al., 2013).

Limitations and Conclusions

Although the current studies include a relatively large number of measures of narcissism and NPD, it is likely that additional measures of narcissism/NPD deserve further study. Similarly, although an array of criterion variables were used, it is certainly the case that other constructs could have been examined (e.g., measurement of aggression in laboratory paradigm following ego threat). In addition, all of the data used here were based on self-reports; future studies could test informant reports on these narcissism measures to test if the same general pattern would be found. The use of overt behaviors as dependent variables would strengthen the current approach, although one would have to choose behaviors for which there is a consensus as to how they should be related to narcissism, a task that may prove difficult, given disagreements as to the nomological network of narcissism. Even with these limitations, we believe the current article presents a strong test of the construct validity of the various narcissism measures. Expert-ratings were used to generate 89 specific a priori predictions about the direction and size of the expected correlations. This entire network of

predictions was then compared to the actual results obtained by each of the narcissism measures.

Overall, a number of assessment instruments exist that can be used to capture NPD, grandiose narcissism, and/or vulnerable narcissism. The data presented here should help researchers and clinicians choose instruments that will assess the specific dimensions or forms of narcissism in which they are most interested and that are most relevant to their own clinical practice or research. In addition, these data should help resolve certain ongoing debates as to the nature of certain popular measures by providing data derived from comparisons of obtained correlations with expert ratings (i.e., Lynam & Widiger, 2001; Samuel et al., 2012; Thomas et al., 2012). Such a resolution could be helpful in that it may allow the field to develop consensus surrounding the performance of various narcissism assessments and encourage the inclusion of the strongest, most appropriate measures in empirical studies. This, in turn, may help encourage the development of a more cohesive and coherent literature on narcissism.

References

- Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the Narcissistic Personality Inventory really measure? *Assessment, 18*, 67–87. doi:10.1177/1073191110382845
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: American Psychiatric Publishing.
- Ames, D. R., Rose, P., & Anderson, C. P. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality, 40*, 440–450. doi:10.1016/j.jrp.2005.03.002
- Back, M. D., Kufner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. A. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology, 105*, 1013–1037.
- Brown, R. P., Budzek, K., & Tamborski, M. (2009). On the meaning and measure of narcissism. *Personality and Social Psychology Bulletin, 35*, 951–964. doi:10.1177/0146167209335461
- Cain, N. M., Pincus, A. L., & Ansell, E. B. (2008). Narcissism at the crossroads: Phenotypic description of pathological narcissism across clinical theory, social/personality psychology, and psychiatric diagnosis. *Clinical Psychology Review, 28*, 638–656. doi:10.1016/j.cpr.2007.09.006
- Campbell, W. K., & Miller, J. D. (2011). *Handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments*. Hoboken, NJ: Wiley.
- Clark, L. A., Simms, L. J., Wu, K. D., & Casillas, A. (in press). *Schedule for nonadaptive and adaptive personality: Manual for administration, scoring, and interpretation* (2nd ed.). Minneapolis, MN: University of Minnesota Press.
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.
- Dickinson, K. A., & Pincus, A. L. (2003). Interpersonal analysis of grandiose and vulnerable narcissism. *Journal of Personality Disorders, 17*, 188–207. doi:10.1521/pedi.17.3.188.22146
- First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B. W., & Benjamin, L. S. (1997). *Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II)*. Washington, DC: American Psychiatric Press.

- Fossati, A., Beauchaine, T. P., Grazioli, F., Carretta, I., Cortinovis, F., & Maffei, C. (2005). A latent structure analysis of *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, narcissistic personality disorder criteria. *Comprehensive Psychiatry*, *46*, 361–367. doi:10.1016/j.comppsy.2004.11.006
- Glover, N., Miller, J. D., Lynam, D. R., Crego, C., & Widiger, T. A. (2012). The Five-Factor Narcissism Inventory: A five-factor measure of narcissistic personality traits. *Journal of Personality Assessment*, *94*, 500–512. doi:10.1080/00223891.2012.670680
- Hendin, H. M., & Cheek, J. M. (1997). Assessing hypersensitive narcissism: A reexamination of Murray's Narcissism Scale. *Journal of Research in Personality*, *31*, 588–599. doi:10.1006/jrpe.1997.2204
- Hyer, S. E. (1994). *PDQ-4+ personality questionnaire*. New York, NY: New York State Psychiatric Institute.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory—Versions 4a and 5a*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- Krueger, R. F., Derringer, J., Markon, K., Watson, D., & Skodol, A. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine*, *42*, 1879–1890. doi:10.1017/S0033291711002674
- Lynam, D. R., & Widiger, T. A. (2001). Using the five-factor model to represent the DSM-IV personality disorders: An expert consensus approach. *Journal of Abnormal Psychology*, *110*, 401–412. doi:10.1037/0021-843X.110.3.401
- McCrae, R. R. (2008). A note on some measures of profile agreement. *Journal of Personality Assessment*, *90*, 105–109. doi:10.1080/00223890701845104
- Miller, J. D., & Campbell, W. K. (2008). Comparing clinical and social-personality conceptualizations of narcissism. *Journal of Personality*, *76*, 449–476. doi:10.1111/j.1467-6494.2008.00492.x
- Miller, J. D., Campbell, W. K., Pilkonis, P. A., & Morse, J. Q. (2008). Assessment procedures for narcissistic personality disorder: A comparison of the Personality Diagnostic Questionnaire-4 and best estimate clinical judgments. *Assessment*, *15*, 483–492. doi:10.1177/1073191108319022
- Miller, J. D., Dir, A., Gentile, B., Wilson, L., Pryor, L. R., & Campbell, W. K. (2010). Searching for a vulnerable dark triad: Comparing factor 2 psychopathy, vulnerable narcissism, and borderline personality disorder. *Journal of Personality*, *78*, 1529–1564. doi:10.1111/j.1467-6494.2010.00660.x
- Miller, J. D., Few, L. R., Wilson, L., Gentile, B., Widiger, T. A., MacKillop, J., & Campbell, W. K. (2013). The Five-Factor Narcissism Inventory (FFNI): A test of the convergent, discriminant, and incremental validity of FFNI scores in clinical and community samples. *Psychological Assessment*, *25*, 748–758. doi:10.1037/a0032536
- Miller, J. D., Gentile, B., Wilson, L., & Campbell, W. K. (2013). Grandiose and vulnerable narcissism and the DSM-5 pathological personality trait model. *Journal of Personality Assessment*, *95*, 284–290. doi:10.1080/00223891.2012.685907
- Miller, J. D., Hoffman, B., Campbell, W. K., & Pilkonis, P. A. (2008). An examination of the factor structure of DSM-IV narcissistic personality disorder criteria: One or two factors? *Comprehensive Psychiatry*, *49*, 141–145. doi:10.1016/j.comppsy.2007.08.012
- Miller, J. D., Hoffman, B. J., Gaughan, E. T., Gentile, B., Maples, J., & Campbell, W. (2011). Grandiose and vulnerable narcissism: A nomological network analysis. *Journal of Personality*, *79*, 1013–1042. doi:10.1111/j.1467-6494.2010.00711.x
- Miller, J. D., Lynam, D. R., & Campbell, W. K. (2014). Measures of narcissism and their relations to DSM-5 pathological traits: A critical re-appraisal. *Assessment*. Advance online publication. doi:10.1177/1073191114522909
- Miller, J. D., Maples, J., & Campbell, W. K. (2011). Comparing the construct validity of scales derived from the Narcissistic Personality Inventory: A reply to Rosenthal and Hooley (2010). *Journal of Research in Personality*, *45*, 401–407. doi:10.1016/j.jrp.2010.12.004
- Miller, J. D., Price, J., & Campbell, W. K. (2012). Is the Narcissistic Personality Inventory still relevant? A test of independent Grandiosity and Entitlement scales in the assessment of narcissism. *Assessment*, *19*, 8–13. doi:10.1177/1073191111429390
- Miller, J. D., Price, J., Gentile, B., Lynam, D. R., & Campbell, W. K. (2012). Grandiose and vulnerable narcissism from the perspective of the interpersonal circumplex. *Personality and Individual Differences*, *53*, 507–512. doi:10.1016/j.paid.2012.04.026
- Miller, J. D., Widiger, T. A., & Campbell, W. K. (2010). Narcissistic personality disorder and the DSM-5. *Journal of Abnormal Psychology*, *119*, 640–649. doi:10.1037/a0019529
- Miller, J. D., Widiger, T. A., & Campbell, W. K. (in press). Vulnerable narcissism: Commentary on the special issue on narcissistic personality disorder. *Personality Disorders: Theory, Research, and Treatment*.
- Morey, L. C. (1991). *Personality Assessment Inventory professional manual*. Lutz, FL: Psychological Assessment Resources.
- Morey, L. C., Berghuis, H., Bender, D. S., Verheul, R., Krueger, R. F., & Skodol, A. E. (2011). Toward a model for assessing level of personality functioning in DSM-5, Part II: Empirical articulation of a core dimension of personality pathology. *Journal of Personality Assessment*, *93*, 347–353. doi:10.1080/00223891.2011.577853
- Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A., & Levy, K. N. (2009). Initial construction and validation of the Pathological Narcissism Inventory. *Psychological Assessment*, *21*, 365–379. doi:10.1037/a0016530
- Pincus, A. L., & Lukowitsky, M. R. (2010). Pathological narcissism and narcissistic personality disorder. *Annual Review of Clinical Psychology*, *6*, 421–446. doi:10.1146/annurev.clinpsy.121208.131215
- Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, *54*, 890–902.
- Rosenthal, S. A., & Hooley, J. M. (2010). Narcissism assessment in social personality research: Does the association between narcissism and psychological health result from a confound with self-esteem? *Journal of Research in Personality*, *44*, 453–465. doi:10.1016/j.jrp.2010.05.008
- Rosenthal, S. A., Hooley, J. M., & Steshenko, Y. (2007). *Distinguishing grandiosity from self-esteem: Development of the Narcissistic Grandiosity Scale*. Unpublished manuscript.
- Russ, E., Shedler, J., Bradley, R., & Westen, D. (2008). Refining the construct of narcissistic personality disorder: Diagnostic criteria and subtypes. *American Journal of Psychiatry*, *165*, 1473–1481. doi:10.1176/appi.ajp.2008.07030376
- Samuel, D. B., Lynam, D. R., Widiger, T. A., & Ball, S. A. (2012). An expert consensus approach to relating the proposed DSM-5 types and traits. *Personality Disorders: Theory, Research, and Treatment*, *3*, 1–16. doi:10.1037/a0023787
- Samuel, D. B., & Widiger, T. A. (2008). Convergence of narcissism measures from the perspective of general personality functioning. *Assessment*, *15*, 364–374. doi:10.1177/1073191108314278
- Thomas, K. M., Wright, A. G. C., Lukowitsky, M. R., Donnellan, M. B., & Hopwood, C. J. (2012). Evidence for the criterion validity and clinical utility of the Pathological Narcissism Inventory. *Assessment*, *19*, 135–145. doi:10.1177/1073191112436664
- Twenge, J. M., Konrath, S., Foster, J. D., Campbell, W. K., & Bushman, B. J. (2008a). Egos inflating over time: A cross-temporal meta-analysis of the Narcissistic Personality Inventory. *Journal of Personality*, *76*, 875–902. doi:10.1111/j.1467-6494.2008.00507.x
- Twenge, J. M., Konrath, S., Foster, J. D., Campbell, W. K., & Bushman, B. J. (2008b). Further evidence of an increase in narcissism among college students. *Journal of Personality*, *76*, 919–928. doi:10.1111/j.1467-6494.2008.00509.x

- Westen, D., & Rosenthal, R. (2003). Quantifying construct validity: Two simple measures. *Journal of Personality and Social Psychology, 84*, 608–618. doi:10.1037/0022-3514.84.3.608
- Wink, P. (1991). Two faces of narcissism. *Journal of Personality and Social Psychology, 61*, 590–597. doi:10.1037/0022-3514.61.4.590
- Wright, A. G. C., Pincus, A. L., Thomas, K. M., Hopwood, C. J., Markon, K. E., & Krueger, R. F. (2013). Conceptions of narcissism and the

DSM-5 pathological personality traits. *Assessment, 20*, 339–352. doi:10.1177/1073191113486692

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