

Initial Construction and Validation of the Pathological Narcissism Inventory

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The construct of narcissism is inconsistently defined across clinical theory, social-personality psychology, and psychiatric diagnosis. Two problems were identified that impede integration of research and clinical findings regarding narcissistic personality pathology: (a) ambiguity regarding the assessment of pathological narcissism vs. normal narcissism and (b) insufficient scope of existing narcissism measures. Four studies are presented documenting the initial derivation and validation of the Pathological Narcissism Inventory (PNI). The PNI is a 52-item self-report measure assessing 7 dimensions of pathological narcissism spanning problems with narcissistic grandiosity (Entitlement Rage, Exploitativeness, Grandiose Fantasy, Self-sacrificing Self-enhancement) and narcissistic vulnerability (Contingent Self-esteem, Hiding the Self, Devaluing). The PNI structure was validated via confirmatory factor analysis. The PNI correlated negatively with self-esteem and empathy, and positively with shame, interpersonal distress, aggression, and borderline personality organization. Grandiose PNI scales were associated with vindictive, domineering, intrusive, and overly-nurturant interpersonal problems, and vulnerable PNI scales were associated with cold, socially avoidant, and exploitable interpersonal problems. In a small clinical sample, PNI scales exhibited significant associations with parasuicidal behavior, suicide attempts, homicidal ideation, and several aspects of psychotherapy utilization.

Keywords: Pathological Narcissism Inventory, narcissistic grandiosity, narcissistic vulnerability, scale construction

Efforts to assess narcissistic personality characteristics and behaviors span clinical psychology, social-personality psychology, and psychiatry. These applied and research literatures include significant evidence that narcissism is associated with several related areas of psychopathology and dysfunction, including the *Diagnostic and Statistical Manual*, 4th edition, text revision (*DSM-IV-TR*; American Psychiatric Association, 2000) Axis I disorders, psychopathy, interpersonal problems and relational dysfunction, substance use and abuse, aggression and sexual aggression, impulsivity, and suicidal behavior (Miller, Campbell, & Pilkonis, 2007; Ronningstam, 2005a,

2005b). However, synthesis of these findings is hindered by the growing recognition that the construct of narcissism is inconsistently defined and measured across disciplines (Cain, Pincus, & Ansell, 2008; Miller & Campbell, 2008). Two issues in construct definition underlying the assessment of narcissism may limit efforts to integrate research and clinical findings and leave a more sophisticated understanding of narcissism perplexingly out of reach (e.g., Blais, 2005; Michels, 2005; Morey, 2005; Watson, 2005). The first issue involves ambiguity regarding the assessment of pathological narcissism versus adaptive/normal narcissism, and the second issue involves the limited scope of pathological narcissistic characteristics assessed in most widely used instruments. In light of the increasing interest in dimensional models and measures of psychopathology (e.g., Krueger & Markon, 2006; Widiger & Trull, 2007), the goal of the present research was to develop a multidimensional self-report measure of *pathological* narcissism that assessed the construct's full range of clinical characteristics.

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Normal Versus Pathological Narcissism

Narcissism can be conceptualized as one's capacity to maintain a relatively positive self-image through a variety of self-, affect-, and field-regulatory processes. It underlies individuals' needs for validation and affirmation as well as the motivation to overtly and covertly seek out self-enhancement experiences from the social environment. Most theorists suggest that narcissism has both normal and pathological expressions reflecting adaptive and maladaptive personality or-

ganization, psychological needs, and regulatory mechanisms, giving rise to individual differences in managing needs for self-enhancement and validation (Kernberg, 1998; Kohut, 1977; Pincus, 2005; Stone, 1998). We view normal and pathological narcissism as potentially distinct dimensions of personality. The former is more commonly assessed in social-personality psychology research, and the latter is more commonly assessed in clinical research and practice.

Normal expressions of narcissism may contribute to self-esteem and well-being by increasing an individual's sense of personal agency (Oldham & Morris, 1995). For example, normal narcissism supports asserting interpersonal dominance (Brown & Zeigler-Hill, 2004; Millon, Weiss, Millon, & Davis, 1994) and fuels achievement motives such as competitive strivings and a strong work ethic (Lukowitsky, Roberts, Lehner, Pincus, & Conroy, 2007). Concurrently, normal narcissism is associated with a tendency toward endorsing positive illusions about the self and minimizing information inconsistent with a positive self-image (Farwell & Wohlwend-Lloyd, 1998; Morf & Rhodewalt, 2001). Such individuals tend to be ambitious, satisfied, and relatively successful (Campbell, 2001; Kohut, 1977; Stone, 1998; Wink, 1992; Wink, Dillon, & Fay, 2005), although this may be at the cost of having disagreeable interpersonal relations (Miller & Campbell, 2008).

The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979, 1981) is used in the vast majority of research in social-personality psychology as the main self-report dimensional measure of narcissism. Although originally developed with reference to the introduction of narcissistic personality disorder (NPD) criteria in *DSM-III* (American Psychiatric Association, 1980), factor analytic studies of the NPI have demonstrated an unstable factor structure with three- (Kubarych, Deary, & Austin, 2004), four- (Emmons, 1987), and seven- (Raskin & Terry, 1988) factor solutions reported. Of these, only Raskin and Terry (1988) felt their seven factors reflected *DSM* NPD criteria. Unfortunately, no NPI subscales based on these factor solutions exhibit acceptable levels of internal consistency (del Rosario & White, 2005), and thus only the NPI total score is used in most recent studies. In light of this, Ames, Rose, and Anderson (2006) developed a brief, unidimensional version of the instrument (NPI-16).

Some investigators propose that the NPI assesses "subclinical narcissism" (e.g., Paulhus & Williams, 2002; Wallace & Baumeister, 2002), others recommend manipulating NPI scoring procedures to assess both "healthy" and "unhealthy" forms of narcissism (e.g., Horton, Bleau, & Drwecki, 2006), still others conclude that the NPI mainly assesses adaptive narcissism (e.g., Watson, Trumper, O'Leary, Morris, & Culhane, 2005–2006). This ambiguity reflects the diverse empirical associations found with the NPI. The results of both experimental and correlational research describe individuals with high NPI scores as being reactive to unmet expectations, resistant to feedback disconfirming of positive self-views, manipulative, self-enhancing, prone to aggression, and exhibiting a dominant interpersonal style (Bushman & Baumeister, 1998; Morf, 2006; Morf & Rhodewalt, 2001; Paulhus & Williams, 2002). Paulhus (1998) reported that the grandiose self-enhancement style associated with high NPI scores leads to hostility and interpersonal rejection over time.

However, research also demonstrates that the NPI assesses adaptive characteristics. For example, high NPI scores are negatively associated with trait neuroticism and depression and posi-

tively associated with achievement motivation and self-esteem (Lukowitsky et al., 2007; Rhodewalt & Morf, 1995; Watson, Little, Sawrie, & Biderman, 1992). Many investigators have attempted to tease apart the consistently positive associations found between the NPI and self-esteem as well as other measures of well-being (e.g., Brown & Zeigler-Hill, 2004; Campbell, Bosson, Goheen, Lakey, & Kernis, 2007; Raskin, Novacek, & Hogan, 1991a, 1991b; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004; Zeigler-Hill, 2006). Several researchers have pointed out that the content of the NPI total score may reflect a confusing mix of adaptive and maladaptive content (e.g., Emmons, 1984, 1987; Watson, 2005; Watson et al., 1992; Watson, Varnell, & Morris, 1999–2000), with the latter being limited to the traits of entitlement and exploitativeness. Miller and Campbell (2008) compared the external correlates of the NPI and a clinical measure of narcissism, the Personality Diagnostic Questionnaire (PDQ-4; Hyler, 1994), and concluded that conceptualization of narcissism diverged across clinical psychology and social-personality psychology. They found that although both measures were associated with an antagonistic interpersonal style, the NPI assessed an emotionally resilient, extraverted form of narcissism, whereas the PDQ-4 assessed an emotionally unstable, negative affect-laden, introverted form of narcissism. In addition to the NPI's adaptive associations, there is an absence of studies in which clinical populations are used. We conclude that the NPI does not assess subclinical narcissism. It predominantly assesses nondistressed adaptive expressions of the construct.

All individuals have narcissistic needs and motives; however, pathologically narcissistic individuals appear particularly troubled when faced with disappointments and threats to their positive self-image. Because no one is perfect and the world is constantly providing obstacles and challenges to desired outcomes, pathological narcissism involves significant regulatory deficits and maladaptive strategies to cope with disappointments and threats to a positive self-image (Kernberg, 1998; Ronningstam, 2005b). In clinical and psychiatric research, such pathological expressions of narcissism are typically operationalized (dimensionally or categorically) as NPD, as found in the *DSM-IV-TR* (American Psychiatric Association, 2000). In such studies, pathological narcissism is typically assessed via semistructured diagnostic interviews for *DSM* personality disorders (PDs) or self-reported responses to either *DSM* criteria or omnibus inventories that include PD scales such as the Minnesota Multiphasic Personality Inventory-2 and the Millon Clinical Multiaxial Inventory-III (Hilsenroth, Handler, & Blais, 1996). Diagnosis of NPD is associated with functional impairments and modest distress in response to such impairments (Miller et al., 2007).

Clinical investigators wishing to use efficient measures of pathological narcissism are rather limited in their options. Interviews for personality disorder diagnosis can be time-consuming, as can self-report data derived from omnibus clinical inventories. Although both methods can generate dimensional (or categorical) scores reflecting NPD, this single score does not allow for investigation of meaningful lower order components found in the phenotypic descriptions of pathological narcissism across the theoretical and empirical clinical literature (Cain et al., 2008). Self-report alone is likely insufficient for comprehensive assessment of pathological personality characteristics (e.g., Oltmanns & Turkheimer, 2006), but our view is that there is presently no well-validated

multidimensional measure of pathological narcissism available to investigators or clinicians that can be used to provide the self-report perspective.

Narcissistic Grandiosity and Narcissistic Vulnerability

To the layperson, the construct of narcissism is most often associated with arrogant, conceited, and domineering attitudes and behaviors (Buss & Chiodo, 1991), which may be captured by the term *narcissistic grandiosity*. Grandiosity is indeed a core component of narcissistic personality, but our review of the phenotypic descriptions of pathological narcissism across clinical theory, social-personality psychology, and psychiatric diagnosis revealed two broad themes of dysfunction, one reflecting grandiosity and the other reflecting vulnerability (Cain et al., 2008). Clinical descriptions of narcissistic grandiosity include intrapsychic processes such as repressing negative aspects of self- and other-representations and distorting disconfirming external information, leading to entitled attitudes and an inflated self-image without requisite accomplishments and skills, as well as engaging in regulatory fantasies of unlimited power, superiority, perfection, and adulation. Such grandiosity is often expressed behaviorally through interpersonally exploitative acts, lack of empathy, intense envy, aggression, and exhibitionism. This may be covertly enacted by providing instrumental and emotional support to others, but concurrently harboring contempt for the person being helped and secretly experiencing the situation as reflecting one's own specialness, goodness, or superior capabilities (e.g., Nurse, 1998). Narcissistic grandiosity has been increasingly emphasized in successive revisions of the *DSM* (Cain et al., 2008), and a recent confirmatory factor analysis of *DSM-IV* NPD criteria supporting a one-factor solution suggests the revised criteria also hold together well (Miller, Hoffman, Campbell, & Pilkonis, 2008). The lack of sufficient vulnerable *DSM-IV* criteria contrasts with much of the clinical literature and structural research that suggests pathological narcissism can include oscillating or chronic conscious awareness and acknowledgment of vulnerable affects and self-states.

The majority of clinical theories describe characteristically vulnerable expressions of pathological narcissism that may dominate patient presentation or alternate with grandiose self-states. *Narcissistic vulnerability* involves the conscious experience of helplessness, emptiness, low self-esteem, and shame. Narcissistic patients may present as long suffering and intractable in their psychic pain, yet find this provides them with a "special status" that they are resistant to give up (e.g., Sarasohn, 2004). Narcissistic vulnerability is also linked with the use of social avoidance to cope with threats to the self by shamefully withdrawing when ideal self-presentation is not possible or needed admiration is not forthcoming (e.g., Akhtar, 2003). Clinical descriptions of narcissistic grandiosity and narcissistic vulnerability are empirically supported by the consistent identification of these two dimensions in structural studies of self-reported narcissism that include clinical measures beyond the NPI (Ansell, 2006; Rathvon & Holmstrom, 1996; Wink, 1991).

Self-Report Measures of Narcissism

The NPI is problematic for the assessment of pathological narcissism in two ways. First, it appears to assess predominantly

adaptive expressions of narcissism, with potential pathological characteristics limited to entitlement and exploitativeness. Second, its scope is limited to adaptive or maladaptive aspects of narcissistic grandiosity. Many self-report measures of NPD are based closely on *DSM* diagnostic criteria and other PD scales developed for omnibus clinical inventories target assessment of *DSM* Axis II categories (e.g., Jones, 2005), limiting assessment to grandiose aspects of pathological narcissism. A few additional self-report measures have been developed that may also tap important features of pathological narcissism, but all are generally unidimensional and limited in scope. Campbell, Bonacci, Shelton, Exline, and Bushman (2004) developed the Psychological Entitlement Scale (PES) to improve assessment of this core narcissistic trait relative to its NPI counterpart. Hendin and Cheek (1997) developed the Hypersensitive Narcissism Scale (HSNS) in response to some of the literature reviewed here, as well as research relating narcissism and shyness (Cheek & Melchior, 1985). The HSNS derives a single score that is uncorrelated with the NPI total score but moderately correlated with MMPI measures that load on Wink's (1991) "Vulnerability-Sensitivity" component and modestly correlated with the Emmons' (1987) Entitlement/Exploitative NPI factor. The HSNS has been used in recent studies, often in conjunction with the NPI, in order to assess both grandiose and vulnerable narcissism (e.g., Smolewska & Dion, 2005). Both of these measures have demonstrated some validity and utility, but neither comprehensively assesses clinically meaningful lower order characteristics of pathological narcissism spanning grandiose and vulnerable expressions. To meet this assessment need, we set out to develop a multidimensional measure of pathological narcissism that assesses both narcissistic grandiosity and narcissistic vulnerability. The following four studies describe the initial development and validation of the Pathological Narcissism Inventory (PNI).

Study 1: Derivation and Item Selection

Method

Generation and Content Analysis of the Item Pool

The first stage of test development was to define the universe of content of pathological narcissism and identify the core dimensions of this construct. With this aim, a test construction team, including clinical faculty and graduate students, psychotherapists, and psychology undergraduates, examined the theoretical and empirical literature on pathological narcissism to understand how it has been conceptualized and operationalized across disciplines, generating a comprehensive review (Cain et al., 2008). Additionally, psychotherapists working with patients exhibiting narcissistic personality pathology gave case presentations and reviewed tapes of sessions that characterized core aspects of pathological narcissism. This comprehensive review of the literature and the discussion of clinical cases culminated in the identification of seven target dimensions encompassing grandiose and vulnerable aspects of pathological narcissism. These hypothesized dimensions were labeled *contingent self-esteem*, *exploitativeness*, *entitlement*, *grandiose fantasies*, *devaluing of others and needs for others*, *narcissistic social avoidance*, and *self-sacrificing self-enhancement*.

Consistent with contemporary recommendations for test construction (Clark & Watson, 1995; Morey, 2003), the test develop-

ment team generated 131 items to capture these dimensions of pathological narcissism (see also Loevinger, 1957). Items were designed to be concise, unambiguous, avoid colloquialisms and professional jargon, minimize content overlap with the other dimensions, and be understandable by someone with a basic reading level. The item pool was independently reviewed by the test development team, and each item was rated for content relevance and quality using a 3-point ordinal scale, with 1 = *unacceptable*, 2 = *fair*, and 3 = *good*. These ratings were tallied, and items with mostly 1 ratings were discarded. The test development team reviewed and revised the remaining items that captured core aspects of pathological narcissism but were too complex or poorly worded. Items that were redundant, lacked relevance, or lacked specificity were discarded. Finally, more items that captured the dimensions of pathological narcissism were developed that were not adequately sampled, and we repeated the process until all hypothesized dimensions were well represented in the initial pool of 105 items.

Data Analyses

The second stage of test development was to determine the structure of the item pool, construct initial scales, and examine basic psychometric properties of the PNI. Exploratory principle-components analyses (Goldberg & Velicer, 2006) and parallel analysis (Horn, 1965; O'Connor, 2000) were used to identify the underlying dimensionality of the item pool and determine which items to retain or discard on the basis of their component loadings, average interitem correlations, and resultant changes in the component's coefficient alpha if the item was deleted (Morey, 2003). The initial solution was then validated using confirmatory factor analysis (Kline, 1998) on a large independent sample.

Participants

Sample 1 consisted of 796 predominantly Caucasian young adult college students (595 women, 202 men) with a mean age of 19.23 years. This sample was used for initial item selection. Sample 2 consisted of 2,801 predominantly Caucasian young adult college students (1,721 women, 1,080 men) with a mean age of 18.50 years. Sample 2 was used to validate the PNI structure derived in Sample 1.

Measures

The PNI version administered to Sample 1 consisted of 105 items assessing the dimensions of pathological narcissism described above. Items were endorsed on a 6-point scale ranging from 0 (*not at all like me*) to 5 (*very much like me*). This format was chosen in order to capture response variability and to eliminate the possibility of overuse of scale midpoint as a response style. Sample 2 was administered a reduced 52-item pool.

Results

Exploratory Principal-Components Analysis

We subjected the item pool to a principal-components analysis with oblique rotation using SPSS 14.0. Parallel analysis

(O'Connor, 2000) for the 95th percentile in 1,000 random data sets suggested an eight-component solution. At root 9, the actual eigenvalue (1.55) fell below the mean random data eigenvalue (1.57) and percentile (1.59). Item generation had targeted seven dimensions. We considered eight dimensions a maximum and examined five-, six-, seven-, and eight-component solutions. The sequence of components that emerged from five components to seven components was understandable and lead to increasingly cleaner and more interpretable solutions. At eight components, there was no change except for the addition of a redundant factor tapping additional variations of grandiose and exploitative attitudes. Thus, we concluded this did not enhance the overall solution beyond seven components. Through several iterations of retaining and deleting items on the basis of their component loadings, item intercorrelations, and contribution to coefficient alpha, the total number of items reduced from 105 to 50.

The reduced item pool was again subjected to a principal-components analysis with oblique rotation. We extracted seven components accounting for 53.76% of the item variance. A summary of the analysis is presented in Table 1. The first component was labeled *Contingent Self-Esteem* (CSE), reflecting a significantly fluctuating experience of self-esteem and acknowledgement of dysregulation in the absence of external sources of admiration and recognition. The second component was labeled *Exploitative* (EXP), reflecting a manipulative interpersonal orientation. The third component was labeled *Self-Sacrificing Self-Enhancement* (SSSE), reflecting the use of purportedly altruistic acts to support an inflated self-image. The fourth component was labeled *Hiding the Self* (HS), reflecting an unwillingness to show others faults and needs. The fifth component was labeled *Grandiose Fantasy* (GF), reflecting engagement in compensatory fantasies of gaining success, admiration, and recognition. The sixth component was labeled *Devaluing* (DEV), reflecting disinterest in others who do not provide needed admiration and shame over needing recognition from disappointing others. The final component was labeled *Entitlement Rage* (ER), reflecting angry affects when entitled expectations are not met. This item pool was further evaluated by the test construction team. To improve fidelity with the constructs, we dropped two items, we revised two items, and we added four items, leading to a set of 52 items.

Table 1
Summary of Principal-Components Analyses of Reduced PNI Item Pool

Component	Scale	Total items	Range of loadings
1	CSE	12	.49–.81
2	EXP	5	.45–.78
3	SSSE	5	.43–.79
4	HS	6	.39–.71
5	GF	7	.60–.79
6	DEV	7	.53–.82
7	ER	8	.34–.74

Note. $N = 796$. PNI = Pathological Narcissism Inventory; CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.

Confirmatory Factor Analysis

We conducted confirmatory factor analysis on the item correlation matrix in Sample 2 using LISREL 8.80 to determine whether exploratory results could be validated. All participants had complete data. Analyses of univariate and multivariate skewness and kurtosis indicated significant departures from normality. We used robust maximum-likelihood methods (Satorra & Bentler, 1994), given that such departures can produce distorted results when using nonrobust maximum-likelihood methods (Curran, West, & Finch, 1996). This provided the Satorra-Bentler scaled chi-square statistic (χ^2_{SB}) and robust standard errors (Chou & Bentler, 1995).

We specified a seven-factor oblique model by assigning items to factors on the basis of their largest loadings, as determined by the results in Sample 1 and a priori placements of new items. All seven factors were allowed to correlate freely. Error variances between items with similar wording stems were allowed to correlate freely, and we trimmed nonsignificant correlations. Thirteen error variances between the following pairs of items remained free in the final model: 1 and 14, 8 and 16, 14 and 26, 14 and 31, 14 and 42, 14 and 45, 17 and 27, 26 and 31, 26 and 42, 27 and 34, 30 and 36, 31 and 45, and 42 and 45. Chi-square is the most widely used summary statistic for examining the adequacy of model fit; however, it is likely to overestimate lack of fit when sample size is large (Bollen, 1989). Therefore, we used multiple complementary fit indices to evaluate the model (Hu & Bentler, 1999), specifically the comparative fit index (CFI), standardized root-mean-square residual (SRMR), and the root-mean-square error of approximation (RMSEA). As expected, the chi-square statistic was significant, $\chi^2_{SB}(1240) = 9,655.68, p = .000$; however, the other indices converged in supporting the fit of the data to the factor model (CFI = .97; SRMR = .052; RMSEA = .049, 90% confidence interval [CI] on RMSEA = 0.048–0.050, RMSEA p for close fit = 0.93). Standardized loadings are presented in Table 2. The latent factor intercorrelations ranged from .12 to .70 (average $r = .48$), as anticipated based on oblique rotation. Scale intercorrelations and scale psychometrics are presented in Table 3. Coefficient alphas for all scales ranged from .78 to .93 (total PNI $\alpha = .95$). Scale intercorrelations ranged from .10 to .62 (average $r = .40$). As scales differ in length, they were scored on the basis of mean item endorsement to ease comparisons. Women scored significantly higher on CSE, SSSE, HS, and the PNI total score. Men scored significantly higher on EXP and GF. Effect sizes (d) ranged from 0.03 to 0.35.

Discussion

Exploratory and confirmatory factor analytic results and scale psychometrics supported a seven-factor solution, reflecting the anticipated dimensions of pathological narcissism: Contingent self-esteem, Exploitativeness, Self-sacrificing self-enhancement, Hiding the self, Grandiose fantasy, Devaluing, and Entitlement rage. Resultant scales were reliable, and scores exhibited small to very small gender differences. Some factor/scale intercorrelations were substantial and warrant investigation of a higher order factor structure (Wright, Lukowitsky, & Pincus, 2008). In Study 2, we examined correlates of the PNI to provide an initial evaluation of its construct validity.

Study 2: Correlates of Normal and Pathological Narcissism

In Study 2, we examined the relations of the PNI with two measures of hypersensitive narcissism and the NPI in order to explore its convergent validity. In addition, we examined external validity correlations between the PNI and well-established measures of self-esteem, empathy, shame, and personality organization to determine whether these correlations were consistent with clinical theory on pathological narcissism and corroborated previous empirical findings. If so, then this would represent useful evidence supporting the validity of PNI. On the basis of our review (Cain et al., 2008), we hypothesized that the PNI would be negatively correlated with self-esteem and empathy and positively correlated with shame. Kernberg (1984, 1998) proposed that narcissistic pathology is embedded within the borderline level of personality organization. Thus, we predicted that the PNI would correlate positively with measures of primitive defenses, identity diffusion, impaired reality testing, aggression, and superego weakness. Finally, we expected the PNI to be only modestly positively correlated with the NPI total score and more strongly correlated with Emmons' (1987) Entitlement/Exploitative NPI factor due to the latter's association with maladjustment (e.g., Watson et al., 2005–2006).

We also sought to explore in this study the validity of the PNI by comparing its external correlations with those of the NPI. Measures of pathological and normal narcissism should correlate differently with self-esteem and adjustment measures. In contrast to the PNI, we expected the NPI to correlate positively with self-esteem, negatively with shame, and to exhibit no relationship with borderline pathology. Both normal and pathological narcissism have been linked to antagonistic interpersonal behavior (e.g., Miller & Campbell, 2008); therefore, the NPI and the PNI should both exhibit positive correlations with aggression and negative correlations with empathy. A predictable pattern of convergent and divergent external correlations for the PNI and NPI would provide initial evidence of validity for the PNI.

Method

Participants

Eight hundred twelve predominantly Caucasian young adult college students (606 women, 206 men) with a mean age of 19.02 years completed a battery of self-report measures for extra credit in introductory psychology courses.

Narcissism Measures

The PNI. Participants completed the PNI. Alpha coefficients were CSE (.93), EXP (.78), SSSE (.79), HS (.75), GF (.89), DEV (.85), ER (.89), and PNI total (.95).

The HSNS (Hendin & Cheek, 1997). The HSNS is a 20-item scale that captures core aspects of vulnerable narcissism (e.g., hypersensitivity and anxious self-preoccupation). Items are rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Coefficient alpha in this sample was .75.

The Narcissism-Hypersensitivity Scale (NHS; Serkownek, 1975). This 18-item true-false scale was derived from the MMPI Masculinity-Femininity (MF) Scale (Hathaway & McKinley,

Table 2
Standardized Factor Loadings of PNI Items

PNI item	PNI factors							
	CSE	EXP	SSSE	HS	GF	DEV	ER	
36. It's hard for me to feel good about myself unless I know other people like me.	.81							
30. It's hard to feel good about myself unless I know other people admire me.	.80							
16. When others don't notice me, I start to feel worthless.	.77							
8. When people don't notice me, I start to feel bad about myself.	.77							
40. I am disappointed when people don't notice me.	.78							
48. I need others to acknowledge me.	.78							
47. When others don't respond to me the way that I would like them to, it is hard for me to still feel ok with myself.	.78							
32. I am preoccupied with thoughts and concerns that most people are not interested in me.	.71							
19. I sometimes need important others in my life to reassure me of my self-worth.	.71							
41. I often find myself envying others' accomplishments.	.66							
5. It's hard to feel good about myself when I'm alone.	.62							
2. My self-esteem fluctuates a lot.	.60							
10. I can make anyone believe anything I want them to.		.86						
15. I find it easy to manipulate people.		.82						
4. I can usually talk my way out of anything.		.72						
23. I can read people like a book.		.59						
35. Everybody likes to hear my stories.		.52						
39. I try to show what a good person I am through my sacrifices.			.70					
43. I help others in order to prove I'm a good person.			.67					
33. I like to have friends who rely on me because it makes me feel important.			.66					
22. I feel important when others rely on me.			.63					
25. Sacrificing for others makes me the better person.			.58					
6. I can make myself feel good by caring for others.			.37					
50. When others get a glimpse of my needs, I feel anxious and ashamed.				.77				
9. I often hide my needs for fear that others will see me as needy and dependent.				.74				
28. It's hard to show others the weaknesses I feel inside.				.66				
46. I can't stand relying on other people because it makes me feel weak.				.63				
44. It's important to show people I can do it on my own, even if I have some doubts inside.				.54				
7. I hate asking for help.				.48				
13. I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.				.34				
45. I often fantasize about being recognized for my accomplishments.					.81			
31. I often fantasize about being rewarded for my efforts.					.79			
42. I often fantasize about performing heroic deeds.					.72			
1. I often fantasize about being admired and respected.					.72			
14. I often fantasize about having a huge impact on the world around me.					.71			
26. I often fantasize about accomplishing things that are probably beyond my means.					.69			
49. I want to amount to something in the eyes of the world.					.65			
21. When others don't meet my expectations, I often feel ashamed about what I wanted.						.75		
34. Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.						.69		
24. When others disappoint me, I often get angry at myself.						.69		
17. Sometimes I avoid people because I'm concerned that they'll disappoint me.						.68		
27. Sometimes I avoid people because I'm afraid they won't do what I want them to.						.66		
3. I sometimes feel ashamed about my expectations of others when they disappoint me.						.64		
51. Sometimes it's easier to be alone than to face not getting everything I want from other people.						.61		
37. It irritates me when people don't notice how good a person I am.							.75	
11. I get mad when people don't notice all that I do for them.							.73	
12. I get annoyed by people who are not interested in what I say or do.							.72	
18. I typically get very angry when I'm unable to get what I want from others.							.70	
38. I will never be satisfied until I get all that I deserve.							.66	
20. When I do things for other people, I expect them to do things for me.							.65	
29. I get angry when criticized.							.60	
52. I can get pretty angry when others disagree with me.							.57	

Note. $N = 2,801$. PNI = Pathological Narcissism Inventory; CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.

1943). According to Graham (1987), high scores on this scale reflect an individual who is self-centered, concerned with physical appearance, highly sensitive to hurts, lacking in self-esteem, preoccupied with sex, and resentful of his or her family. Coefficient alpha for this sample was .65.

The NPI (Raskin & Hall, 1979). The NPI is a 40-item forced-choice measure of trait narcissism. Participants are instructed to choose one of two paired items that best describes themselves. Coefficient alpha for the NPI total was .85. Consistent with previous research, Emmons' (1987) four factors exhibited lower re-

Table 3
PNI Scale Intercorrelations and Scale Statistics

	1	2	3	4	5	6	7	Men (n = 1,080)		Women (n = 1,721)		T	d
								M	SD	M	SD		
PNI scale													
1. CSE	(.93)							1.80	1.12	2.19	1.11	-8.87***	0.35
2. EXP	.10	(.80)						2.40	1.12	2.15	1.02	6.11***	0.24
3. SSSE	.44	.23	(.78)					2.80	0.95	2.92	0.88	-3.47**	0.13
4. HS	.49	.22	.44	(.79)				2.46	1.00	2.59	0.98	-3.40**	0.13
5. GF	.45	.32	.51	.44	(.89)			2.97	1.16	2.77	1.14	4.41***	0.17
6. DEV	.57	.18	.38	.49	.35	(.86)		1.38	0.94	1.44	0.98	-1.86	0.06
7. ER	.62	.31	.44	.44	.48	.59	(.87)	1.98	1.03	2.01	1.01	-0.68	0.03
PNI total								2.19	0.76	2.27	0.75	-2.84**	0.11

Note. N = 2,801. Coefficient alpha appears on the diagonal. PNI = Pathological Narcissism Inventory; CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage. ** p < .01. *** p < .001.

liabilities: Entitlement/Exploitativeness (E/E; .58), Superiority/Arrogance (S/A; .59), Self-Absorption/Self-Admiration (S/S; .65), and Leadership/Authority (L/A; .77).

Validity Measures

Rosenberg Self-Esteem Inventory (RSI; Rosenberg, 1965). The RSI is a widely used 10-item measure of global self-esteem rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Coefficient alpha for the RSI was .90.

Visions of Morality Scale (VMS; Shelton & McAdams, 1990). The VMS is a 45-item measure that assesses empathy and morality from cognitive, behavioral, and social perspectives rated on a 7-point scale ranging from 1 (definitely would not do) to 7 (definitely would do). Coefficient alpha for the VMS total score was .90.

The Experience of Shame Scale (ESS; Andrews, Qian, & Valentine, 2002). The ESS is a 25-item measure that assesses shame related to self and performance rated on a 4-point scale ranging from 1 (not at all) to 4 (very much). Coefficient alpha for the ESS total scale was .94.

Inventory of Personality Organization (IPO; Lenzenweger, Clarkin, Kernberg, & Foelsch, 2001). The IPO is an 83-item measure that operationalizes the core diagnostic components of Kernberg's model of borderline personality organization on a 5-point scale ranging from 1 (never true) to 5 (always true). The measure consists of five scales (i.e., Primitive Psychological Defenses, Identity Diffusion, Impaired Reality Testing, Aggression, and Moral Values). High scores on these scales suggest more primitive personality organization. Coefficient alphas for the five scales were Primitive Psychological Defenses (.82), Identity Diffusion (.87), Impaired Reality Testing (.91), Aggression (.91), and Low Moral Values (.80).

Results

Consistent with prior studies, alphas for the NPI subscales and HNS are lower than ideal, and interpretation of their correlates should be considered with this in mind. However, these associations are important in evaluating convergent and divergent validity

of the PNI. Correlations between the PNI and its subscales and the other narcissism measures are presented in Table 4. As predicted, the PNI was only modestly correlated with NPI (.13), and this was due to the predicted convergent correlation with the NPI E/E factor (.36). PNI correlations with all other NPI factors approached zero. Four PNI scales assessing grandiose characteristics (EXP, SSSE, GF, ER) exhibited small positive correlations with the NPI. The PNI subscales assessing vulnerable characteristics (CSE, HS, DEV) exhibited very small, often negative correlations with the NPI. Also as predicted, the PNI correlated moderately and positively with both measures of hypersensitive narcissism, whereas NPI correlations with these measures were smaller.

External validity correlations for both the PNI and NPI are presented in Table 5. PNI and NPI external correlations exhibited the predicted pattern of convergence and divergence. The PNI correlated negatively with self-esteem and empathy and correlated positively with shame, aggression, and indicators of borderline personality organization. The NPI correlated positively with self-esteem and aggression and negatively with empathy and shame. The NPI exhibited near zero correlations with indicators of borderline personality organization.

Discussion

Comparing correlational patterns for the PNI and NPI, we conclude preliminary evidence exists to support the construct validity of the PNI as a measure of pathological narcissism. Clinical theory and research indicates that pathological narcissism is associated with both grandiose and vulnerable themes of dysfunction. PNI subscales assessing both grandiose and vulnerable characteristics are generally associated with low self-esteem, low empathy, shameful affects, aggression, and borderline personality organization, consistent with a pathologically distressed and antagonistic presentation (Cain et al., 2008; Miller & Campbell, 2008; Miller et al., 2007). In contrast, the NPI appears to assesses a nondistressed, self-confident, yet disagreeable presentation (Miller & Campbell, 2008). We extended examination of the construct validity of the PNI by examining its links with interpersonal problems.

Table 4
Correlations Among Narcissism Measures

PNI	Narcissism measures						
	NPI	NPI E/E	NPI L/A	NPI S/S	NPI S/A	HSNS	NHS
PNI total	.13**	.36**	.02	.06	.05	.62**	.51**
CSE	-.07	.22**	-.13**	-.09*	-.12**	.54**	.54**
EXP	.56**	.39**	.43**	.32**	.56**	.27**	.10*
SSSE	.12**	.08*	.12**	.15**	.00	.33**	.25**
HS	-.15**	.10*	-.20**	-.20**	-.09*	.31**	.32**
GF	.18**	.28**	.11*	.13**	.06	.45**	.34**
DEV	-.01	.26**	-.10*	-.04	-.06	.44**	.38**
ER	.24**	.44**	.09*	.16**	.11*	.56**	.41**

Note. $N = 812$. PNI = Pathological Narcissism Inventory; NPI = Narcissistic Personality Inventory; NPI E/E = Entitlement/Exploitativeness; NPI L/A = Leadership/Authority; NPI S/S = Self-Absorption/Self-Admiration; NPI S/A = Superiority/Arrogance; HSNS = Hypersensitive Narcissism Scale; NHS = Narcissistic Hypersensitivity; CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.

* $p < .05$. ** $p < .01$.

Study 3: Pathological Narcissism and Interpersonal Problems

Many clinical investigators propose that personality pathology is often expressed through disturbed interpersonal relations (e.g., Benjamin, 1996; Pincus, 2005). One widely used model of interpersonal dysfunction is the interpersonal problems circumplex (IIP-C; Alden, Wiggins, & Pincus, 1990), a two-dimensional circular representation based on the dimensions of Dominance (vs. Submissiveness) and Love (vs. Coldness). Previous research has consistently located NPD in the dominant or hostile-dominant sector of the IIP-C circle (e.g., Gurtman, 1996; Pincus & Wiggins, 1990; Soldz, Budman, Demby, & Merry, 1993). Previous investigations have also demonstrated that the NPI is similarly located in circumplex space but is negatively associated with IIP-C profile elevation (Gurtman, 1992), an index of general interpersonal distress (Tracey, Rounds, & Gurtman, 1996). The association between the NPI and low distress is consistent with the distinction between pathological and normal narcissism. In Study 3, we examined relations between the PNI, NPI, and interpersonal prob-

lems. We predicted that the NPI subscales would be located in the Domineering (PA) or Vindictive (BC) octants and would exhibit negative profile elevation, indicative of low distress. We predicted that the PNI subscales would disperse around the circumplex, with most grandiose scales located in the Domineering (PA) or Vindictive (BC) octants, CSE and SSSE subscales located in the Overly-nurturant (LM) or Exploitable (JK) octants, and the HS subscale located in the Avoidant (FG) octant. Additionally, we predicted PNI scales would exhibit positive profile elevation indicative of interpersonal distress.

Method

Participants

Three hundred ninety-nine (200 women, 199 men) mostly Caucasian introductory psychology students, with a mean age of 19.0 years, participated in an experimental study for course credit. Only the relevant self-report measures are described here.

Table 5
External Correlates of the PNI and NPI

Variable	External measures							
	Self-Esteem	Empathy	Shame	Primitive defenses	Identity diffusion	Impaired reality testing	Aggression	Low moral values
Narcissism								
NPI	.38**	-.14**	-.15**	.08*	.02	.09*	.20**	.17**
PNI Total	-.37**	-.14**	.55**	.60**	.62**	.47**	.36**	.45**
CSE	-.53**	-.12**	.61**	.51**	.57**	.36**	.25**	.32**
EXP	.17**	-.07*	.00	.23**	.19**	.23**	.26**	.28**
SSSE	.02	.18**	.24**	.26**	.29**	.20**	.05	.15**
HS	-.42**	-.03	.44**	.46**	.49**	.39**	.25**	.35**
GF	-.13**	-.03	.32**	.37**	.41**	.32**	.20**	.29**
DEV	-.40**	-.16**	.47**	.54**	.50**	.47**	.35**	.38**
ER	-.22**	-.29	.39**	.52**	.51**	.39**	.38**	.43**

Note. $N = 812$. PNI = Pathological Narcissism Inventory total score; NPI = Narcissistic Personality Inventory; CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.

* $p < .05$. ** $p < .01$.

Measures

The PNI. Participants completed the PNI. Alpha values were CSE (.92), EXP (.81), SSSE (.75), HS (.82), GF (.91), DEV (.86), ER (.85), and the PNI total (.92).

The NPI. Participants completed the NPI. Alpha values were L/A (.79), S/S (.67), S/A (.50), E/E (.50), and NPI total (.85).

The IIP-C scales (Alden et al., 1990). The IIP-C is a 64-item measure of interpersonal dysfunction. Thirty-nine items target behaviors that the respondent finds difficult to engage in, "It is hard for me . . ." Twenty-five items target behaviors the respondent over expresses, "These are things I do too much . . ." Items are rated on a 5-point scale ranging from 0 (*not at all*) to 4 (*extremely*). The IIP-C conforms to the interpersonal circumplex, via eight 8-item scales—Domineering (PA), Vindictive (BC), Cold (DE), Avoidant (FG), Nonassertive (HI), Exploitable (JK), Overly-nurturant (LM), and Intrusive (NO). The IIP-C has been extensively validated in personality and clinical research. Alpha values ranged from .75 (Intrusive) to .90 (Nonassertive).

Results

We evaluated associations between the PNI, NPI, and interpersonal problems using the structural summary method for circumplex data (Gurtman & Balakrishnan, 1998). Correlations between narcissism scales and the eight circumplex octants are transformed into a profile and modeled to a cosine function. A scale's angular displacement describes its predominant interpersonal theme. Elevation in the context of the IIP-C can be understood as mean level of interpersonal distress. Locations of all scales on the IIP-C are presented in Figure 1.

As predicted, all PNI scales were located in a cluster within the Domineering octant, with displacements ranging from 75.98° to 98.22°. Three of the four subscales exhibited negative elevation, the exception being the PNI E/E scale (elevation = .09). The PNI scales were dispersed as expected across all quadrants of the IIP-C, with positive elevations ranging from .04 to .34. PNI ER (116.52°) and PNI DEV (154.05°) fell in the Vindictive octant, PNI EXP (82.98°) fell in the Domineering octant, and PNI GF (57.90°) fell in the Intrusive octant. PNI HS (238.89°) fell in the Avoidant octant, PNI CSE (335.41°) fell in the Exploitable octant, and PNI SSSE (359.44°) fell in the Overly-nurturant octant.

Discussion

Results suggested that the PNI is associated with interpersonal distress, whereas the NPI is associated with interpersonal adjustment, consistent with the distinction between pathological and normal narcissism. Replicating previous research, the NPI appears to assess a rather restricted range of grandiose characteristics reflecting, in part, nondistressed interpersonal dominance (Brown & Zeigler-Hill, 2004; Gurtman, 1992). Results for the PNI provide additional evidence for its construct validity. Several PNI scales assess grandiose characteristics reflecting, in part, a range of vindictive, domineering, intrusive, and overly-nurturant interpersonal problems. Several PNI scales assess vulnerable characteristics reflecting, in part, cold, avoidant, and exploitable interpersonal problems. We conclude that the associations between the PNI and IIP-C contribute evidence in support of the PNI's construct validity. In our final study, we attempted to replicate PNI external validity correlations and examine the PNI's relationship to psychotherapy presentation and utilization in a small clinical sample.

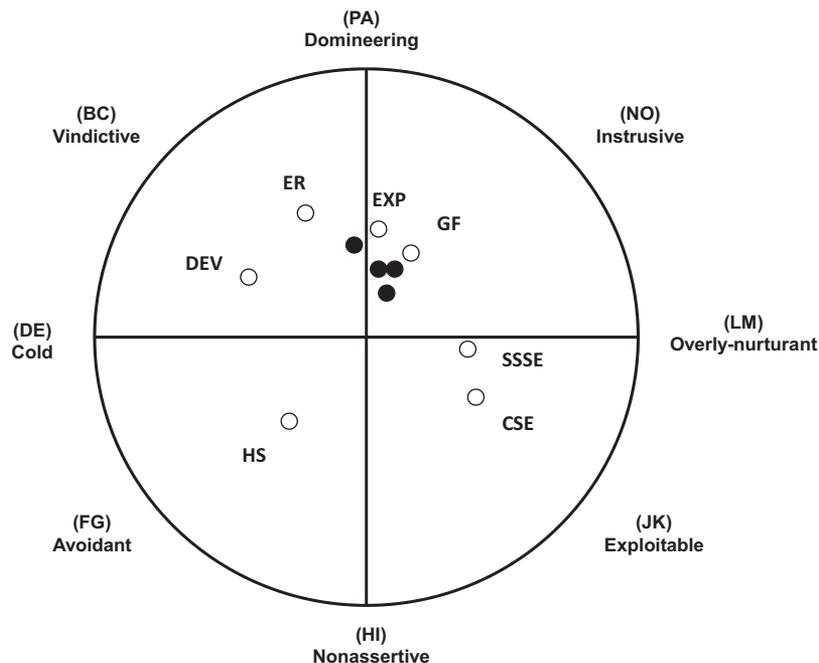


Figure 1. Projections of PNI scales (white circles) and NPI scales (black circles) onto the interpersonal problems circumplex. ER = Entitlement Rage; EXP = Exploitative; GF = Grandiose Fantasy; SSSE = Self-Sacrificing Self-Enhancement; CSE = Contingent Self-Esteem; HS = Hiding the Self; DEV = Devaluing.

Study 4: Pathological Narcissism and Psychotherapy

In a large-scale study examining the prevalence of *DSM-IV* PDs in psychiatric outpatients, Zimmerman, Rothschild, and Chelminski (2005) found the prevalence of NPD to be 2.3%. However, Clarkin, Levy, Lenzenweger, and Kernberg (2004) reported that 17% of inpatients reliably diagnosed with borderline personality disorder were also diagnosed with NPD. Research has also shown that clinicians in practice use the diagnosis more frequently than is suggested by reported prevalence rates (Doidge et al., 2002; Westen, 1997). Despite being regularly diagnosed by clinicians in practice, Levy, Reynoso, Wasserman, and Clarkin (2006) found limited research on long-term course and outcome and no randomized controlled treatment studies on NPD. Hilsenroth, Holdwick, Castlebury, and Blais (1998) examined early termination in a university-based community clinic and found that NPD patients had the largest percentage of dropout (64%). A problem with the sparse literature is its reliance on *DSM* NPD, which, as previously noted, emphasizes narcissistic grandiosity and ignores narcissistic vulnerability. Given the lack of data on the treatment of pathological narcissism and the failure to assess vulnerable narcissistic dysfunction in studies investigating the links between narcissism and psychotherapy outcome, the present study had two main purposes. First, we attempted to replicate the external validity correlations reported in Study 2 in a small clinical sample. Second, we examined how normal and pathological narcissism related to psychotherapy variables, such as treatment course and utilization, homicidal ideation, suicidal ideation and suicide attempts, and parasuicidal behavior, in an outpatient psychotherapy clinic. We predicted that scores on the NPI would be unrelated or negatively related to all psychotherapy variables examined in this study. In contrast, we expected PNI scales representing narcissistic grandiosity to correlate negatively with treatment utilization and PNI scales representing narcissistic vulnerability to correlate positively with treatment utilization. Links between pathological narcissism and suicidality led us to predict positive correlations between PNI scales and patient parasuicidal behavior and suicide attempts.

Method

Participants

Twenty female and 6 male patients, with a mean age 35.12 years ($SD = 13.55$), were recruited from a large rural community outpatient psychotherapy clinic. The overall racial composition was Caucasian (96%) and African American (4%), and mean education level was 14.80 ($SD = 2.40$) years. Regarding marital status, 46.2% were never married, 26.9% were in a current intimate relationship, 19.2% were divorced, 3.8% were married, and 3.9% did not indicate their status. Finally, 34.6% of the participants were employed either full time or part time, 42.3% were unemployed, and 23.1% were full- or part-time students.

In this sample, 100% of the patients met criteria for at least one Axis I disorder, and 72% of the patients received more than one Axis I disorder based on the SCID interview (First, Spitzer, Gibbon, & Williams, 1996). The Axis I disorders in this sample included major depressive disorder (40%), generalized anxiety disorder (28%), dysthymic disorder (20%), bipolar II disorder (12%), anxiety disorder not otherwise specified (NOS) (12%), schizoaffective disorder (8%), panic disorder (8%), social phobia

(8%), bulimia nervosa (4%), attention-deficit/hyperactivity disorder (4%), and adjustment disorder (4%). In addition, 32% of the patients met criteria for either substance abuse or dependence, and 12% met criteria for alcohol abuse or dependence. For Axis II disorders, 68% of the patients were diagnosed with at least one PD, and 41% of those patients received multiple Axis II diagnosis, which included borderline PD (41%), narcissistic PD (24%), histrionic PD (24%), obsessive-compulsive PD (24%), dependent PD (12%), PD NOS (12%), schizoid PD (6%), and avoidant PD (6%).

Self-Report Measures

The patients completed the same battery of self-report measures described in Study 2. Coefficient alphas for the NPI and PNI total scores were both .92. Coefficient alphas for the seven PNI scales were CSE (.93), EXP (.77), SSSE (.77), HS (.85), GF (.87), DEV (.91), and ER (.85). Relevant for this study, the reliability coefficient for NPI E/E was .81.

Chart Review

Participants signed Health Insurance Portability and Accountability Act consent allowing access to their protected health information. One chart was not available at the time of review ($n = 25$). Information reviewed for each participant included intake reports, session notes, psychiatry notes, treatment reports, and closing reports (if applicable). Three research assistants were trained to systematically extract relevant information. Two raters were randomly assigned to review each participant chart. Interrater kappa values ranged from .81 to 1.00, and intraclass correlations with absolute agreement ranged from .81 to 1.00. Consensus data were used in all analyses. Associations between narcissism scores and dichotomous clinical variables were calculated using one-tailed point-biserial correlations. Associations between narcissism scores and scaled clinical variables were calculated using one-tailed Pearson correlations.

Results

Validity Correlations

One-tailed validity correlations are presented in Table 6. Correlation patterns are generally consistent with the results of Study 2. The PNI and NPI were uncorrelated in this sample ($r = .06$). The PNI exhibited strong convergence with the HSNS and NHS, whereas the NPI was not correlated with the measures. The PNI exhibited the same pattern of correlations found in Study 2: self-esteem (-), shame (+), borderline personality organization (+), aggression (+). The PNI failed to correlate with empathy or impaired reality testing in the present sample, perhaps due to restriction of range. The NPI also failed to correlate with empathy, but otherwise exhibited a similar pattern of correlations as found in Study 2: self-esteem (+), shame (-), aggression (+), and near zero correlations core features of borderline personality organization.

Psychotherapy Variables

PNI and NPI correlations with psychotherapy variables are presented in Table 7. As predicted, neither the NPI total score nor any of its subscales exhibited significant correlations with psychotherapy variables, and all NPI effect sizes were very small to small

Table 6
External Correlates of the PNI and NPI in a Clinical Sample

Variable	External measures									
	HSNS	NHS	Self-Esteem	Empathy	Shame	Primitive defenses	Identity diffusion	Impaired reality testing	Aggression	Low moral values
NPI	.03	-.13	.45*	.11	-.49**	.04	.00	.22	.28	.29
PNI	.70**	.49**	-.32*	.07	.27	.32	.31	.01	.45*	.18

Note. *N* = 26. Correlations are one-tailed. PNI = Pathological Narcissism Inventory total score; NPI = Narcissistic Personality Inventory; HSNS = Hypersensitive Narcissism Scale; NHS = Narcissistic Hypersensitivity.
* *p* < .05. ** *p* < .01.

(<.28). Notably, the vast majority of these correlations were negative. Therefore, we present only the correlations for the NPI total score and the NPI E/E scale, as the latter is identified as containing the inventory’s maladaptive content. Also as predicted, the PNI and its scales (with the exception of the DEV) exhibited several significant and moderate correlations with psychotherapy variables (significant effect sizes ranging from 1.331 to 1.501).

Several PNI scales exhibited significant correlations with forms of intervention and service utilization. The GF, EXP, and SSSE scales were negatively related to use of psychiatric medication. The GF scale was also negatively related to attendance at partial-hospitalization programs. The EXP scale was negatively related to the number of different partial-hospitalization programs attended and with the number of inpatient mental health hospitalizations. In contrast, the SSSE scale was positively correlated with attendance in partial-hospitalization programs, and both the SSSE and HS scales correlated positively with use of telephone crisis services. For psychotherapy attendance variables, the HS scale was positively related to number of psychotherapy sessions attended, but

negatively related with the number of previous therapies. Also, the GF, EXP, and ER scales were positively correlated with the number of psychotherapy session cancellations or no-shows, and the CSE and SSSE scales were negatively correlated with the number of psychotherapy session no-shows.

Both the HS and CSE scales were positively correlated with the number of parasuicidal behaviors reported in patient charts. The GF, ER, and SSSE scales were positively correlated with the suicide attempts noted in the patients’ charts. Similarly the GF, SSSE, and CSE scales were positively correlated with the number of suicide attempts reported. Notably, the SSSE scale was also positively correlated with report of homicidal ideation (*r* = .36), consistent with the contempt felt for those helped that underlies this strategy of self-enhancement.

Discussion

This preliminary clinical study largely replicated validity correlations found in a sample of young adults, providing initial evi-

Table 7
NPI and PNI Correlations With Psychotherapy Variables

Psychotherapy variables	Narcissism									
	NPI	NPI E/E	PNI	GF	EXP	ER	CSE	SSSE	DEV	HS
Is client taking psychiatric medications?	-.24	-.28	-.35*	-.47**	-.35*	-.16	-.19	-.43*	-.08	-.01
Has client attended partial hospitalization?	-.23	.00	-.25	-.41*	-.32	-.14	-.11	.38*	-.11	.17
Number of partial-hospitalization programs attended	-.23	-.14	-.04	-.16	-.44*	.07	.12	-.22	-.08	.20
Has client used telephone-based crisis services?	-.14	.09	-.03	-.31	-.25	.03	.11	.33*	-.04	.35*
Number of hospitalizations for a psychiatric problem	-.26	-.09	.15	.04	-.37*	.06	.21	.07	.13	.24
Number of previous therapies	-.11	.16	-.22	-.18	-.11	-.28	-.16	.09	.12	-.34*
Number of therapy sessions attended	-.19	.03	.14	.00	-.18	.10	.03	.02	.15	.39*
Number of client-cancelled sessions	-.25	-.21	.25	-.01	-.18	.34*	.18	.08	.09	.43*
Number of client no-show sessions	.07	.09	-.42*	.50**	.35*	-.21	-.33*	-.38*	-.02	-.08
History of violence	-.26	.00	-.31	-.16	-.26	-.12	-.34*	-.14	-.11	-.17
Report of homicidal ideation	-.17	-.17	.10	.18	.05	.09	.03	.36*	-.16	-.02
Report of suicide attempts	.11	.10	.43*	.37*	.05	.33*	.28	.39*	.15	.25
Number of suicide attempts	.01	.09	.43*	.40*	-.10	.30	.36*	.47**	.08	.26
Number of parasuicidal behaviors	-.14	-.17	.32	.17	-.23	.27	.37*	.02	.03	.41*

Note. *N* = 25. Bold type indicates significant correlation. NPI = Narcissistic Personality Inventory; PNI = Pathological Narcissism Inventory total score; NPI E/E = Entitlement/Exploitativeness; GF = Grandiose Fantasy; EXP = Exploitative; ER = Entitlement Rage; CSE = Contingent Self-Esteem; SSSE = Self-Sacrificing Self-Enhancement; DEV = Devaluing; HS = Hiding the Self.
* *p* < .05. ** *p* < .01.

dence for the generalizability of the PNI to clinical populations. In addition, PNI scales exhibited substantively meaningful correlations with psychotherapy presentation and utilization, whereas the NPI was unrelated to any psychotherapy variables assessed. Results suggest that the NPI does not assess pathological narcissism, whereas the PNI assesses clinically relevant aspects of pathological narcissism that have an impact on psychotherapy. Consistent with our expectations, significant associations with parasuicidal behavior, suicidality and attempts, and homicidal ideation suggest that both narcissistic grandiosity and narcissistic vulnerability are related to aggression against the self and others.

General Discussion

On the basis of evidence of divergent conceptualization and assessment of narcissism across disciplines, we sought to develop a multidimensional self-report inventory to assess pathological narcissism, including scales spanning narcissistic grandiosity and narcissistic vulnerability. Four studies were described providing initial evidence supporting the construct validity of the PNI.

The PNI is a 52-item inventory that can be completed by young adults and psychotherapy outpatients in 12 min or less. It reliably measures seven aspects of pathological narcissism. In general, high scores on PNI scales are associated with low self-esteem, interpersonal distress, shameful affects, aggression, borderline personality organization, and low empathy. Narcissistic grandiosity is represented by scales assessing ER, EXP, GF, and SSSE. Grandiose PNI scales are positively related to a range of vindictive, domineering, intrusive, and overly-nurturant interpersonal problems. Narcissistic vulnerability is represented by scales assessing CSE, HS, and DEV. Vulnerable PNI scales are positively related to cold, socially avoidant, exploitable interpersonal problems.

Pathological narcissism impacted service utilization and patient presentation in psychotherapy. Grandiose characteristics most often reduced treatment utilization (e.g., more cancellations and no-shows, less medication use, less contact with partial hospitalizations and inpatient admissions). In contrast, vulnerable characteristics most often promoted treatment utilization (e.g., more contact with crisis services and partial hospitalizations, fewer therapy no-shows). The PNI HS scale provides a more fine-grained perspective. The tendency to hide the self's imperfections is associated with fewer previous therapies and more cancellations. However, once in treatment, it is the best predictor of the number of sessions attended. These preliminary results suggest that it is mainly narcissistic vulnerability that is associated with treatment utilization, and thus therapists and diagnosticians may be more likely to see narcissistic patients when they are in a vulnerable self-state. Relying solely on *DSM-IV* NPD diagnostic criteria may impede clinical recognition of pathological narcissism (Cain et al., 2008; Dickinson & Pincus, 2003; Doidge et al., 2002; Westen, 1997). This becomes a significant issue when combined with our results linking pathological narcissism with homicidal ideation, parasuicidal behavior, and suicide attempts.

Finally, we found no evidence to suggest that the NPI assesses "subclinical narcissism." Consistent with previous research, the NPI exhibited a pattern of correlations suggesting psychological adjustment, interpersonal dominance, and aggression. The NPI was unrelated to psychotherapy utilization and patient presentation in a small clinical sample. The NPI is not an appropriate measure

for investigations of pathological narcissism but may serve well as a complementary measure of normal/adaptive narcissism. Our results suggest pathological narcissism and normal narcissism may be distinct personality dimensions.

This series of studies has a number of limitations. First, all PNI data were based on self-report. Although preliminary evidence supporting its construct validity was found, self-report alone is unlikely to provide comprehensive assessment of personality pathology (Oltmanns & Turkheimer, 2006). Future PNI studies in which peer-, parent-, and therapist-reports are used appear warranted. Second, measures of *DSM* Axis II constructs were not included, thus our studies emphasized convergent validity with clinical characteristics of narcissism over discriminant validity in relation to PDs. Third, omnibus inventories of pathological personality traits, such as the Schedule for Nonadaptive and Adaptive Personality (Clark, 1993) and the Dimensional Assessment of Personality Pathology (Livesley, 2006), and diagnostic interviews for narcissism (e.g., Gunderson, Ronningstam, & Bodkin, 1990), were also not used. Fourth, NPI subscales and the HNS exhibited low reliabilities consistent with previous research. Although their use was warranted in order to compare the PNI with widely used alternative measures, results associated with these scales should be interpreted with caution. Fifth, the majority of our samples were students, and all lacked significant representation of ethnically diverse participants and were predominantly female. Finally, our clinical sample was quite small, and thus results are clearly preliminary.

Looking ahead, replications in larger clinical samples and more diverse samples are clearly needed. In addition, the optimal higher order structure of the PNI has not yet been determined. We are presently investigating multigroup confirmatory factor analyses across genders comparing a single-factor higher order model (i.e., all seven scales load on "pathological narcissism") with a correlated two-factor higher order model (i.e., scales loading on narcissistic grandiosity and narcissistic vulnerability). Clarification of the higher order structure of the PNI will inform optimal scoring procedures. Future multimethod research linking the PNI to other PDs and dimensional models of pathological traits is also needed. The present results suggest that investigations into the role of pathological narcissism in self-destructive behaviors as well as psychotherapy process and outcome also appear warranted (e.g., Luchner, Mirsalimi, Moser, & Jones, 2008). The development of the PNI may help to increase needed empirical research on narcissistic personality pathology (Levy et al., 2006) by providing a clinically relevant, efficient, reliable, and valid multidimensional measure of pathological narcissism.

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