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SPECIAL SECTION: Measures to Assess Maladaptive Variants of the Five-Factor Model

The Five-Factor Narcissism Inventory: A Five-Factor Measure of Narcissistic Personality Traits

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This study provides convergent, discriminant, and incremental validity data for a new measure of narcissistic personality traits created from the perspective of the Five-factor model (FFM) of general personality structure. Fifteen scales were constructed as maladaptive variants of respective facets of the FFM (e.g., Reactive Anger as a narcissistic variant of angry hostility), with item selection made on the basis of a criterion-keying approach using results from 167 undergraduates. On the basis of data from 166 additional undergraduates, the convergent validity of these 15 scales was tested with respect to 8 established measures of narcissism (including measures of both grandiose and vulnerable narcissism) and the respective facets of the FFM. Discriminant validity was tested with respect to facets from other FFM domains. Incremental validity was tested with respect to the ability of the FFM narcissism trait scales to account for variance in 2 alternative measures of narcissism, after variance accounted for by respective NEO PI–R facet scales and other established measures of narcissism were first removed. The findings support the validity of these new scales as measures of narcissistic personality traits and as maladaptive variants of the FFM.

As described in the introduction to this special section (Widiger, Lynam, Miller, & Oltmanns, this issue), a considerable body of research has suggested that the personality disorders described within the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text revision [*DSM–IV–TR*]; American Psychiatric Association, 2000) can be understood as maladaptive variants of the domains and facets of the five-factor model (FFM) of general personality structure (Clark, 2007; Samuel & Widiger, 2008b). Studies have even demonstrated that the correlation of a person's profile in terms of the 30 facets of the FFM with the profile for a prototypic case of narcissistic personality disorder (e.g., Lynam & Widiger, 2001) can serve as an effective index of the extent to which the person is likely to be narcissistic (Miller, Reynolds, & Pilkonis, 2004).

However, existing measures of the FFM are confined largely to the assessment of FFM traits within the normal range of personality functioning. Such measures have evident utility for general personality research, but they lack adequate fidelity for the assessment of the FFM maladaptive variants (Haigler & Widiger, 2001; Reynolds & Clark, 2001). Therefore, researchers are beginning to develop measures that are focused on maladaptive variants of the domains and facets of the FFM (e.g., De Clercq, De Fruyt, Van Leeuwen, & Mervielde, 2006; Edmundson, Lynam, Miller, Gore, & Widiger, 2011; Lynam et al., 2011; Piedmont, Sherman, Sherman, Dy-Liacco, & Williams, 2009). The purpose of this article is to describe the development of and provide initial validation for a self-report measure for the assessment of narcissistic personality traits from the perspective of the FFM. The introduction begins with a discussion of narcissistic personality disorder (NPD), in particular its heterogeneity and assessment, followed by a description of how narcissism could be understood from the perspective of the FFM.

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THE HETEROGENEITY OF NARCISSISM

Many problems have been noted with respect to the *DSM–IV–TR* categorical classification, including excessive diagnostic comorbidity, inadequate coverage, an arbitrary boundary with normal psychological functioning, and inadequate scientific foundation (Clark, 2007; Widiger & Trull, 2007). One particular limitation is the provision of only one term to describe a heterogeneous construct consisting of a constellation of maladaptive personality traits. Like virtually every other personality disorder, NPD does not appear to be a homogeneous construct (Ackerman et al., 2011; Miller & Campbell, 2008; Pincus & Lukowitsky, 2010; Russ, Shedler, Bradley, & Westen, 2008) and is perhaps best understood as a constellation of maladaptive personality traits (Clark, 2007; Lynam & Widiger, 2001; Widiger & Trull, 2007).

NPD was first included in the third edition of the American Psychiatric Association (1980) diagnostic manual and assessment instruments were subsequently developed. The most prominent measure is the Narcissistic Personality Inventory (NPI), which was developed by Raskin and Hall (1981) on the basis of the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed. [*DSM–III*]; American Psychiatric Association, 1980) criterion set. Factor analysis of the NPI item pool

yielded seven factors that became commonly used NPI scales (Raskin & Terry, 1988). As suggested by Cain, Pincus, and Ansell (2008), "for the past two decades, the NPI has dominated social/personality research on narcissistic personality traits" (p. 642). The NPI continues to be used effectively in research on narcissism (e.g., Foster, Misra, & Reidy, 2009; Horvath & Morf, 2010; Zeigler-Hill, Myers, & Clark, 2010), although significant questions have been raised regarding its factor structure (Ackerman et al., 2011; Cain et al., 2008) and its failure to adequately assess "vulnerable" narcissism (Cain et al., 2008; Pincus & Lukowitsky, 2010).

The authors of the *DSM* criterion sets for NPD have themselves vacillated in their effort to represent vulnerable narcissism. For example, the *DSM–III* criterion set referred to humiliation and rage, as well as cool indifference, in response to criticism (American Psychiatric Association, 1980). The reference to cool indifference was removed in the *Diagnostic and Statistical Manual of Mental* Disorders (3rd ed., revised [*DSM–III–R*]; American Psychiatric Association, 1987) in the belief that there had been too much emphasis on arrogant grandiosity in *DSM–III* (Widiger, Frances, Spitzer, & Williams, 1988). *DSM–IV* (American Psychiatric Association, 2000), however, shifted back with the removal of the hypersensitivity to criticism (Gunderson, Ronningstam, & Smith, 1991). Cain et al. (2008) subsequently criticized this decision, suggesting that "the lack of sufficient vulnerable DSM–IV criteria contrasts with much of the clinical literature and structural social/personality research" (p. 648).

There have indeed been a number of references to a vulnerable narcissism within the clinical literature, including such traits as feelings of shame and insecurity (Cain et al., 2008; Morf & Rhodewalt, 2001; Pincus & Lukowitsky, 2010). Hendin and Cheek (1997) developed the Hypersensitive Narcissism Scale (HSNS) partly in response to the absence of sufficient representation of a more vulnerable narcissism within existing measures (the HSNS is generally uncorrelated with the total NPI score). Pincus et al. (2009) most recently developed the Pathological Narcissism Inventory (PNI–52), consisting of seven scales assessing constructs that they felt, on the basis of their review of the theoretical and clinical literature, constitute both grandiose and vulnerable narcissism. The three scales of Exploitative, Grandiose Fantasies, and Self-Sacrificing Self-Enhancement are combined to form a measure of grandiose narcissism, whereas the four scales of Devaluing, Entitlement Rage, Contingent Self-Esteem, and Hiding the Self are combined to form a measure of vulnerable narcissism (Wright, Lukowitsky, Pincus, & Conroy, 2010).

Five-Factor Model of Narcissism

There have been prior conceptualizations of narcissism from the perspective of the FFM, such as Paulhus's (2001) reference to "disagreeable extraverts," which emphasizes extraversion and antagonism. "Unmitigated agency," "which includes being hostile, cynical, greedy, and arrogant" (Helgeson & Fritz, 1999, p. 132) has similarly been associated with FFM antagonism (Ghaed & Gallo, 2006) and extraversion (Foster & Trimm, 2008). However, the FFM conceptualization developed herein will be at the lower order level of facets, which will allow for a more specific and nuanced description. Two sources for identifying these facets were expert opinion and the empirical relationship of measures of narcissism with the FFM.

Expert Opinion

Widiger, Trull, Clarkin, Sanderson, and Costa (2002) provided an FFM description of *DSM–IV–TR* NPD by coding its diagnostic criteria and text description in terms of a respective facet of the FFM. They hypothesized that *DSM–IV–TR* NPD consisted of low modesty (e.g., grandiose sense of self-importance), low altruism (interpersonally exploitative), and tough-mindedness (lacks empathy) from the domain of antagonism, and high openness to fantasy (preoccupation with fantasies of success, power, and brilliance). On the basis of the text of *DSM–IV–TR* they also coded for high self-consciousness (hypersensitivity to criticism) and high angry hostility (reacting with rage or anger in response to criticism) from the domain of neuroticism. NPD was also coded as being high in achievement-striving (conscientiousness) because "overweening ambition and confidence may lead to high achievement" (American Psychiatric Association, 2000, p. 716), although it was also noted in the text of *DSM–IV–TR* that the ambition is often greater than the actual accomplishments.

Lynam and Widiger (2001) surveyed 197 personality disorder researchers, asking them to describe a prototypic case of a respective personality disorder, 12 of whom described NPD on a scale from 1 (*extremely low*) to 5 (*extremely high*) for each of the 30 facets of the FFM. If one uses the (arbitrary) cutoff of 2 or below for low, and 4 or above for high, the prototypic case of NPD would be said to be high in angry hostility (neuroticism), assertiveness and excitement seeking (extraversion), and openness to actions, and low in self-consciousness (neuroticism), warmth (extraversion), and openness to feelings, and low in all facets of agreeableness. A marginally high score of 3.83, however, was also provided for gregariousness (extraversion), and a score of 3.92 for achievement-striving (conscientiousness). A noteworthy discrepancy with Widiger et al. (2002), who confined their ratings to traits included within the *DSM–IV–TR,* was the inclusion of facets of extraversion, such as excitement seeking. Samuel and Widiger (2004) surveyed 154 clinicians, using the same methodology of Lynam and Widiger (2001), 22 of whom described NPD. The clinicians described a prototypic case of NPD as being high in assertiveness, activity, and excitement seeking from extraversion, low in self-consciousness from neuroticism, and low in all six facets of agreeableness. However, the clinicians also provided relatively high scores for the facets of angry hostility, gregariousness, and openness to fantasy.

Empirical Research

Samuel and Widiger (2008b) conducted a meta-analysis of studies relating a measure of the FFM (at the domain and facet level) with measures of NPD. At the facet level there were significant effect sizes for angry hostility ($r = .23$) from neuroticism; trust ($r = -.20$), straightforwardness ($r = -.31$), altruism ($r = -.20$), compliance ($r = -.26$), modesty ($r = -.37$) and tender-mindedness ($r = -.17$) from agreeableness; and assertiveness ($r = .19$) from extraversion.

Samuel and Widiger (2008a) compared five narcissism inventories with respect to their relationship to the domain and facet scales of the revised NEO Personality Inventory (NEO PI–R; Costa & McCrae, 1992): the Million Clinical Multiaxial Inventory (3rd ed. [MCMI–III]; Millon, Millon, Davis, & Grossman, 2009), Minnesota Multiphasic Personality Inventory–2 (MMPI–2; Morey, Waugh, & Blashfield, 1985), NPI (Raskin & Terry, 1988), Personality Diagnostic

Questionnaire (4th ed. [PDQ–4]; Bagby & Farvolden, 2004), and the Schedule for Nonadaptive and Adaptive Personality (SNAP; Simms & Clark, 2006). It is noteworthy that none of them correlated positively with the domain of neuroticism, inconsistent with the vulnerability conceptualization (Cain et al., 2008; Pincus & Lukowitsky, 2010). All of these NPD scales would be considered to be assessing grandiose narcissism (Cain et al., 2008). Miller and colleagues (Miller et al., 2010; Miller et al., 2011) reported positive correlations of PNI–52 vulnerable narcissism with the domain of neuroticism, including the facets of self-consciousness and vulnerability.

On the basis of the expert consensus ratings and the empirical research, there appears to be a need and support for as many as 15 FFM narcissism trait scales to adequately cover the heterogeneity of the construct of narcissism (both vulnerable and grandiose). Two of these scales, though, have already been developed and validated in the course of the construction of the Elemental Psychopathy Inventory (EPA; Lynam et al., 2011), consistent with the considerable overlap of narcissism and psychopathy (Widiger, 2011):

1. Reactive Anger (narcissistic variant of FFM angry hostility), concerning anger and rage in response to perceived slights, criticism, failure, or rebuke.
2. Shame (high FFM self-consciousness), concerning shame or humiliation in response to perceived slights, criticism, failure, or rebuke.
3. Indifference (low FFM self-consciousness), concerning indifference in response to perceived slights, criticism, failure, or rebuke.
4. Need for Admiration (FFM vulnerability), involving a sense of inner weakness, uncertainty, and insecurity with respect to a desired or perceived greatness.
5. Exhibitionism (FFM gregariousness), a seeking of constant admiration, showing off when in the presence of others, and attention-seeking, without reference to feelings of insecurity.
6. EPA Thrill-Seeking (FFM excitement seeking), assessing a tendency to engage in high-risk behavior for the sake of thrills and excitement.
7. Authoritativeness (FFM assertiveness), assessing a tendency to take charge of situations, to authoritatively take responsibility for making decisions, and to perceive oneself as a leader.
8. Grandiose Fantasies (FFM fantasy), assessing fantasies of grandeur and success, preoccupation with fantasies of future glory, and a tendency to distort reality to achieve an overly positive view of past, current, or future accomplishments.
9. EPA Cynicism/Distrust (low FFM trust), assessing a sense of cynicism and mistrust concerning the motives, intentions, and reliability of others.
10. Manipulativeness (low FFM straightforwardness), assessing a tendency to skillfully and characteristically manipulate, ply, shape, beguile, machinate, or maneuver the feelings or opinions of others.
11. Exploitativeness (low FFM altruism), assessing a tendency to exploit, take advantage of, and use others for his or her own gain.
12. Entitlement (low FFM altruism), involving feelings and actions of entitlement, presumptuousness, not being satisfied until he OR she gets what is perceived to be deserved, or expectation of favorable treatment.
13. Arrogance (low FFM modesty), assessing haughty, snobbish, imperious, pretentious, conceited, pompous, and disdainful beliefs and behaviors.
14. Lack of Empathy (low FFM tender-mindedness), assessing the extent to which the person fails to be aware of, appreciate, or acknowledge the feelings of others, displaying attitudes that are generally uncaring and unsympathetic.
15. Acclaim-Seeking (FFM achievement-striving), assessing narcissistic aspirations, working toward acclaim, and an excessive driving ambition to achieve.

Presented herein are first the results of the construction of 13 new FFM narcissism scales, followed by data concerning their validity. The validation analyses will also include the two EPA scales (i.e., EPA Thrill-Seeking and Cynicism/Distrust) so as not to presume their validity for the assessment of narcissism. Validation will include internal consistency, convergent and discriminant validity with respect to NEO PI–R facet scales, convergent validity with respect to existing measures of narcissism, incremental validity with respect to NEO PI–R facet scales, and incremental validity with respect to existing measures of narcissism.

Method

Participants

Participants were 412 undergraduates currently enrolled in introductory psychology courses at the University of Kentucky. The results for 13 participants were excluded due to failing to complete a substantial portion of the items. Forty-seven of the remaining 399 participants failed to respond to just a few scattered items. Nineteen of the remaining 352 participants were also excluded due to elevated responses on a validity scale, leaving a final sample of 333 participants, which was then divided (167 for item construction, 166 for scale validation).

The item selection sample was 68% female and 32% male with a mean age of 18.9 ($SD = 2.05$). The sample was 90% Caucasian, 7% African American, and 1% Hispanic; the remaining participants endorsed other ethnic identities. Ninety-nine percent were unmarried. The validation sample was 66% female and 34% male with a mean age of 19.4 ($SD = 2.53$). The sample was 90% Caucasian, 8% African American, and 1% Hispanic; the remaining participants endorsed other ethnic identities. Ninety-eight percent were unmarried. Estimated values were obtained for these missing data using the expectation maximization procedure, which has been shown to produce more accurate estimates of population parameters than other methods, such as mean substitution or deletion of missing cases (Enders, 2006).

Materials

Five-Factor Narcissism Inventory. The initial item pool for the FFNI consisted of 390 items, with 30 draft items per subscale, answered on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Items were written using a rational approach for item construction (Clark & Watson, 1995) to assess narcissistic maladaptive variants of each respective FFM facet. For example, the narcissistic variant of FFM angry hostility (i.e., FFNI Reactive Anger) is not a nonspecific disposition for feelings of anger (Costa & McCrae, 1992) but

is instead confined to feelings of anger in response to rebuke, criticisms, or slights (e.g., "I hate being criticized so much that I can't control my temper when it happens," and "I feel enraged when people disrespect me"). Similarly, the narcissistic variant of FFM self-consciousness is not simply a disposition to feel "uncomfortable around others, sensitive to ridicule, and prone to feelings of inferiority" (Costa & McCrae, 1992, p. 16), but is instead feelings of shame and embarrassment specifically in response to rebuke, failure, criticism, or slights (e.g., "It's really quite shameful to publicly fail," and "I feel ashamed when people judge me").

Data from the first half of the participants ($n = 167$) were used to correlate each potential FFNI item with its respective NEO PI–R facet scale and the eight measures of narcissism using a criterion-keying approach to item selection and scale construction (Clark & Watson, 1995; Garb, Wood, & Fiedler, 2011). Ten items were selected for the final version of each subscale on the basis of obtaining the relatively highest correlations across all measures, yet also avoiding explicitly redundant items. Note that items assessing vulnerable narcissism, such as FFNI Shame items, were not expected to correlate with measures of grandiose narcissism, such as the NPI; similarly, items assessing grandiose narcissism, such as FFNI Acclaim-Seeking, were not expected to correlate with measures of vulnerable narcissism, such as the HSNS.

It was also the intention of the test authors to have 30% of the items in each scale be reverse-keyed. However, the reverse-keyed items generally performed less well than the other items, resulting in only five scales having three reverse-coded items, seven having just two, and three having only one. Nevertheless, this might be advantageous, as there is an accumulating body of research to suggest that reverse-keyed items tend to weaken the validity of scales and might not be sufficiently beneficial with respect to offsetting response biases (Lindwall et al., 2012; Rodebaugh, Woods, & Heimberg, 2007).

The final version of the FFNI consists of 15 subscales (including two from the EPA):

1. Reactive Anger (e.g., "I have at times gone into a rage when not treated rightly").
2. Shame (e.g., "When I realize I have failed at something, I feel humiliated").
3. Indifference (e.g., "Others' opinions of me are of little concern to me").
4. Need for Admiration (e.g., "I want so much to be admired by others").
5. Exhibitionism (e.g., "I enjoy being in front of an audience or big crowd").
6. EPA Thrill-Seeking (e.g., "I like to have new and exciting experiences, even if they are a little frightening").
7. Authoritativeness (e.g., "I tend to take charge of most situations").
8. Grandiose Fantasies (e.g., "I daydream about someday becoming famous").
9. EPA Cynicism/Distrust (e.g., "You have to look out for your own interests because no one else will").
10. Manipulativeness (e.g., "I will mislead people if I think it is necessary").
11. Exploitativeness (e.g., "If people are ignorant enough to let me take advantage of them, so be it").
12. Entitlement (e.g., "I believe I am entitled to special accommodations").
13. Arrogance (e.g., "I only associate with people of my caliber").
14. Lack of Empathy (e.g., "I'm not big on feelings of sympathy").
15. Acclaim-Seeking (e.g., "I have devoted my life to success").

NEO Personality Inventory–Revised. The NEO PI–R (Costa & McCrae, 1992) is a 240-item self-report inventory designed to assess normal personality domains according to the FFM. It uses a 5-point Likert scale ranging from 1 (*strongly disagree* to 5 (*strongly agree*). In this study, Cronbach's alpha for facet scales ranged from .53 (self-consciousness) to .81 (altruism).

Narcissistic Personality Inventory. The NPI (Raskin & Terry, 1988) is a 40-item forced-choice self-report measure of narcissism based on the *DSM–III* clinical criteria for NPD. It is the most popular measure of narcissism in social psychological research (Cain et al., 2008). Cronbach's alpha for total score in this sample was .88.

Millon Clinical Multiaxial Inventory–III. The MCMI–III (Millon et al., 2009) is a 175-item true–false self-report inventory designed to assess *DSM–IV–TR* (American Psychiatric Association, 2000) personality disorders and some Axis I disorders. This study included only the 19 MCMI–III items pertaining to NPD (Cronbach's $\alpha = .63$).

Minnesota Multiphasic Personality Inventory–2. The MMPI–2 is a 567-item true–false self-report measure designed in part to assess dysfunctional personality at the clinical level. Morey et al. (1985) selected those items from the inventory that appeared to represent NPD and demonstrated good internal consistency. The resulting scale contained 31 items. Somwaru and Ben-Porath (1995) subsequently created their own NPD scale from the MMPI–2 utilizing seven of the items from Morey et al. as well as adding an additional nine items. Because these two scales overlap substantially, the MMPI–2 NPD scale used in this study is represented by the entire pool of their 40 items (Cronbach's $\alpha = .70$).

Personality Diagnostic Questionnaire. The PDQ–4 (Bagby & Farvolden, 2004) is a 99-item true–false self-report inventory intended to measure the 10 *DSM–IV–TR* (American Psychiatric Association, 2000) personality disorders and two personality disorders listed in its appendix. This study included only the nine PDQ–4 items pertaining to NPD (Cronbach's $\alpha = .78$).

OMNI Personality Inventory–IV. The OMNI–IV (Loranger, 2001) is a 390-item self-report inventory intended to assess both normal personality (25 scales) and *DSM–IV* (American Psychiatric Association, 1994) personality disorders (10 scales). It uses a 7-point Likert scale ranging from 1 (*definitely agree*) to 7 (*definitely disagree*). Only the 27 OMNI–IV items pertaining to NPD were included (Cronbach's $\alpha = .76$).

Schedule for Nonadaptive and Adaptive Personality. The SNAP (Simms & Clark, 2006) is a 375-item factor analytically derived true–false self-report inventory designed to measure both normal and abnormal personality functioning through dimensional scales. This study included only the 21 SNAP items pertaining to NPD (Cronbach's $\alpha = .75$).

Pathological Narcissism Inventory. The PNI–52 (Pincus et al., 2009) is a 52-item self-report measure designed to assess seven facets of pathological narcissism: contingent self-esteem, exploitative, self-sacrificing, hiding the self, grandiose fantasy, devaluing, and entitlement rage (Pincus et al., 2009). Exploitative, grandiose fantasy, and self-sacrificing self-enhancement define a Grandiose component, whereas entitlement rage, contingent self-esteem, hiding the self, and devaluing define a Vulnerable component (Wright et al., 2010). Cronbach's alpha for the full scale score was .89.

Hypersensitivity Narcissism Scale. The HSNS (Hendin & Cheek, 1997) is a 10-item measure assessing characteristics associated with hypersensitivity and vulnerable narcissism. The HSNS has been used to assess a vulnerable form of narcissism and contains items such as "I often interpret the remarks of others in a personal way." Cronbach's alpha for this scale was .71.

Validity scale. Data collection also included a validity scale to detect careless and random responding. The scale consisted of five items (e.g., "I have used a computer in the past 2 years" [reverse-keyed]). Validity items were answered on the same 5-point Likert scale as were the FFNI items.

Procedure

Students received research credit for their participation. All measures were administered via SurveyMonkey, a secure online questionnaire-building service (Chuah, Drasgow, & Roberts, 2006). Given the online format, individuals indicated their informed consent by choosing the *agree* option; individuals who, given the informed consent document, chose the *disagree* option were automatically exited from the study. After completion they received a printable debriefing document. The order in which the materials were administered was the same for all participants. Completion of all materials required 2 to 3 hours, but participants were free to halt participation at any time and resume later when no longer fatigued or distracted.

RESULTS

The following analyses were conducted on the second half of the sample ($n = 166$). Cronbach's alpha coefficients for the FFNI subscales ranged from .62 (FFNI Shame), .72 (Grandiose Fantasies), .77 (Need for Admiration), and .78 (Exhibitionism), to .87 (Acclaim-Seeking), .88 (Indifference), and .89 (Exploitativeness). Cronbach's alpha for the entire scale was .90.

Convergent and Discriminant Validity With NEO PI–R Facet Scales

Table 1 provides correlations of the FFNI subscales with their corresponding NEO PI–R facet scales (e.g., FFNI Reactive Anger correlated with NEO PI–R angry hostility). Significant convergent validity was obtained for all but 1 of the 15 FFNI subscales with their respective NEO PI–R facet scales, the exception being the correlation of Grandiose Fantasies with NEO PI–R fantasy ($r = .13$). FFNI Grandiose Fantasies did correlate –.36, though, with NEO PI–R modesty. The median absolute convergent correlation was .58.

Table 1 also provides discriminant validity data for the relationship of the 15 FFNI subscales with other NEO PI–R facet scales. Row 2 provides the averaged correlations with the five NEO PI–R facet scales within the same domain as the respective FFNI subscale, and row 3 provides the averaged correlations with the 24 NEO PI–R facet scales outside of the domain. Note that correlations were expected to be obtained with facets within the same domain as a respective FFNI subscale, whereas no significant correlations should be obtained with the facets outside of the domain. For example, the FFNI Arrogance subscale correlated on average –.41 with the five facets within the Agreeableness domain as assessed by the NEO PI–R and –.02 with the 24 facets from all other domains. Although the within-domain correlation does indicate lack of complete divergence, its magnitude is clearly less than that of the correlation between this FFNI subscale and its parent NEO PI–R facet (i.e., $r = –.72$). In sum, it is evident from Table 1 that good to excellent discriminant validity was obtained for all but a few of the FFNI subscales. The exceptions might be the marginal correlations of Reactive Anger, Shame, Thrill-Seeking and Lack of Empathy with the facets outside of their respective domains.

TABLE 1.—Convergent and discriminant validity of the Five-Factor Narcissism Inventory scales with measures of general personality.

	N				E			O	A						C
	RA[a]	Sh	Ind	NfA	Exh	Auth	TS	GF	CynDs	Manip	Exp	Ent	Arr	LoE	AS
Other Measures	(N2)	(N4)	(N4)	(N6)	(E2)	(E3)	(E5)	(O1)	(A1)	(A2)	(A3)	(A3)	(A5)	(A6)	(C4)
NEO facet	.64***	.58***	−.45***	.47***	.57***	.74***	.46***	.13	−.60***	−.67***	−.55***	−.59***	−.72***	−.53***	.62***
Disc same[b]	.21	.28	−.28	.39	.32	.44	.07	−.03	−.17	−.41	−.47−	.47	−.41	.20	.24
Disc other[c]	−.24	.23	.06	−.17	−.02	.04	−.29	−.04	.07	−.12	−.22	−.05	−.02	−.25	.07

Note. N = Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness; RA = Reactive Anger; Sh = Shame; Ind = Indifference; NfA = Need for Admiration; Exh = Exhibitionism; Auth = Authoritativeness; TS = Thrill-Seeking; GF = Grandiose Fantasies; CynDS = Cynism/Distrust; Manip = Manipulativeness; Exp = Exploitativeness; Ent = Entitlement; Arr = Arrogance; LoE = Lack of Empathy; AS = Acclaim-Seeking.

[a]Corresponding NEO Revised Personality Inventory (NEO PI–R) facet for each Five-Factor Narcissism Inventory (FFNI) trait scale. [b]Discriminant validity between the FFNI and the average correlation of noncorresponding NEO PI–R facets within the same domain. [c]Discriminant validity between the FFNI and the average correlation of noncorresponding NEO PI–R facets outside of each scale's domain.

***$p < .001$.

TABLE 2.—Correlations among Five-Factor Narcissism Inventory subscales.

	N				E			O	A					
	RA[a]	Sh	Ind	NfA	Exh	Auth	TS	GF	CynDs	Manip	Exp	Ent	Arr	LoE
Sh	.32***													
Ind	−.18	−.54***												
NfA	.23	.52***	−.58***											
Exh	.07	−.21	−.03	−.07										
Auth	.03	−.32***	.14	−.35***	.33***									
TS	.17	−.11	.24	−.06	.30***	.09								
GF	.22	.01	.03	.03	.29***	.18	.23							
CynDs	.33***	.33	−.13	.23	−.10	−.11	.23	.15						
Manip	.37***	−.06	.17	.01	.09	.19	.36***	.31***	.31***					
Exp	.41***	.05	.16	.08	.07	.00	.30***	.36***	.30***	.64***				
Ent	.40***	−.03	.09	.17	.11	−.05	.21	.31***	.03	.49***	.65***			
Arr	.45***	−.10	.16	.02	.21	.16	.25	.43***	.13	.57***	.70***	.76***		
LoE	.33***	−.01	.25	.04	−.10	−.09	.24	.25	.20	.48***	.64***	.57***	.58***	
AS	.03	−.15	.03	−.24	.35***	.49***	.01	.43***	−.02	.05	.05	−.03	.12	−.21

Note. N = Narcissism; E = Extraverted; O = Openness; A = Agreeableness; C = Conscientiousness; RA = Reactive Anger; Sh = Shame; Ind = Indifference; NfA = Need for Admiration; Exh = Exhibitionism; Auth = Authoritativeness; TS = Thrill-Seeking; GF = Grandiose Fantasies; CynDS = Cynicism/Distrust; Manip = Manipulativeness; Exp = Exploitativeness; Ent = Entitlement; Arr = Arrogance; LoE = Lack of Empathy; AS = Acclaim-Seeking.

[a]Five-Factor Narcissism Inventory.

***$p < .001$.

Convergent and Discriminant Validity Among FFNI Subscales

Table 2 provides the correlations among the FFNI subscales. Due to the large number of correlations and the exploratory nature of these analyses, a conservative threshold for statistical significance was used. It is evident from Table 2 that many of the FFNI subscales are uncorrelated with one another, consistent with the hypothesis the NPD is a heterogeneous constellation of maladaptive personality traits rather than a homogeneous construct. When the scales do correlate, there is a tendency to do so in a manner consistent with the FFM and the findings of Table 1. For example, most of the FFNI antagonism subscales correlate with one another, as do the subscales within extraversion and neuroticism, with less convergence across domains. There are a few notable exceptions, however, such as FFNI Reactive Anger correlating with FFNI antagonism scales, Grandiose Fantasies correlating with antagonism scales (Grandiose Fantasies was the only FFNI openness scale), and Acclaim-Seeking correlating with FFNI extraversion scales (Acclaim-Seeking was the only FFNI conscientiousness scale).

TABLE 3.—Convergent validity of measures of narcissism.

	HSNS	PNI–52–T	NPI	MCMI–III	PDQ–4	MMPI–2	SNAP
PNI–52–T	.63***						
NPI	.14	.27**					
MCMI–III	−.06	.09	.65***				
PDQ–4	.42***	.41***	.48***	.37***			
MMPI–2	−.15	−.11	.64***	.71***	.15		
SNAP	.48***	.51***	.52***	.41***	.61***	.21**	
OMNI–IV	.39***	.43***	.61***	.53***	.71***	.30**	.74***

Note. HSNS = Hypersensitive Narcissism Scale (Hendin & Cheek, 1997); PNI–52–T = Pathological Narcissism Inventory Total (Pincus et al., 2009); NPI = Narcissistic Personality Inventory (Raskin & Terry, 1988); MCMI–III = Millon Clinical Multiaxial Inventory–III (Millon et al., 2009); PDQ–4 = Personality Diagnostic Questionnaire–4 (Bagby & Farvolden, 2004); MMPI–2 = Minnesota Multiphasic Personality Inventory–2 (Morey et al., 1985); SNAP = Schedule for Nonadaptive and Adaptive Personality (Simms & Clark, 2006); OMNI–IV = OMNI Personality Inventory–IV (Loranger, 2001).

**$p < .01$. ***$p < .001$.

Convergent Validity Among Narcissism Scales

Table 3 provides the correlations of the narcissism measures with each other. The majority of them correlated significantly with one another. However, it is also evident that the HSNS and PNI–52 (although correlating highly with one another) correlated weakly with the NPI, MCMI–III, and MMPI–2 (which correlated highly with one another). The PNI–52 and NPI correlated only .27 despite sharing six items (i.e., the five PNI–52 Exploitative items are identical to five NPI Exploitativeness items).

Convergent and Discriminant Validity With Narcissism Scales

Table 4 provides the correlations of the 15 FFNI subscales (as well as the total FFNI score) with the nine narcissism scales. Consistent with the inconsistent convergent validity coefficients among the nine narcissism scales, the FFNI subscales obtained inconsistent correlations with these scales. For example, FFNI Shame, Indifference, and Need for Admiration correlated on average close to zero across all nine narcissism scales (see last row). However, this was due primarily to the fact that they correlated in mainly opposite directions with the MMPI–2 and MCMI–III as compared to the PNI–52 and HSNS (although they also correlated weakly or not at all with the PDQ–4, SNAP, and OMNI–IV). The FFNI subscales of Grandiose Fantasies, Manipulativeness, Exploitativeness, and Arrogance correlated significantly with all nine narcissism measures, whereas the Authoritativeness and Acclaim-Seeking subscales correlated with a more select subset. One could interpret this finding as suggesting relatively weaker convergent validity for FFNI Acclaim-Seeking or, alternatively, that the NPI, MCMI–III, MMPI–2, and OMNI–IV include aspects of Acclaim-Seeking (as measures of more grandiose narcissism) whereas the PNI–52, HSNS, PDQ–4, and SNAP do not include this aspect of grandiose narcissism.

The correlations for the sum and average of the 15 FFNI subscales were also relatively low with the PNI–52 and the HSNS. However, this reflects the fact that the HSNS and PNI–52 are

TABLE 4.—Convergent validity of the FFNI subscales with measures of narcissism.

Other Measures	FFNI Subscales															FFNI Total Score	Measure Means
	RA	Sh	Ind	NfA	Exh	Auth	TS	GF	CD	Manip	Exp	Ent	Arr	LoE	AS		
HSNS	.48***	.44***	−.36***	.49***	−.03	−.20	.17	.19	.41***	.23***	.30***	.30***	.33	.22***	.04	.41***	.20
PNI–52	.50***	.47***	−.38***	.59***	.04	−.18	.13	.27***	.48***	.25***	.28***	.33***	.26***	.10	.01	.44***	.21
NPI	.33***	−.20	.18	−.14	.53***	.44***	.33***	.53***	.11	.53***	.41***	.41***	.55***	.27***	.43***	.69***	.31
MCMI–III	.26***	−.27***	.23***	−.30***	.43***	.38***	.32***	.43***	.06	.44***	.44***	.38***	.50***	.25***	.38***	.59***	.26
PDQ–4	.47***	.10	−.01	.19	.18	.03	.22***	.39***	.25***	.54***	.58***	.60***	.66***	.52***	.07	.68***	.32
MMPI–2	.11	−.35***	.29***	−.44***	.54***	.45***	.34***	.33***	−.04	.29***	.21***	.13	.45***	.09	.41***	.41***	.19
SNAP	.50***	.11	−.02	.21***	.29***	.11	.41***	.45***	.35***	.50***	.58***	.54***	.63***	.48***	.13	.76***	.35
OMNI–IV	.42***	.04	−.06	.16	.31***	.12	.28***	.27***	.15	.25***	.63***	.64***	.71***	.48***	.21***	.74***	.31
FFNI means	.38	.04	−.02	.10	.29	.14	.28	.36	.22	.38	.43	.41	.51	.30	.21		

Note. FFNI = Five-Factor Narcissism Inventory; RA = Reactive Anger; Sh = Shame; Ind = Indifference; NfA = Need for Admiration; Exh = Exhibitionism; Auth = Authoritativeness; TS = Thrill-Seeking; GF = Grandiose Fantasies; CD = Cynicism/Distrust; Manip = Manipulativeness; Exp = Exploitativeness; Ent = Entitlement; Arr = Arrogance; LoE = Lack of Empathy; AS = Acclaim-Seeking; HSNS = Hypersensitive Narcissim Scale (Hendin & Cheek, 1997); PNI-52 = Pathological Narcissism Inventory (Pincus et al., 2009); NPI = Narcissistic Personality Inventory (Raskin & Terry, 1988); MCMI–III = Millon Clinical Multiaxial Inventory–III (Millon et al., 2009); PDQ–4 = Personality Diagnostic Questionnaire–4 (Bagby & Farvolden, 2004); MMPI–2 = Minnesota Multiphasic Personality Inventory–II (Morey et al., 1985); SNAP = Schedule for Nonadaptive and Adaptive Personality (Simms & Clark, 2006); OMNI–IV = OMNI Personality Inventory–IV (Loranger, 2001).

$^{***}p < .001$.

scales that emphasize vulnerable narcissism to a greater extent does the FFNI. The FFNI, however, does include subscales that can be used for the assessment of a vulnerable narcissism; more specifically, FFNI Shame, Need for Admiration, Reactive Anger, and Cynicism/Distrust, whereas the rest can be understood as measures of grandiose narcissism.

Table 5 provides the correlations of the FFNI Grandiose and Vulnerable subscales with the PNI–52 Grandiose and Vulnerable subscales, as well as with the total PNI–52 score and with the other measures of narcissism. It is evident from this table that FFNI Vulnerable correlated substantially with PNI–52 Vulnerable, as well as with the PNI–52 and HSNS total scores (but not with *DSM–IV* NPD scales). FFNI Grandiose did not correlate substantially with PNI–52 Grandiose (FFNI Grandiose did correlate well with PNI–52 subscale of Exploitative [.54] but not with either PNI–52 Grandiose Fantasies [.13] or Self-Sacrificing Self-Enhancement [–.02]). On the other hand, FFNI Grandiose did obtain strong convergent validity with the NPI, an established measure of grandiose narcissism (Cain et al., 2008), as well as with the MCMI–III, MMPI–2, OMNI–IV, and SNAP assessments of grandiose narcissism.

Table 5 also provides the correlations of the PNI–52 Grandiose and Vulnerable with the other measures of narcissism. It is evident from Table 5 that the findings for FFNI Vulnerable paralleled closely the findings for PNI–52 Vulnerable. However, the findings for PNI–52 Grandiose were relatively weaker than for FFNI Grandiose. For example, PNI–52 Grandiose correlated as highly with the HSNS as it did with the NPI, and its correlations with other measures of grandiose narcissism (e.g., MMPI–2 and MCMI–III) were relatively weak.

Finally, Table 5 also provides the correlations of the three subscales of the NPI developed by Ackerman et al. (2011) with the other measures of narcissism. The FFNI grandiose dimension was positively correlated with all three NPI subscales, whereas the FFNI vulnerable dimension was positively correlated with only the Entitlement/Exploitativeness subscale of the NPI.

Incremental Validity Over the NEO PI–R Facet Scales

Table 6 provides incremental validity analyses for the ability of each one of the FFNI subscales to account for variance within the NPI and the PNI–52 over and above the variance accounted for by its corresponding NEO PI–R facet scale. For the NPI, there was no expectation that FFNI Shame, Cynicism-Distrust, or Need for Admiration would obtain incremental validity in accounting for variance within the NPI, as the latter is a measure of grandiose narcissism. This expectation was confirmed.

TABLE 5.—Convergent and discriminant validity of the FFNI, PNI–52, and NPI component scales.

Other Measures	FFNI Component Scales		PNI–52 Component Scales		NPI Component Scales		
	Grandiose	Vulnerable	Grandiose	Vulnerable	Lead/ Auth	Grand/ Exh	Ent/ Exploit
FFNI							
Grandiose	—	.06	.30***	.06	.60***	.60***	.60***
Vulnerable	.06	—	.36***	.74***	−.09	.08	.28***
PNI–52							
Grandiose	.30	.36***	—	.39***	.33***	.26***	.34***
Vulnerable	.06	.74***	.39***	—	−.12	.11	.30***
HSNS	.19	.65***	.38***	.64***	−.01	.15	.30***
NPI	.74***	.05	.40***	.07	—	—	—
MCMI–III	.67***	.08	.27***	−.10	.56***	.49***	.48***
PDQ–4	.60***	.37***	.27***	.36***	.30***	.42***	.47***
MMPI–2	.55***	−.25***	.20***	−.25***	.62***	.48***	.32***
SNAP	.66***	.43***	.34***	.44***	.32***	.49***	.45***
OMNI–IV	.70***	.29***	.37***	.34***	.41***	.60***	.54***

Note. FFNI = Five-Factor Narcissism Inventory; PNI–52 = Pathological Narcissism Inventory (Pincus et al., 2009); NPI = Narcissistic Personality Inventory (Raskin & Terry, 1988); Lead/Auth = Leadership/Authority; Grand/Exh = Grandiose/Exhibitionism; Ent/Exploit = Entitlement/Exploitativeness; HSNS = Hypersensitive Narcissism Scale (Hendin & Cheek, 1997); MCMI–III = Millon Clinical Multiaxial Inventory–III (Millon et al., 2009); PDQ–4 = Personality Diagnostic Questionnaire–4 (Bagby & Farvolden, 2004); MMPI–2 = Minnesota Multiphasic Personality Inventory–2 (Morey et al., 1985); SNAP = Schedule for Nonadaptive & Adaptive Personality (Simms & Clark, 2006); OMNI–IV = OMNI Personality Inventory–IV (Loranger, 2001). FFNI Grandiose = Indifference, Exhibitionism, Authoritativeness, Thrill-Seeking, Grandiose Fantasies, Manipulativeness, Exploitativeness, Entitlement, Arrogance, Lack of Empathy, and Acclaim-Seeking. FFNI Vulnerable = Reactive Anger, Shame, Need for Admiration, and Distrust. PNI-52 Grandiose = Exploitative + Grandiose Fantasy + Self-Sacrificing Self-Enhancement; PNI–52 Vulnerable = Contingent Self-Esteem + Hiding the Self + Devaluing + Entitlement Rage.

$^{***}p < .001$.

TABLE 6.—Incremental validity of the total FFNI score over corresponding NEO PI–R facets.

	FFNI Subscales																											
	Reactive Anger (N2)		Shame (N4)		Ind. (N4)		Need for Admiration (N6)		Exh. (E2)		Auth. (E3)		Thrill-Seeking (E5)		Grandiose Fantasies (O1)		Cynicism Distrust (A1)		Manip. (A2)		Exploit. (A3)		Entitle. (A3)		Arrogance (A5)		Lack of Empathy (A6)		Acclaim-Seeking (C4)	
Predictor	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2
Criterion: NPI																														
Step 1	.05**		.05**		.05**		.03		.02		.20**		.06**		.00		.02		.15**		.06**		.06**		.28**		.02		.01	
NEO[a]																	.00													
Step 2	.06**		.01		.01		.01		.30**		.03		.06**		.29**			.01	.13**		.11**		.11**		.06**		.05**		.21**	
NEO		.00		.02		.03		.01		.04**						.01		.00		.00		.00		.00		.04**		.00		.04**
FFNI[b]		.06**		.01		.01		.01		.30**		.03		.06**		.29**	.02			.13**		.11**		.11**		.06**		.05**		.21**
Total R^2	.11**		.06		.06		.03		.32**		.22**		.12**		.29**				.28**		.17**		.16**		.34**		.07**		.23**	
Criterion: PNI–52																														
Step 1	.14**		.13**		.13**		.08**		.02		.02		.02		.00		.08**		.03		.09**		.01		.02*		.00		.00	
NEO[a]																														
Step 2	.11**		.07**		.04**		.21**		.03		.00		.01		.08**		.15**		.06**		.09**		.11**		.05**		.01		.01	
NEO		.01		.02		.06**		.00		.03		.02		.01		.02		.01		.01		.01		.01		.01		.01		.01
FFNI[b]		.11**		.07**		.04**		.21**		.05		.03		.01		.30**		.15**		.06**		.09**		.11**		.06**		.00		.01
Total R^2	.25**		.21**		.17**		.29**		.05		.04**		.02		.08**		.23**		.09**		.10**		.12**		.07**		.01		.01	

Note. FFNI = Five-Factor Narcissism Inventory; NEO = NEO Revised Personality Inventory (Costa & McCrae, 1992).
[a]Corresponding NEO PI–R facet for each FFNI subscale was entered in Step 1 for individual analyses. [b]FFNI subscale.
**$p < .01$.

Incremental validity was obtained in accounting for variance by FFNI scales that concern grandiose narcissism, with the one exception of FFNI Indifference. For the PNI–52, which includes scales to assess both grandiose and vulnerable narcissism, the FFNI subscales obtained significant incremental validity in all cases except Authoritativeness, Thrill-Seeking, Lack of Empathy, and Acclaim-Seeking, all of which concern aspects of grandiose narcissism. These results again parallel the relative emphasis given to a vulnerable narcissism in the PNI–52.

Table 6 also provides the semipartial correlations squared when both measures are included. It is evident from these values that the respective NEO PI–R facet scale provides a unique proportion of variance in only 4 of the 30 cases, and in three of these four cases the respective FFNI subscale accounted for relatively more unique variance. For example, NEO PI–R Gregariousness accounted for 4% unique variance when both NEO PI–R Gregariousness and FFNI Exhibitionism are related to the NPI (and would likely then have some incremental validity over FFNI Exhibitionism). However, FFNI Exhibitionism accounted for considerably more unique variance in the NPI (i.e., 30%).

Incremental Validity Over Narcissism Measures

Table 7 provides incremental validity analyses for the ability of the total sum of the FFNI to account for variance within the NPI and the PNI–52, over and above the variance already accounted for by each of the other narcissism scales. The FFNI obtained incremental validity in accounting for variance within the NPI over and above all of the other individual narcissism scales, including the more grandiose measures, such as the MCMI–III (15%) and MMPI–2 (22%). The FFNI also obtained incremental validity in accounting for variance within the PNI–52 over and above most of the other narcissism scales, including the HSNS. The FFNI total score did not obtain incremental validity over the SNAP Narcissism scale in accounting for variance within the PNI–52.

Table 7 also provides the semipartial correlations squared when both measures are included. It is evident from these values that the respective narcissism scale provided a unique proportion of variance in only two of seven instances when the criterion measure was the NPI, whereas the FFNI accounted for unique variance in all seven cases. When the PNI–52 was the criterion measure, a respective narcissism measure accounted for unique variance in only three cases, whereas the FFNI did in six cases. The HSNS and the SNAP, however, did account for more unique variance than the FFNI in accounting for variance within the PNI–52.

DISCUSSION

The purpose of this study was to provide initial convergent, discriminant, and incremental validity findings for an assessment of narcissistic personality traits created from the perspective of the FFM. The FFNI was derived from the theory that narcissism (in its various forms), like other personality disorders, can be understood as comprising maladaptive variants of the FFM (Clark, 2007; Widiger & Trull, 2007). The FFNI includes 15 subscales to assess elements of narcissism that are coordinated with respective facets of the FFM identified through surveys of researchers and clinicians (Lynam & Widiger, 2001; Samuel & Widiger, 2004) and empirical research (Samuel & Widiger, 2008a), as well as more recent research concerning

vulnerable or pathological narcissism (Cain et al., 2008; Miller et al., 2010; Pincus et al., 2009).

The FFNI subscales obtained good to excellent internal consistency and discriminant validity with respect to their relationship with other NEO PI–R facet scales. Each FFNI subscale also correlated significantly with its respective facet scale from the NEO PI–R (Costa & McCrae, 1992), with one exception. FFNI Grandiose Fantasies did not obtain a significant correlation with NEO PI–R openness to fantasy, its respective NEO PI–R facet scale. It also correlated significantly with NEO PI–R modesty, as well as the FFNI scales from the domain of antagonism (e.g., FFNI Arrogance and Entitlement). This might reflect a rejection of the hypothesis that a maladaptive variant of openness to fantasy could include grandiose fantasies (Samuel & Widiger, 2004; Widiger et al., 2002). Narcissistic grandiose fantasies involves a preoccupation with fantasies of unlimited success and power (American Psychiatric Association, 2000), whereas openness to fantasy refers to one's receptivity for the inner world of imagination (Costa & McCrae, 1992). The two constructs are not totally unrelated conceptually, as they both pertain to imaginative faculties and dispositions; however, they are perhaps different enough such that the former should not be conceptualized as a maladaptive variant of the latter. Grandiose fantasies should perhaps be conceptualized more accurately as a maladaptive variant of low FFM modesty (i.e., as another expression of narcissistic arrogance).

The FFNI subscales did not correlate uniformly with one another, inconsistent with the hypothesis that NPD is a homogeneous construct, but consistent with the view that NPD is heterogeneous constellation of maladaptive personality traits (Widiger & Trull, 2007). These findings do question, though, whether it is likely that persons would obtain elevations on all FFNI subscales. It has been hypothesized that there are persons who demonstrate both grandiose and vulnerable narcissism (Pincus & Lukowitsky, 2010), but all studies of vulnerable and grandiose narcissism to date have simply demonstrated that these constructs obtain different correlates, including history of childhood abuse, difficult parenting, and attachment styles (Miller et al., 2010; Miller et al., 2011). No study has yet demonstrated that persons elevate on both scales, or vacillate between grandiose and vulnerable narcissism. The FFNI subscales, as well as the PNI–52, allow for a direct empirical test of this hypothesis in future studies.

The covariations among the FFNI subscales were generally consistent with the FFM conceptualization of narcissism. For example, FFNI Indifference correlated negatively with FFM Shame, consistent with their being maladaptive variants of opposite poles of the FFM facet of self-consciousness. Similarly, FFNI subscales within antagonism, neuroticism, and extraversion tended to correlate with one another more so than they correlated with FFNI narcissism scales from the other respective domains, providing convergent validity for scales within a respective domain and discriminant validity among scales within different domains. There were some exceptions, however, such as FFNI Reactive Anger not correlating with Shame or Indifference, and correlating instead with FFNI scales from antagonism. These findings were consistent with cross-loadings that are often obtained with the NEO PI–R (Costa & McCrae, 1992). Future research should consider additional measures of the FFM, and further test the fidelity of the FFNI FFM structure.

The FFNI subscales are useful in serving as a bridge between the normal traits of the FFM and the abnormal traits of narcissism. An alternative view is that the FFNI simply consists of scales to assess narcissistic traits rather than assessing maladaptive variants of FFM facets. However, the items for each scale were written specifically to represent maladaptive variants of a respective FFM facet, consistent with the construction of comparable FFM measures similarly focused specifically on maladaptive variants of FFM facets (e.g., De Clercq et al., 2006; Lynam et al., 2011; Piedmont et al., 2009). The items were also selected in part on the basis of their correlations with the respective NEO PI–R facet scales. Finally, the convergent validity

TABLE 7.—Incremental validity of the total Five-Factor Narcissism Inventory score over established measures of narcissism/narcissistic personality disorder.

	Narcissism Measures															
	HSNS		PNI–52		NPI		MCMI–III		PDQ–IV		MMPI–2		SNAP		OMNI–IV	
Predictor	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2	ΔR^2	sr^2
Criterion: NPI																
Step 1	.02		.07**				.42**		.22**		.41**		.27**		.37**	
NAR																
Step 2	.48**		.41**				.15**		.25**		.22**		.21**		.12**	
NAR		.02		.00				.09**		.00		.15**		.00		.02
FFNI		.48**		.41**				.14**		.25**		.22**		.21**		.12**
Total R^2	.50**		.48**				.57**		.48**		.63**		.48**		.50**	
Criterion: PNI–52																
Step 1	.39**				.07**		.01		.17**		.00		.26**		.18**	
NAR																
Step 2	.04**				.13**		.23**		.05**		.26**		.01		.04**	
NAR		.24**				.00		.04**		.02		.06		.07**		.02
FFNI		.04**				.13**		.23**		.05**		.26**		.01		.04**
Total R^2	.43**				.20**		.24**		.22**		.26**		.27**		.22**	

Note. FFNI = Five-Factor Narcissism Inventory; HSNS = Hypersensitive Narcissim Scale (Hendin & Cheek, 1998); PNI–52 = Pathological Narcissism Inventory (Pincus et al., 2009); NPI = Narcissism Personality Inventory (Raskin & Terry, 1988); MCMI–III = Millon Clinical Multiaxial Inventory–III (Millon et al., 2009); PDQ–4 = Personality Diagnostic Questionnaire–4 (Bagby & Farvolden, 2004); MMPI–2 = Minnesota Multiphasic Personality Inventory–2 (Morey et al., 1985); SNAP = Schedule for Nonadaptive & Adaptive Personality (Simms & Clark, 2006); OMNI–IV = OMNI Personality Inventory–IV (Loranger, 2001); NAR = respective narcissism measure.

**$p < .01$.

coefficients with the NEO PI–R support the scales' interpretation as measures of maladaptive variants of FFM facets (median $r = .58$).

The development of a measure of narcissistic personality traits from the perspective of the FFM has a number of potential advantages. The scales will provide greater fidelity of an FFM measure for assessing maladaptive variants (Haigler & Widiger, 2001; Krueger et al., 2011; Reynolds & Clark, 2001). There are maladaptive variants of the FFM that are not currently well assessed by its more commonly used measures (Krueger et al., 2011). The FFNI provides such a measure specifically with respect to narcissistic personality traits. Consistent with this hypothesis, the FFNI subscales often obtained significant incremental validity in accounting for variance within either the PNI–52 or the NPI over and above the variance accounted for by its corresponding NEO PI–R facet scale.

There were instances in which an FFNI subscale failed to obtain incremental validity over a NEO PI–R facet scale or a measure of NPD. However, these exceptions were typically the result of the respective narcissism criterion scale being either a measure of a grandiose or a vulnerable narcissism. For example, FFNI Shame and Need for Admiration did not obtain incremental validity over their respective NEO PI–R facet scales in accounting for variance in the NPI because the latter is a measure of grandiose narcissism and lacks any representation of narcissistic shame or need for admiration (Pincus & Lukowitsky, 2010). Similarly, FFNI Acclaim-Seeking and Authoritativeness failed to obtain incremental validity over the NEO PI–R facet scales in accounting for variance within the PNI–52 largely because the latter does not include scales to assess the grandiose aspects of acclaim-seeking or authoritativeness.

The FFNI scales are typically assessing a narrower construct than the parent NEO PI–R facet scale. For example, FFNI Reactive Anger is a narrower construct than NEO PI–R Angry Hostility. To the extent that an NPD scale intentionally or inadvertently assesses angry hostility more generally, NEO PI–R Angry Hostility could have some incremental validity over FFNI Reactive Anger. However, this study found that this was actually quite infrequent. NEO PI–R facet scales accounted for unique variance in either the NPI or the PNI–52 in only 4 of 30 instances, and in three of these four cases the respective FFNI subscale accounted for relatively more unique variance.

This study did not address the question of whether the FFNI subscales assess a more maladaptive variant of a respective NEO PI–R facet scale. This will not necessarily always be the case. The NEO PI–R is assessing, for the most part, maladaptive traits when keyed in the direction of (for instance) neuroticism and antagonism (Haigler & Widiger, 2001). In such instances, it is possible that a respective FFNI scale is not assessing a more extreme variant of a respective facet but instead a more narcissistically specific variant. This hypothesis can be tested in future research using such methods as item response theory analysis. Previous studies have demonstrated that the personality trait scales of the SNAP (Simms & Clark, 2006), for instance, lie along the same latent traits as those assessed by the NEO PI–R (Costa & McCrae, 1992), the primary distinction being that the SNAP scales have relatively greater fidelity for the assessment of the extreme variants of FFM traits, whereas the NEO PI–R has relatively greater fidelity for the more normative variants (Samuel, Simms, Clark, Livesley, & Widiger, 2010; Stepp et al., in press). However, what is also apparent in this research is a considerable amount of overlap in the latent traits assessed by the NEO PI–R and SNAP.

Considering personality disorders, including NPD, from the perspective of the FFM is useful in the development of a more integrative understanding of normal and abnormal personality (Paulhus, 2001; Widiger & Trull, 2007). There is quite a substantial body of research on the construct validity of the FFM (McCrae & Costa, 2008; Widiger et al., this issue). This construct validity could be applied to an understanding of narcissistic personality traits, to the extent to which they are understood as maladaptive variants of facets of the FFM. The FFNI provides an explicit means with which researchers and clinicians can assess narcissistic traits from the perspective of the FFM.

In addition, by dismantling NPD into component parts of the FFM, one might be better able to recognize how the etiology, course, and correlates of this heterogeneous syndrome vary across different components (Brown, Budzek, & Tamborski, 2009). The FFNI could have a particular advantage in this regard over existing measures of NPD, such as the Coolidge Axis II Inventory (Coolidge, 1993), MCMI–III, OMNI–IV, PDQ–4, and Wisconsin Personality Disorders Inventory (Klein et al., 1993), in that the FFNI provides separate subscales to assess different variants of narcissistic traits. NPD is a heterogeneous construct (Ackerman et al., 2011; Cain et al., 2008; Miller & Campbell, 2008; Pincus & Lukowitsky, 2010; Raskin & Terry, 1988; Russ et al., 2008) and without separate subscales it will not be clear at times precisely why or how the disorder relates to some external validator or correlate (Strauss & Smith, 2009). The FFNI enables a researcher to disambiguate the construct into component parts to determine whether any particular finding reflects (for instance) the reactive anger, the arrogance, the exhibitionism, the acclaim-seeking, or the sense of entitlement, rather than just attributing the finding simply to the broad construct of narcissism.

One particular heterogeneity that has been receiving considerable attention is the distinction between grandiose and vulnerable narcissism (Cain et al., 2008; Miller et al., 2011; Pincus & Lukowitsky, 2010). Existing measures of NPD, and the NPI in particular, are confined largely to assessing narcissistic traits of grandiosity, neglecting the assessment of the more vulnerable traits of narcissism. Pincus et al. (2009) addressed this concern through the development of the PNI–52, which offers their understanding of what would constitute traits of both vulnerable and grandiose narcissism. The FFNI takes a similarly neutral stance, assessing both the vulnerable and grandiose components within the same instrument. FFNI Vulnerable correlated strongly with the PNI–52 and HSNS, and weakly with measures of grandiose narcissism such as the NPI, MCMI–III, and MMPI–2. These latter measures in turn correlated strongly with FFNI Grandiosity.

FFNI Grandiosity, however, did not correlate strongly with PNI–52 Grandiosity. It does appear to be the case that FFNI Grandiosity provides a different conceptualization (or assessment) of grandiosity than is provided by the PNI–52. For example, the FFNI does not have any scale that aligns conceptually with PNI–52 Self-Sacrificing Self Enhancement. PNI–52 Self-Sacrificing Self Enhancement concerns an outward self-presentation of empathy, concern for others, and sacrificing one's needs for others, but with the aim of increasing self-esteem as opposed to genuine feelings of empathy (Pincus et al., 2009).

The FFNI, in turn, includes some constructs not explicitly or strongly assessed by the PNI–52, such as authoritarianism, exhibitionism, and acclaim-seeking. It will be useful for future research to determine whether these alternative provisions of coverage represent a significant liability for either instrument.

This study did report a higher correlation of FFNI Grandiosity with other measures of grandiose narcissism than was obtained by the PNI–52. PNI–52 Grandiose correlated as highly with HSNS vulnerable narcissism as it did with the NPI, and incremental validity was obtained for the full set of FFNI scales over the PNI–52 total score in accounting for variance within the NPI. These findings are consistent with recent research questioning the adequacy of the PNI–52 assessment of grandiose narcissism (Miller et al., 2011; Miller, Price, & Campbell, 2012).

The FFNI subscales of Entitlement and Exploitativeness, as well as Reactive Anger, Grandiosity, Manipulativeness, Arrogance, and Lack of Empathy obtained good to excellent convergent validity with all six NPD scales, albeit with the one exception of Entitlement with the MMPI–2. The total FFNI score correlated substantially with the PDQ–4, OMNI–IV, and SNAP measures of NPD. The FFNI subscales of Acclaim-Seeking, Authoritativeness, and Exhibitionism failed to correlate consistently with the PDQ–4, SNAP, and OMNI–IV, albeit they did correlate well with both the MCMI–III and MMPI–2. The MCMI–III and MMPI–2 NPD scales also correlated more highly with each other than they did with the other NPD scales. These findings likely reflect that these two NPD scales are confined relatively heavily to the assessment of a grandiose, and perhaps even adaptive, narcissism (Miller & Campbell, 2008; Samuel & Widiger, 2008a). In any case, the FFNI total score did obtain significant incremental validity over each of the seven narcissism scales in accounting for variance within the NPI, and incremental validity over six of the seven narcissism scales in accounting for variance within the PNI–52. The HSNS and the SNAP, however, did account for more unique variance than the FFNI when the PNI–52 was the criterion measure, perhaps reflecting the fact that the FFNI total score is weighted relatively more heavily toward the assessment of grandiose narcissism (i.e., only 4 of the 15 FFNI subscales concern vulnerable narcissism).

Limitations

One limitation of this study was its confinement to self-report. The study did include the predominant measures of narcissism currently being used and researched, such as the NPI (Cain et al., 2008), the PNI–52 (Pincus et al., 2009), and the MCMI–III (Millon et al., 2009), all of which are confined to self-report inventories, however. Close friends, peers, and other informants can provide a considerable amount of useful information with respect to maladaptive personality functioning (Oltmanns & Turkheimer, 2009), perhaps particularly with respect to narcissism (Oltmanns & Carlson, in press), albeit there is some support for accurate self-description among persons with elevated levels of narcissism (Carlson, Vazire, & Oltmanns, 2011). It will be important for future research to explore the convergent validity of the FFNI and, perhaps particularly useful, its various subscales in comparison to (for instance) the convergence of self and informant versions of the respective NEO PI–R facets. There is currently no informant version of the FFNI, and it might be useful for future research to explore the possibility that an informant version might require significant item modification to be optimally suitable for an informant assessment of narcissism beyond simply converting to third-person format.

It would also be useful for future research to consider the relationship of the FFNI and its subscales to laboratory and real-life correlates or outcomes of narcissism, such as aggression, self-enhancement, distorted self-presentation, failed relationships, and cognitive biases (Miller & Campbell, 2008; Pincus & Lukowitsky, 2010). An advantage of the FFNI, relative to existing measures of *DSM–IV–TR* NPD, is that the subscales will be helpful in determining which particular component of narcissism best explains a particular finding that has been found to be associated with NPD. In addition, the considerable body of research literature concerning FFM might help to inform a particular controversy or issue with respect to the correlates of NPD.

An additional potential limitation of this study is that the data were collected within a student population. A sample more representative of narcissism as it is discussed within the theoretical literature might be obtained within corporate boardrooms, law offices, or entertainment professions. However, narcissism does appear to be a maladaptive personality trait that is effectively studied within undergraduate student populations. Many of these professions in which narcissistic persons are evident were preceded by an undergraduate education, indicating that many individuals who would be characterized as narcissistic would, at one time, have been within a college student population. A recent meta-analysis suggested a significant proportion of narcissism within the college student population (Twenge, Konrath, Foster, Campbell, & Bushman, 2008), and quite a bit of informative research on narcissism has been obtained within university studies (Miller & Campbell, 2008). Nonetheless, the measures administered in this study were generally clinical measures and their relevance is typically understood in reference to psychiatric populations. It would then be of interest to determine whether comparable findings would be obtained within outpatient clinical samples wherein persons with NPD are being treated for their narcissism.

In sum, FFNI appears to be a promising new assessment measure for assessing the specific symptoms and facets of narcissism in a manner that is explicitly related to a well-validated model of personality functioning. The FFNI might prove a helpful tool for parsing this heterogeneous construct into its constituent components to better understand the etiology, consequences, and treatment implications for narcissism.

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