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Convergence of Narcissism Measures From the Perspective of General Personality Functioning

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The construct of narcissism has a lengthy history and has been operationalized and measured by a variety of instruments. In this study, five narcissism scales were compared in terms of alternative conceptualizations of narcissism offered by C. C. Morf and F. Rhodewalt (2001), D. L. Paulhus (2001), and S. Vazire and D. C. Funder (2006), using the domains and facets of the five-factor model as a common point of comparison. The findings provided little support for the conceptualizations of Morf and Rhodewalt or Vazire and Funder. Support was obtained for the conceptualization of Paulhus, particularly as assessed by the Narcissistic Personality Inventory and, secondarily, the Millon Clinical Multiaxial Inventory–III. Implications for the assessment and conceptualization of narcissism are discussed.

Keywords: FFM; five-factor model; narcissism; narcissistic personality disorder; personality

Am I the lover or beloved? Since I am what I long for, then my riches are so great they make me poor.

Ovid, *Metamorphoses* (trans. 1958)

With its origins in the mythologies of Ancient Greece, the concept of narcissism is still an area of active research interest and intense clinical focus. Despite this long history, there are currently many different ways of conceptualizing narcissism and numerous theories as to how to best describe this complex construct. Perhaps then it is not surprising that Morf and Rhodewalt (2001) preceded their recent review by stating, “Narcissism is a complex and multidimensional personality and clinical construct that has generated considerable interest across the social sciences and in literature for many decades” (p. 193).

Although narcissism has traditionally been studied and assessed within the clinical domain (Ronningstam, 2005), the past few decades have seen an increasing interest from researchers within the fields of social and personality psychology (e.g., Morf & Rhodewalt, 2001; Paulhus, 2001;

Raskin & Terry, 1988). This increased interest from outside the clinical realm stems in large part from the hypothesis that the traits associated with narcissism exist on a continuum that ranges from mild, less impairing manifestations to the extreme, maladaptive forms that are seen within psychological clinics (Raskin & Hall, 1979). There have been numerous theories as to what are the most important aspects and facets of narcissism and many attempts to explain the seeming paradoxes that are inherent to narcissism (e.g., Morf & Rhodewalt, 2001; Paulhus, 2001; Vazire & Funder, 2006).

Narcissism has been portrayed by Morf and Rhodewalt (2001) as a “grandiose, yet vulnerable self-concept” (p. 177). Even that brief statement reveals the paradoxical nature of narcissism, such that it describes individuals who simultaneously entertain notions of their own grandeur while also seeking constant external affirmations of their self-concept. Narcissists have also been described by Paulhus (2001) as “disagreeable extraverts,” in reference to the two domains of the five-factor model

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of personality that he considered most relevant to the construct. Vazire and Funder (2006) have also argued that a high standing on the dispositional trait of impulsivity may provide a parsimonious explanation for much of the difficulties associated with narcissism. They suggested that impulsivity "has been overlooked as an important explanation for narcissists' behavior . . . and that researchers should consider impulsivity as a possible explanatory variable when interpreting narcissists' self-defeating behaviors" (Vazire & Funder, 2006, p. 163).

The American Psychiatric Association (APA) offers an official definition of narcissistic personality disorder (NPD) within the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.—text rev. [DSM-IV-TR]; APA, 2000). The current DSM-IV-TR definition includes "a pervasive pattern of grandiosity (in fantasy and behavior), need for admiration, and lack of empathy, beginning by early adulthood and present in a variety of contexts." This definition is further fleshed out by the inclusion of nine diagnostic criteria (e.g., "requires excessive admiration"), which are considered to be indicative of maladaptive narcissism.

Consistent with the many conceptualizations and descriptions of narcissism, the past 30 years have also seen a proliferation of measures and instruments designed to assess the construct. The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979; Raskin & Terry, 1988) was among the first self-report measures developed and was designed as a subclinical measure of the DSM-III (APA, 1980) description of NPD. It has since been used in many studies of narcissism, particularly within the general personality and social psychology literature. However, there also exist a number of other self-report measures of NPD that are routinely used within clinical practice and research (Hilsenroth, Handler, & Blais, 1996). These include NPD scales from the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), the Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, 1993), the Personality Diagnostic Questionnaire-4 (PDQ-4; Hyler, 1994), and the Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, Millon, & Davis, 1997).

Despite the existence of so many alternative measures, there is surprisingly little evidence in the way of convergent validity among these scales. Hilsenroth et al. (1996) conducted a review of the assessments of NPD and found only a handful of studies that reported convergent validity coefficients. Those that were reported were typically between the MMPI and either the MCMI-I or MCMI-II. These values ranged from .25 (Hills, 1995) to .78 (McCann, 1989). In addition, the authors reported only two correlations between the MCMI-I and the NPI (i.e.,

.66 and .75). Widiger and Coker (2002) subsequently conducted a review of the literature concerning the convergent correlations of all personality disorder measures and located several other applicable studies. There have been five studies reporting correlations between the MMPI and PDQ (three using the MMPI and PDQ-R as well as two between the MMPI-2 and the PDQ-4) and these values ranged from a low of $-.12$ (O'Maille & Fine, 1995) to a high of only .24 (Renneberg, Chambless, Dowdall, Fauerbach, & Gracely, 1992). Haigler and Widiger (2001) provided the only reported correlations involving the SNAP (.42 with the MMPI-2 and .67 with the PDQ-4). A search of the literature revealed no reported correlations of the MMPI-2 with the NPI, the MCMI-III with the PDQ-4, the SNAP with the MCMI-III, or the NPI with the PDQ-4.

Given the inconsistent convergent validity correlations that have been presented and the existence of so many alternative conceptualizations of narcissism within the literature (Morf & Rhodewalt, 2001; Paulhus, 2001; Vazire & Funder, 2006), it is possible that alternative instruments are operationalizing narcissism in unique and potentially distinctive ways. Thus, a more comprehensive assessment of the convergence (and potential divergence) among all of the aforementioned measures of narcissism would appear to be an informative and useful enterprise.

In addition, it would also be useful to evaluate the measures with respect to a common point of comparison. One potentially useful point of comparison is the five-factor model (FFM), which was developed to provide a reasonably comprehensive description of general personality structure that has been recommended as a basis for comparing and integrating seemingly diverse personality constructs (Ozer & Reise, 1994). Goldberg (1993) has even analogized the domains of the FFM to the coordinates of latitude and longitude that cartographers used to map the world. Reasonably consistent support has been obtained for the five broad bipolar domains of extraversion (vs. introversion), agreeableness (vs. antagonism), conscientiousness (vs. impulsivity), neuroticism (vs. emotional stability), and openness (vs. closedness to experience). Empirical support for the construct validity of the FFM is extensive. This support includes (a) convergent and discriminant validity across self, peer, and spouse ratings (Costa & McCrae, 1988); (b) temporal stability across 7 to 10 years (Costa, Herbst, McCrae, & Siegler, 2000); (c) cross-cultural replication (McCrae & Allik, 2002); (d) heritability (Jang, McCrae, Angleitner, Reimann, & Livesley, 1998; Plomin & Caspi, 1999); and (e) links to a wide variety of important life outcomes (Ozer & Benet-Martinez, 2006).

A number of studies have already used the FFM as a metric by which to compare personality disorder assessment

instruments (e.g., Trobst, Ayearst, & Salekin, 2004). For example, Zuroff (1994) compared two alternative measures of dependency with respect to their relationship to the FFM. Costa and McCrae (1990) also used the FFM as a point of comparison for different versions of the Millon Clinical Multiaxial Inventory (MCMI; Millon et al., 1997). Hicklin and Widiger (2005) administered three measures of psychopathy and three measures of antisocial personality disorder along with the NEO Personality Inventory–Revised (NEO PI-R; Costa & McCrae, 1992). The authors found that the differences among these measures with respect to their conceptualization of this personality as psychopathy (Hare, 2003) or antisocial personality disorder (APA, 2000) were meaningfully understood by using the domains and facets of the FFM. More relevant to the current study, Paulhus and Williams (2002) correlated the NPI (Raskin & Terry, 1988), the self-report psychopathy scale (SRP; Hare, 1985), and the Mach-IV inventory (Christie & Geis, 1970) with an FFM inventory (i.e., the Big Five Inventory; John, 1990). In this manner, Paulhus and Williams used the FFM as a lens through which to examine the similarities and differences among measures of these constructs.

The current study proposes that the FFM could similarly be used to compare different assessments of narcissism. Correlating the total score of each narcissism instrument with the facets of the NEO PI-R could produce an FFM profile that is relatively unique to each instrument and potentially informative with regard to its conceptualization of the construct. More specifically, it is predicted to the extent the narcissism scales are assessing the construct as conceptualized by Morf and Rhodewalt (2001) they will correlate with NEO PI-R self-consciousness, vulnerability, and modesty. In contrast, they are predicted to correlate with the domains of extraversion and antagonism to the extent that they are assessing the construct as conceptualized by Paulhus (2001). Finally, to the extent that they are assessing narcissism as described by Vazire and Funder (2006), correlations are expected with NEO PI-R facets that concern aspects of impulsivity; more specifically the neuroticism facet of impulsiveness, the conscientiousness facets of deliberation and self-discipline, and/or the extraversion facet of excitement seeking (Whiteside & Lynam, 2001).

A further advantage of using the FFM as assessed by the NEO PI-R as a common point of comparison is the ability to also compare the instruments with respect to their relative congruence with the FFM conceptualization of NPD. Samuel and Widiger (2004) asked a sample of practicing clinical psychologists to describe, on the basis of their clinical experience and training, a prototypic case of NPD in terms of the FFM. Twenty-two

clinicians provided ratings on a Likert-type scale ranging from 1 (*extremely low*) to 5 (*extremely high*) for each of the 30 FFM facets. These ratings were then averaged to produce a consensus FFM profile for a prototypic case of NPD. The clinicians described the prototypic narcissist as being particularly low (i.e., a mean rating <2.0) on all six facets of agreeableness and on the neuroticism facet of self-consciousness, and particularly high (i.e., a mean rating >4.0) on the extraversion facets of assertiveness, activity, and excitement seeking. This description of the prototypic narcissist is itself closest to the conceptualization of narcissism by Paulhus (2001) as it includes facets of both extraversion and antagonism (along with low rather than high self-consciousness, as suggested by Morf and Rhodewalt, 2001).

In sum, the current study seeks to compare and contrast the various instruments that assess narcissism through four related aims. First, the study will provide the first same-sample convergent data on five narcissism instruments. Second, these instruments will each be correlated with the domains and facets of the NEO PI-R to produce an instrument-specific FFM profile. Third, the instrument-specific profiles will be compared to alternative conceptualizations of narcissism. And, finally, these instrument-specific profiles will be compared to empirically derived FFM profiles for NPD to determine the degree to which each instrument corresponds to clinicians' expectations regarding maladaptive narcissism.

METHOD

The sample consisted of 150 undergraduate college students enrolled in introductory psychology at a large southeastern university. The participant pool is largely female (63%) and predominantly Caucasian (91%), with a mean age of approximately 19 years.

Procedure

All participants received research credits for their participation, provided written informed consent, and were assigned a randomized identification number to ensure confidentiality. In small groups (i.e., 20 to 25 individuals) participants were asked to complete a packet that included two complete self-report inventories (i.e., the NEO PI-R and the SNAP) as well as a number of scales, drawn from larger instruments, assessing the constructs of narcissism and narcissistic personality disorder. The order in which these measures were administered was randomized to prevent order effects.

Materials

NEO Personality Inventory-Revised (NEO PI-R). The NEO PI-R (Costa & McCrae, 1992) is a measure of the five-factor model of personality and contains 240 items that are rated on a Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). This instrument is composed of five broad domain scales that are each in turn assessed by six underlying facet scales.

Minnesota Multiphasic Personality Inventory-2 (MMPI-2). The MMPI-2 (Butcher et al., 1989) is a 567-item true/false self-report inventory that assesses 10 clinical as well as supplemental scales. Morey, Waugh, and Blashfield (1985) selected those items from the inventory that both rationally and empirically represented each *DSM-III* (APA, 1980) personality disorder. The resulting NPD scale contains 31 items and is often used in both clinical and forensic settings (Widiger & Coker, 2002).

Millon Clinical Multiaxial Inventory-III (MCMI-III). The MCMI-III (Millon et al., 1997) is a 175-item true/false self-report inventory developed in accordance with the *DSM-IV* that assesses 14 personality disorders as well as 10 other clinical syndromes. The MCMI-III is among the most frequently used personality disorder self-report inventories in clinical practice (Widiger & Coker, 2002). The NPD scale on the MCMI-III consists of 24 items.

Personality Diagnostic Questionnaire-4 (PDQ-4). The PDQ-4 (Hyler, 1994) is a 99-item true/false self-report inventory that assesses 12 personality disorders according to *DSM-IV* personality disorder criteria. The PDQ-4 is perhaps the most commonly used self-report measure of personality disorder within clinical research (Widiger & Coker, 2002). The NPD scale from the PDQ-4 has nine items, each of which corresponds to a diagnostic criterion for the disorder.

Narcissistic Personality Inventory (NPI). The NPI (Raskin & Hall, 1979; Raskin & Terry, 1988) consists of 40 statements that are rated on a 1 (*strongly disagree*) to 7 (*strongly agree*) Likert-type scale. This instrument was developed as a measure of subclinical levels of narcissism and has subsequently become "the most widespread measure used by non-clinical researchers" (Ames, Rose, & Anderson, 2006, p. 440). This instrument also assesses seven factor-analytically derived subscales: authority, self-sufficiency, superiority, exhibitionism, exploitativeness, vanity, and entitlement.

Schedule for Nonadaptive and Adaptive Personality (SNAP). The SNAP (Clark, 1993) is a 375-item true/false instrument that assesses a dimensional model of personality

TABLE 1
Descriptive Statistics for Narcissism/NPD Measures and Subscales

	M	SD	α	Avg. Corr. Item-Total r
MCMI-III	15.7	5.0	.53	.18
MMPI-2	18.7	4.1	.68	.21
NPI	161.3	30.7	.93	.48
Authority	36.4	8.8	.90	.68
Self-sufficiency	26.6	5.0	.62	.35
Superiority	21.5	4.9	.68	.44
Exhibitionism	23.8	7.6	.81	.55
Exploitativeness	19.1	5.1	.75	.51
Vanity	8.9	3.9	.82	.67
Entitlement	25.9	5.1	.60	.34
PDQ-4	1.4	1.4	.51	.23
SNAP	7.0	3.7	.71	.27

NOTE: Avg. Corr. Item-Total r is the average correlation of each individual item with all other items in the scale, excluding itself. MCMI-III = narcissistic personality disorder (NPD) scale from the Millon Clinical Multiaxial Inventory-3rd ed.; MMPI-2 = Morey et al. (1985) NPD scale from the Minnesota Multiphasic Personality Inventory-2nd ed.; SNAP = NPD scale from the Schedule of Nonadaptive and Adaptive Personality; PDQ-4 = NPD scale from the Personality Diagnostic Questionnaire-4; NPI = Narcissistic Personality Inventory.

disorder containing 3 broad temperament and 12 primary trait scales. In addition, the SNAP also contains scales measuring the 12 *DSM-IV* personality disorders. The NPD scale from the SNAP contains 22 items.

RESULTS

Table 1 provides the means and standard deviations as well as two measures of internal consistency for each of the narcissism scales included in this study. The descriptive statistics obtained for each of the five inventories match well with previously reported values. For instance, the mean score on the SNAP NPD scale was 7.0 ($SD = 3.7$) in the current sample, whereas the manual reports a mean of 9.0 ($SD = 4.0$) in a sample of female college students (Clark, 1993). The mean score on the MMPI-2 NPD scale was 18.7 ($SD = 4.1$) in the current sample, as compared to 15.1 ($SD = 5.0$) in the derivation sample (Morey et al., 1985).

Internal consistency was first calculated using Cronbach's alpha, and the values ranged from a low of .51 (PDQ-4) to a high of .93 (NPI). However, because the number of items on these measures varied significantly (e.g., 9 items on the PDQ-4 vs. 40 items on the NPI), averaged corrected item-total correlations were also calculated for each scale. These values were generally low, ranging from a low of .18 (MCMI-III) to a high of .48

TABLE 2
Correlations Among Narcissism Measures

	<i>MCMI-III</i>	<i>MMPI-2</i>	<i>SNAP</i>	<i>PDQ-4</i>	<i>NPI</i>
MCMI-III	–				
MMPI-2	0.64*	–			
SNAP	0.36*	0.44*	–		
PDQ-4	0.30*	0.31*	0.46*	–	
NPI	0.58*	0.62*	0.52*	0.29*	–

*All values are significant at $p < .01$ (one-tailed). MCMI-III = Narcissistic PD Scale from Millon Clinical Multiaxial Inventory - 3rd Edition; MMPI-2 = Morey et al. (1985) Narcissistic PD scale from the Minnesota Multiphasic Personality Inventory - 2nd edition; SNAP = Narcissistic PD scale from the Schedule of Nonadaptive and Adaptive Personality; PDQ-4 = Narcissistic PD scale from the Personality Diagnostic Questionnaire-IV; NPI = Narcissistic Personality Inventory.

(NPI), suggesting that the content of the items comprising these scales is somewhat heterogeneous.

Convergent Validity of Narcissism Measures

Table 2 provides the convergent validity correlations among the narcissism inventories. Although all the correlations were significant and positive, there was a substantial degree of variability in the values, which ranged from a high of .64 (MCMI-III to MMPI-2) to a low of .29 (PDQ-4 to NPI). A clear pattern of relations among these inventories is difficult to discern. The MCMI-III and the MMPI-2 were strongly related to one another ($r = .64$) but less strongly related to the SNAP and PDQ-4 (both were statistically significantly different at $p < .05$). The SNAP and PDQ-4 were in turn also somewhat strongly related to one another ($r = .46$). The NPI appeared to find a common ground with three of the four other inventories, achieving correlations larger than .50 with all scales except the PDQ-4.

Correlations With NPI Subscales

Table 3 provides the correlations of the four NPD scales and the five NEO PI-R domain scales with the seven subscales of the NPI. It appears from Table 3 that there is little differentiation among the four NPD scales with respect to their relationship with the seven components of narcissism assessed by the NPI. The only apparent difference is that PDQ-4 obtained correlations with NPI subscales of authority, self-sufficiency, and exhibitionism that were significantly lower than the other scales ($p < .05$). This finding may simply reflect the fact that the PDQ-4 NPD scale is much shorter than the other scales and consists of more behaviorally specific items that will then have a lower endorsement rate than the broader, more personological items of the SNAP, MMPI-2, and MCMI-III.

The consistently significant correlations of the MCMI-III, MMPI-2, and SNAP NPD scales with each of the seven NPI components of narcissism is positive news as it provides convergent validity support for their assessment of narcissistic personality traits. However, the NPD scales do not appear to be particularly well differentiated with respect to NPI components of narcissism.

Some differentiation does appear to occur with respect to the relationship of the NPI components of narcissism with the domain scales of the NEO PI-R (see Table 3). For example, NPI exploitativeness and entitlement correlate uniquely with antagonism. In contrast, vanity and exhibitionism are associated with extraversion (although NPI exhibitionism is also correlated with antagonism). Feelings of self-sufficiency and superiority are associated with low neuroticism (feelings of superiority also correlated with extraversion and $-.53$ with the modesty facet of agreeableness). NPI authority correlated with all three of these respective domains of the FFM (i.e., antagonism, extraversion, and low neuroticism).

Correlations With NEO PI-R Domains and Facets

Table 4 provides the correlations of the five narcissism inventories with the domains and facets of the NEO PI-R. It is evident from Table 4 that these values show quite a different pattern of correlations with the domains of the FFM across the measures of narcissism. For example, the SNAP and PDQ-4 correlated significantly with the NEO PI-R domain of agreeableness ($r = -.55$ and $-.38$, respectively) and, equally important, neither correlated with any other domain of the FFM, including neuroticism and extraversion. In stark contrast, the narcissistic PD scales from the MMPI-2 and the MCMI-III both correlated significantly with the NEO PI-R domains of extraversion ($r = .48$ and $.35$, respectively) and neuroticism ($r = -.40$ and $-.30$, respectively). Furthermore, the MMPI-2 NPD scale failed to correlate significantly with agreeableness. The MCMI-III NPD scale did correlate with antagonism ($r = .22$) but at a level that was significantly lower than was obtained with the SNAP, $t(147) = 4.2$; $p < .01$.

In sum, the MCMI-III and MMPI-2 operationalizations of narcissism are largely in terms of low neuroticism and high extraversion, with marginal representation (at the domain level) of antagonism, whereas the PDQ-4 and the SNAP, in contrast, are predominated by antagonism, with little to no extraversion or low neuroticism. The NPI total score fell somewhat in between these contrasting conceptualizations, obtaining significant correlations with the NEO PI-R domains of agreeableness ($r = .33$) and extraversion ($r = .28$).

TABLE 3
NPI Subscales' Correlations With Other NPD Measures and NEO PI-R Domains

	<i>NPI Total</i>	<i>Authority</i>	<i>Self-Sufficiency</i>	<i>Superiority</i>	<i>Exhibitionism</i>	<i>Exploitativeness</i>	<i>Vanity</i>	<i>Entitlement</i>
NPD measures								
MMPI-2	0.66*	0.63*	0.46*	0.45*	0.51*	0.44*	0.34*	0.51*
MCMII-III	0.58*	0.50*	0.40*	0.48*	0.47*	0.36*	0.35*	0.43*
SNAP	0.52*	0.42*	0.32*	0.38*	0.42*	0.42*	0.26*	0.49*
PDQ	0.30*	0.22*	0.08	0.26*	0.25*	0.24*	0.16	0.34*
NEO PI-R domains								
Neuroticism	-0.17	-0.23*	-0.22*	-0.20	-0.06	-0.03	-0.08	-0.03
Extraversion	0.28*	0.30	0.17	0.20	0.33*	0.14	0.22*	0.03
Openness	0.15	0.08	0.18	0.19	0.09	0.07	0.19	0.03
Agreeableness	-0.33*	-0.28*	-0.13	-0.12	-0.27*	-0.35*	-0.17	-0.35*
Conscientiousness	0.02	0.18	0.19	-0.01	-0.16	-0.09	-0.12	0.07

*All values are significant at $p < .01$ (two-tailed). MCMII-III = Narcissistic PD Scale from Millon Clinical Multiaxial Inventory - 3rd Edition; MMPI-2 = Morey et al. (1985) Narcissistic PD scale from the Minnesota Multiphasic Personality Inventory - 2nd edition; SNAP = Narcissistic PD scale from the Schedule of Nonadaptive and Adaptive Personality; PDQ-4 = Narcissistic PD scale from the Personality Diagnostic Questionnaire-IV; NPI = Narcissistic Personality Inventory.

TABLE 4
Self-Report NEO PI-R Correlations With Narcissism Scales

	<i>MCMII-III</i>	<i>MMPI-2</i>	<i>NPI</i>	<i>PDQ</i>	<i>SNAP</i>	<i>Clinicians' FFM Profile</i>
Neuroticism	-0.30*	-0.40*	-0.17	0.13	0.11	2.89
Extraversion	0.35*	0.48*	0.28*	-0.15	-0.05	3.63
Openness	0.16	0.17	0.15	0.01	0.04	3.16
Agreeableness	-0.22*	-0.12	-0.33*	-0.38*	-0.55*	1.71*
Conscientiousness	-0.01	0.12	0.02	-0.02	-0.10	2.73
(n1) Anxiousness	-0.29*	-0.40*	-0.25*	0.04	-0.10	2.71
(n2) Angry hostility	0.02	-0.14	0.05	0.27*	0.32*	3.90
(n3) Depressiveness	-0.31*	-0.34*	-0.10	0.10	0.14	2.75
(n4) Self-consciousness	-0.40*	-0.41*	-0.27*	0.02	-0.03	1.67*
(n5) Impulsiveness	-0.06	-0.13	-0.02	0.07	0.12	3.57
(n6) Vulnerability	-0.27*	-0.33*	-0.16	0.08	0.02	2.76
(e1) Warmth	0.17	0.25*	0.15	-0.26	-0.14	2.05
(e2) Gregariousness	0.34*	0.37*	0.21	-0.19	-0.09	3.95
(e3) Assertiveness	0.36*	0.48*	0.36*	0.06	0.14	4.00*
(e4) Activity	0.25*	0.43*	0.24*	-0.04	0.05	4.14*
(e5) Excitement seeking	0.27*	0.34*	0.22*	-0.09	0.00	4.10*
(e6) Positive emotions	0.19	0.30*	0.13	-0.13	-0.14	3.52
(o1) Fantasy	0.05	0.01	0.01	-0.03	-0.02	3.82
(o2) Aesthetics	0.19	0.20	0.21	0.11	0.19	3.32
(o3) Feelings	-0.01	0.08	0.00	-0.10	-0.12	2.68
(o4) Actions	0.30*	0.20	0.16	0.01	-0.01	3.36
(o5) Ideas	0.11	0.20	0.18	0.06	0.08	3.09
(o6) Values	0.07	0.05	0.05	-0.05	-0.03	2.68
(a1) Trust	0.09	0.08	-0.09	-0.29	-0.39	1.86*
(a2) Straightforwardness	-0.27*	-0.21	-0.37*	-0.36	-0.54	1.91*
(a3) Altruism	-0.05	0.05	-0.06	-0.27	-0.24	1.73*
(a4) Compliance	-0.20	-0.08	-0.17	-0.17	-0.36	1.77*
(a5) Modesty	-0.47*	-0.35*	-0.51*	-0.34	-0.43	1.23*
(a6) Tendermindedness	-0.09	-0.06	-0.22*	-0.14	-0.32	1.77*
(c1) Competence	0.12	0.22*	0.11	0.00	0.00	3.00
(c2) Order	0.00	0.01	0.02	0.12	-0.04	3.00

(continued)

TABLE 4 (continued)

	<i>MCMI-III</i>	<i>MMPI-2</i>	<i>NPI</i>	<i>PDQ</i>	<i>SNAP</i>	<i>Clinicians' FFM Profile</i>
(c3) Dutifulness	-0.09	0.08	-0.03	-0.14	-0.16	2.50
(c4) Achievement striving	0.06	0.15	0.12	-0.01	-0.04	3.18
(c5) Self-discipline	-0.01	0.17	-0.01	-0.02	-0.11	2.23
(c6) Deliberation	-0.11	-0.04	-0.08	-0.09	-0.14	2.45
<i>r</i> with clinicians' profile	.70*	.55*	.77*	.57*	.73*	

*All correlations are significant at $p < .01$ (two-tailed); r with Clinicians' Profile = Pearson correlation of the instrument-specific FFM profile with the consensus profile generated by Samuel and Widiger (2004); Within Clinicians' FFM Profile, those values marked in bold indicate facets that are characteristic of narcissism. MCMI-III = Narcissistic PD Scale from Millon Clinical Multiaxial Inventory - 3rd Edition; MMPI-2 = Morey et al. (1985) Narcissistic PD scale from the Minnesota Multiphasic Personality Inventory - 2nd edition; SNAP = Narcissistic PD scale from the Schedule of Nonadaptive and Adaptive Personality; PDQ-4 = Narcissistic PD scale from the Personality Diagnostic Questionnaire-IV; NPI = Narcissistic Personality Inventory.

A more fine-grained level of analysis is afforded by correlating the five narcissism measures with the 30 facet scales of the NEO PI-R. Here it is evident how immersed, for example, the SNAP is with antagonism, correlating with all six facets. The facet-level analysis also reveals that the PDQ-4 and the SNAP NPD scales did correlate with one facet of neuroticism, but it was the facet that is conceptually and empirically closely related to antagonism: angry hostility. In contrast, this was one facet of neuroticism with which the MCMI-III, MMPI-2, and NPI scales did not correlate. The facet-level analysis did indicate that the MCMI-III scale correlated with two facets of antagonism; specifically, low straightforwardness (deceitfulness, manipulation) and low modesty (arrogance, conceit). Although the MMPI-2 scale failed to correlate with straightforwardness, it also correlated with low modesty. However, it is apparent that SNAP and PDQ-4 scales are significantly more invested with the antagonism and angry hostility components of narcissism than are the MMPI-2 and MCMI-III.

The facet-level analysis further revealed the relatively unique features of the MCMI-III and MMPI-2 scales. Both involve low anxiousness, low depressiveness, low self-consciousness, and low feelings of vulnerability, and both correlated with at least four of the facets of extraversion (the MCMI-III failed to correlate significantly with warmth and positive emotions). Surprisingly, none of these findings were replicated with the PDQ-4 or SNAP NPD scales. In fact, the PDQ-4 obtained a marginal but significant correlation with warmth that was in a direction opposite to those obtained with the MCMI-III and the MMPI-2. The PDQ-4 correlation with warmth was significantly different using dependent-samples t test from the correlation for both the MCMI-III ($t[147] = 4.7$; $p < .01$) and the MMPI-2 ($t[147] = 5.8$; $p < .01$). In sum, it appears that the MCMI-III and MMPI-2 NPD scales

heavily emphasize extraversion; this is not the case for the SNAP or PDQ-4.

Table 4 also contains the correlation of each instrument's FFM profile with the clinicians' consensus FFM profile generated by Samuel and Widiger (2004). The NPI profile obtained the largest correlation at $r = .77$, followed closely by the SNAP ($r = .73$) and the MCMI-III ($r = .70$). The PDQ-4 and the MMPI-2 correlated only .57 and .55, respectively.

DISCUSSION

The measures of narcissism included within this study certainly provide supporting evidence for the complexity of the construct. First, the internal consistency of these scales was marginal, suggesting that the items are tapping a variety of underlying traits. The MCMI-III, MMPI-2, PDQ-4, and SNAP all had alpha statistics that were less than optimal for scales assessing a single underlying trait (i.e., ranging from .51 to .71). Although the NPI obtained an acceptable value for Cronbach's alpha, this value was facilitated, in part, by the much larger number of items that comprise the measure. The average corrected item-total correlation for the NPI was only .48. The values for the other four measures were even worse, ranging from .18 to .27. These results suggest that the items included within each of these scales are not assessing a single underlying latent trait, consistent with the intention of the current study to deconstruct the alternative measures in terms of the domains and facets of the FFM.

The level of internal consistency placed a limit on the extent to which the scales could obtain good to strong convergent validity values. In general, the convergent validity coefficients obtained in the current study were

similar to those reported in past examinations of narcissism measures (Hilsenroth et al., 1996; Widiger & Coker, 2002). However, it should also be pointed out that many of the correlations reported in Table 2 have not been previously reported and thus there is limited room for comparison. In any case, the convergent validity coefficients were lower than would be expected if they were all assessing precisely the same construct. The one instrument that appeared to evidence the most robust convergence was the NPI, which correlated above .50 with all of the other measures except with the PDQ-4 ($r = .29$).

The NPI also achieved the highest correlation with the clinicians' FFM profile of prototypic narcissism. Comparably high convergence was also obtained with the SNAP and MCMI-III. Considering their somewhat discrepant FFM profiles and rather low convergent correlation with one another (i.e., $r = .36$), it might seem surprising that both the MCMI-III and SNAP would obtain similar correlations with the narcissism profile generated by Samuel and Widiger (2004). However, looking more closely, it appears they achieve these correlations for almost entirely different reasons. The MCMI-III appears to match closely with the consensus profile in terms of its correlation with the extraversion facets of gregariousness, assertiveness, activity, and excitement seeking as well as a negative relationship with the neuroticism facet of self-consciousness. However, the MCMI-III does not match well in terms of agreeableness, correlating negatively with only two of the six facets that were indicated as characteristic of narcissism by the clinicians. Conversely, the SNAP obtained significant, negative correlations with all six of these agreeableness facets but failed to correlate with any facet of extraversion.

In contrast, the strength of the NPI in capturing the pattern of relationships within the consensus profile appears to be due to the fact that it assesses elements of both extraversion and low agreeableness. The NPI obtains a pattern of correlations with agreeableness that is similar to the SNAP; albeit to a lesser degree, correlating with only three of the six facets. In addition, the NPI taps the facets of extraversion in a manner similar to the MCMI-III, correlating with three facets as well. Thus, it appears that although the SNAP profile may match more closely in terms of agreeableness and the MCMI-III more closely in terms of extraversion, the NPI provides a common ground that matches most closely across the entire consensus profile. In sum, it is evident from the current study that the measures of NPD operationalize the construct of narcissism in quite different ways.

Convergence With Alternative Conceptualizations of Narcissism

Morf and Rhodewalt (2001) conceptualize narcissism as a set of intra- and interpersonal processes that serve to continually construct a grandiose yet vulnerable self-image. It is evident that all five narcissism measures share a conceptualization that includes grandiosity as a core component, in that they all show significant negative correlations with the modesty facet of the NEO PI-R. In fact, modesty was the only NEO PI-R scale that correlated significantly with all five of the narcissism scales that were studied. However, Morf and Rhodewalt also view high feelings of vulnerability as a central component of narcissism, yet none of the five measures of narcissism included in this study correlated positively with vulnerability. In this respect, none of the measures appear to assess narcissism as conceptualized by Morf and Rhodewalt (2001). In fact, one of the more distinguishing features of the MCMI-III and MMPI-2, relative to the SNAP and PDQ-4, was their substantial negative correlations with neuroticism, including even the facets of self-consciousness, vulnerability, anxiousness, and depressiveness. This suggests that the operationalizations of narcissism offered by these instruments are simply not reflecting the inherent vulnerability emphasized so much by Morf and Rhodewalt (2001) and others (e.g., Ronningstam, 2005). On the contrary, a distinctive feature of the MCMI-III and MMPI-2 is their significant negative correlations with vulnerability and self-consciousness.

In contrast to the suggestion of Vazire and Funder (2006), the current study did not provide support for a strong link between narcissism and impulsivity as assessed by the NEO PI-R facets. NEO PI-R excitement seeking did correlate with the MCMI-III, the MMPI-2, and marginally with the NPI. However, none of the instruments achieved a significant correlation with the neuroticism facet of impulsiveness or the conscientiousness facets of self-discipline and deliberation. The lack of a relationship between impulsivity and narcissism in the current study may be somewhat surprising considering that their proposal was based in part on a meta-analysis of previously published research. However, these results should be considered in light of two important points. First, the NEO PI-R was included as a measure of impulsivity in only one (unpublished) data set analyzed by Vazire and Funder. Surprisingly, perhaps, there have as yet been no published studies correlating the NEO PI-R to the NPI. Ramaniah, Detwiler, and Byravan (1994) did administer both instruments, but correlations between the measures were not reported. Bradlee and Emmons (1992)

administered the NPI along with the NEO PI, a previous version of the NEO PI-R that did not include facet scales for the domains of conscientiousness. Second, although Vazire and Funder did conduct a very thorough search of the social and personality literatures relating these two constructs, they purposefully excluded any and all studies that included the word *disorder*. In doing so, they eliminated all possible findings relating the NPD scales from the MCMI-III, MMPI-2, PDQ-4, and SNAP. In any case, given the results of the current study, it appears that impulsivity does not play an important role in the assessment of narcissism provided by the MCMI-III, MMPI-2, PDQ-4, and SNAP, as well as the NPI.

The results of the current study do support Paulhus's (2001) conceptualization of narcissists as "disagreeable extraverts," particularly as assessed by the NPI and secondarily the MCMI-III. However, it is evident that neither the PDQ-4 nor the SNAP includes much of any extraversion within their assessment of narcissism. This stands in stark contrast to the assessments by the MCMI-III and MMPI-2, which prominently feature extraversion but much less so antagonism. All of the narcissism measures do include at least some degree of antagonism (notably the facet of low modesty), but the PDQ-4 and SNAP appear to be more highly saturated with and confined largely to antagonism than the other measures.

Using comparable FFM terminology, one might say that narcissists according to the PDQ-4 and the SNAP are "angry antagonists" rather than disagreeable extraverts, whereas from the perspective of the MMPI-2 they might be referred to as "self-assured and immodest extraverts." Nevertheless, considering the fact that the NPI and MCMI-III also correlated significantly with the neuroticism facets of self-consciousness and anxiousness, Paulhus's view could be seen as oversimplified or at least incomplete.

Limitations and Future Directions

It is important to acknowledge several potential limitations of the current study that might serve to limit the generalizability of the results. First, this study was conducted using self-report methodology, exclusively. Self-report is the predominant method of assessment in narcissism research, and the measures included in this study are commonly used as self-report measures of narcissism (Widiger & Coker, 2002). However, personality disorders are characterized in part by distortions in self-image, and informant or peer assessments of personality disorder are not highly convergent with self-reports (Klonsky, Oltmanns, & Turkheimer, 2002). Oltmanns and Turkheimer (2006), for example, indicated that there is

considerable agreement among peers within a particular social circle who among them would be characterized as narcissistic but little agreement with the person identified as being narcissistic. The persons identified by their peers as being narcissistic described themselves instead as being outgoing, gregarious, and likeable. Similarly, in one of the earliest FFM studies of personality disorder, Costa and McCrae (1990) reported that narcissism correlated negatively with neuroticism when the latter was assessed by self-reports but not when it was assessed by reports from a peer or a spouse. It should be noted though that no positive correlation with neuroticism was obtained by the peer or spouse assessments of narcissism, a finding that is still contrary to Morf and Rhodewalt's (2001) conceptualization. Nevertheless, it would be useful to replicate and extend the findings of the current study to peer, informant assessments of narcissism.

A second potential limitation is the failure to include all possible measures of narcissism. The fact that none of the measures confirmed the conceptualization of narcissism by Morf and Rhodewalt (2006) could say more about the limitations of the existing measures than the validity of their model. In fact, Pimentel, Pincus, and Cain (2006) have recently developed the Vulnerable Narcissism Scale (VNS; Pimentel, Ansell, Pincus, & Cain, 2006) precisely to provide a measure of narcissism that emphasizes feelings of insecurity, self-consciousness, and vulnerability. One would expect that the model of Morf and Rhodewalt would be confirmed with the VNS, obtaining results in direct contrast with the MCMI-III and the MMPI-2 assessments of narcissism. However, no data on the VNS have as yet been published within the literature, and it would be useful for future research to extend the current study to include the VNS.

Finally, it should be acknowledged that the data were collected within an undergraduate student population. A sample more representative of narcissism as discussed within the theoretical literature might be obtained within corporate boardrooms, law offices, or entertainment professions (e.g., acting). However, narcissism might still be a maladaptive personality trait that is effectively studied within undergraduate student populations. Many of these professions 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. Nonetheless, the measures administered in the current 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.

CONCLUSIONS

The current study examined five measures of narcissism by building on past research that has used the five-factor model of personality as a common point of comparison (Goldberg, 1993; Ozer & Reise, 1994). The current study in fact identified quite substantial differences among commonly used measures of narcissism with respect to their inclusion of traits of neuroticism, extraversion, and antagonism. The results of the current study also suggested that the NPI (and secondarily the MCMI-III) appears to assess narcissism in a manner that is most consistent with clinicians' conceptualizations of this personality disorder. Finally, the results also indicated that none of the measures assessed narcissism in a manner that was consistent with the conceptualization of Morf and Rhodewalt (2001) as a vulnerable grandiosity. The measures, particularly the NPI and the MCMI-III, are more consistent with Paulhus's (2001) conceptualization of narcissism as disagreeable extraversion, although this conceptualization of narcissism should perhaps be modified to include traits of low anxiousness and low self-consciousness as well.

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