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Development and Validation of the Narcissistic Vulnerability Scale: An Adjective Rating Scale

Michael L. Crowe,
University of Georgia

Elizabeth A. Edershile,
University of Pittsburgh

Aidan G.C. Wright,
University of Pittsburgh

W. Keith Campbell,
University of Georgia

Donald R. Lynam, and
Purdue University

Joshua D. Miller
University of Georgia

Abstract

There is an ongoing debate regarding the nature of narcissism such that some argue that narcissistic individuals oscillate between grandiose and vulnerable states, whereas others argue these dimensions are stable traits (e.g., grandiose individuals remain in grandiose states). Scales sensitive to fluctuations in narcissistic states are necessary to address this question. The current study (N = 1,613 across three samples) validates the newly developed Narcissistic Vulnerability Scale (NVS), a brief (11-item) adjective-based measure of vulnerable narcissism. Expert ratings were used for item selection. The NVS's factor structure was evaluated along with its correlations with measures of grandiose and vulnerable narcissism, five-factor model traits, and self-esteem. A subset of NVS items were also evaluated using an EMA design. Results indicate the NVS is a unidimensional measure of vulnerable narcissism that could be used in either trait-oriented or state-oriented analyses, the latter of which may be particularly well-suited to answering the most pressing questions in the study of narcissism.

Keywords

narcissism; grandiose; vulnerable; scale development; adjective rating form

Correspondence concerning this article should be addressed to Michael L. Crowe crowem@uga.edu or Joshua D. Miller jdmiller@uga.edu.

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Although long discussed in the clinical literatures (e.g., Cain, Pincus, & Ansell, 2008), empirical research distinguishing between narcissistic grandiosity and vulnerability has burgeoned in the last 10-15 years with the growing recognition of their divergent nomological networks (e.g., Miller et al., 2011). The two constructs share a common core of interpersonal antagonism and entitled attitudes, but diverge in their relationship with agentic traits (e.g., extraversion) and negative emotionality (Miller et al., 2017). Narcissistic grandiosity is characterized by traits of immodesty, entitlement, exploitativeness, vanity, dominance, and exhibitionism. Conversely, narcissistic vulnerability is characterized by self-absorption, entitlement, distrust of others, and pervasive negative emotionality.

There is continuing debate about these constructs, with some arguing that pathologically narcissistic individuals oscillate between grandiosity and vulnerability (Pincus & Lukowitsky, 2010) and others arguing that they are largely independent dimensions that do not necessarily co-occur in the same individual (Miller, Lynam, Hyatt, & Campbell, 2017). In general, narcissistic grandiosity is reasonably stable over a range of time-scales (Carlson & Gjerde, 2009; Wright et al., 2015; Wright & Simms, 2016). Giacomin and Jordan (2016) used a daily diary approach to examine the stability of narcissism; while some within person variability was found, the majority of variance was explained by between person variability. Although some studies have examined the oscillation hypothesis indirectly (e.g., Gore & Widiger, 2016; Hyatt et al., in press), few direct tests of this hypothesis have been reported. One difficulty impeding progress is the absence of state-based measures of narcissism that are appropriate for use in ecological momentary assessments (EMA), which are particularly well-suited to answer these sorts of questions. That is, most extant measures of narcissism, including the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), Pathological Narcissism Inventory (PNI; Pincus et al., 2009), and Five-Factor Narcissism Inventory (FFNI; Glover et al., 2012), are aimed at capturing relatively stable, trait-based descriptions and not designed to capture states of grandiosity and vulnerability (e.g., Giacomin & Jordan, 2016). Consider, for example, an item from the FFNI: “Leadership comes easy for me.” Responses to such an item are unlikely to fluctuate over time. Alternatively, consider an item from the Narcissistic Grandiosity Scale (NGS; Rosenthal, Hooley, & Steshenko, 2007) that asks participants to rate the extent to which they feel “authoritative” at a point in time. Clearly, the NGS can capture more transient experiences making adjective ratings such as these better suited for repeated state-oriented assessments. While the NGS can assess state and trait grandiosity, no such measure of narcissistic vulnerability exists.

The aim of the current study is to create such a measure that could serve as an efficient state and trait measure of narcissistic vulnerability. In the current study, we first generate a list of 24-items believed to be relevant to narcissistic vulnerability (See Appendix 1 for a description of how this initial pool of items was developed). These adjectives are then rated by 17 experts in this topic. Expert ratings of each item are then used to develop an adjective-based measure of narcissistic vulnerability for validation with existing measures of narcissism, self-esteem, and personality. We expect that the NVS would correlate more strongly with exiting measure of narcissistic vulnerability but less so with measures of grandiosity and demonstrate expected relations with important criteria such as lower self-esteem, neuroticism, and disagreeableness.

Methods

Expert Sample Participants and procedure

Participants included 17[1] experts in the who were identified through a literature review and contacted by email. Each expert evaluated a list of 24 adjectives (see *Measures*). The 17 sets of ratings were evaluated for internal consistency; two of the raters provided responses that were negatively associated with the total ratings (i.e., they both had a negative loading on the first principal component of the ratings). These two experts were dropped from the analyses yielding a total of 15 raters.

Sample 1 Participants and procedure

Sample 1 (S1) consisted of 755 participants recruited through Amazon's Mechanical Turk (MTurk) who were required to be 18 years of age or older, live in the US, and have a "HIT" Approval Rate of 95% or greater. They were reimbursed $.25 for their participation. MTurk participants were excluded for invalid responding (see *Validity Scales*; $N = 59$) and for failing to respond to 25% or more of the items ($N = 46$). The final sample of participants consisted of 654 individuals (67% female; 81% white; $M_{age} = 37.06$, $SD = 12.51$). Institutional Review Board (IRB) approval was obtained for this study.

Sample 2 - Participants and procedure

Sample 2 (S2) consisted of 707 participants recruited through MTurk using the same criteria as S1. They were paid $2.00 for their participation. Participants were excluded for invalid responding (see *Validity Scales*, $N = 86$), for invariant response patterns ($N = 4$), and for excessively quick responding ($N = 26$)[2]. The final sample consisted of 591 individuals (62% female; 79% white; $M_{age} = 37$, $SD = 11.74$). IRB approval was obtained for this study.

Sample 3 – Participants and procedure

Sample 3 (S3) consisted of 836 participants recruited through the University of Pittsburgh psychology subject pool, with the only requirement that they be 18 years of age or older. Participants completed a battery of self-report measures for research credit and were given the opportunity to enroll in a weeklong EMA study that included a once daily survey each morning, as well as six surveys spaced throughout the day on a blocked random schedule. Participants had 30 minutes to complete each survey. The random surveys had a branching logic, such that if the participants reported an interpersonal interaction since the last survey they answered questions related to that interaction, and if they had no interaction, they answered questions about their current situation. Only the "current situation" surveys contained the NVS questions; all participants who completed at least one current situation survey were retained for analyses. The final person-level sample consisted of 368 individuals (56% female; 81% white; $M_{age} = 18.76$, $SD = 1.39$). IRB approval was obtained for this study.

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[1]Of the 17 experts who provided ratings, 16 gave approval to be acknowledged: Mitja Back; Keith Campbell; Jonathan Cheek; Brittany Gentile; Chris Hopwood; Zlatan Krizan; Joanna Lamkin; Mark Lukowitsky; Donald R. Lynam; Jessica Maples-Keller; Aaron Pincus; Michael Roche; Michelle Schoenleber; Tom Widiger; Aidan Wright; Virgil Zeigler-Hill.

[2]Participants were removed if it took them 20 minutes or less to complete the series of questionnaires. Given a total item count of 616 items (not including informed consent), a 20-minute completion time would indicate roughly one item every two seconds.

Participation was incentivized with the opportunity to earn one of several rewards (e.g., $75 gift card); chances of receiving a reward was tied to participation. On average, participants completed 10.26 current situation surveys, for a total observation-level sample of 3774.

Measures.[3]

Five-Factor Narcissism Inventory (FFNI)*: The FFNI (Glover, Miller, Lynam, Crego, & Widiger, 2012; Sherman et al., 2015) is a self-report inventory assessing 15 traits related to grandiose and vulnerable narcissism. The short form (FFNI-SF; 60-items) was administered to all 3 samples. The FFNI-SF can be used to assess three empirically-derived factors (Miller et al., 2016): Antagonism (FFNI-A; S1 α = .92; S2 α = .92; S3 α = .92), Extraversion (FFNI-E; S1 α = .89; S2 α = .90; S3 α = .85), Neuroticism (FFNI-N; S1 α = .88; S2 α =.88; S3 α = .90) or grandiose (FFNI-G; S1 α = .93; S2 α = .94; S3 α = .92) and vulnerable narcissism (FFNI-V; S1 α = .87; S2 α = .85; S3 α = .86) composites.

Hypersensitive Narcissism Scale (HSNS)*: The HSNS (Hendin & Cheek, 1997) is a 10-item measure of narcissistic vulnerability, hypersensitivity, and entitlement. It was administered to S1 (α = .79) and S2 (α = .77).

IPIP NEO-PI-R – 120 item (IPIP NEO-120): The IPIP NEO-120 (Maples, Guan, Carter, & Miller, 2014) is a 120-item measure of the International Personality Item Pool – NEO PI-R administered to S2 only. The scale includes five domains, each with 6 facets; alphas for the domains ranged from .83 to .94.

Mini-IPIP: The Mini-IPIP (Donnellan, Oswald, Baird, & Lucas, 2006) is a 20-item short form of the 50-item International Personality Item Pool – Five-Factor Model Measure. It was administered to S1 only. Alphas ranged from .74 to .83.

Narcissistic Admiration and Rivalry Questionnaire* (NARQ): The NARQ (Back et al., 2013) is an 18-item measure that was created to assess the dimensions of Admiration (S2 α = .84; S3 α = .80) and Rivalry (S2 α = .80; S3 α = .83).

Narcissistic Grandiosity Scale – 16 item* (NGS): The NGS (Crowe, Carter, Campbell, & Miller, 2016; Rosenthal, Hooley, & Steshenko, 2007) is a unidimensional adjective-based measure of narcissistic grandiosity. It was administered to S2 only (α = .93).

Narcissistic Personality Inventory (NPI)*: The NPI (Raskin & Terry, 1988) is a forced-choice measure of narcissistic grandiosity. S1 (α = .77) was administered an abbreviated (13-item; Gentile et al., 2013) version of the forced-choice measure, while S2 (α = .94) was administered the full 40-item version in Likert format, and S3 was administered a 25-item Likert version. Subscales identified by Ackerman et al. (2011) were also used: Leadership/Authority (NPI LA; S1 α = .70; S2 α = .90; S3 α = .78), Grandiose Exhibitionism (NPI GE; S1 α = .70; S2 α = .82; S3 α = .80), Entitlement/Exploitativeness (NPI EE; S1 α = .57; S2 α = .68; S3 α = .59).

[3]All scales marked with an asterisk (*) were combined into a single randomized pool of items that was administered to Sample 2. All items instructed participants to rate their agreement on a scale of 1 (*strongly disagree)* to 5 (*strongly agree*).

Pathological Narcissism Inventory (PNI)*: The PNI (Pincus et al., 2009) is a self-report measure of traits related to grandiose and vulnerable narcissism. A 52-item and 28-item version has been developed. The Brief-PNI (BPNI; Schoenleber, Roche, Wetzel, Pincus, & Roberts, 2015) was administered to Samples 1 and 3. The PNI was administered to S2. (B)PNI vulnerable narcissism alphas were α =.90, α = .94, and α = .89 for Samples 1, 2, and 3 respectively. Grandiose narcissism alphas were α = .83, α = .88, and α = .79 for Samples 1, 2, and 3 respectively.

Personality Diagnostic Questionnaire-4 NPD Scale* (PDQ-4+ NPD): The PDQ-4+ (Hyler, 1994) is a 99-item self-report measure of DSM-IV personality disorders. In the current study, we use only the 9 items needed for the Narcissistic Personality Disorder Scale. The PDQ-4+ NPD was administered to S2 only (α = .78)

Rosenberg Self-esteem Scale (RSES)*: The RSES (Rosenberg, 1965) is a 10-item global measure of self-esteem. It was administered to Samples 1 (α = .92) and 2 (α = .92).

Validity scales: Two validity scales from the Elemental Psychopathy Assessment (Lynam et al., 2011) were used, the *Infrequency Scale* and the *Too Good to be True Scale*. Participants were removed from the analyses if they received a score of four or more on the Infrequency Scale or a score of three or more on the Too Good to Be True Scale.

Vulnerable Narcissism Item Pool (NVS item pool): A list of 24 adjectives were identified by the authors (See Supplemental Table 1 for all scale items and expert ratings). The items were completed in S1 (α = .95) and S2 (α = .96). The 24 adjectives were also provided to the sample of narcissism experts who rated each item for how characteristic it was of the way that a vulnerably narcissistic individual would describe him/herself on a scale of 1 (*not characteristic*) to 5 (*very characteristic*). Experts were also asked to list the 12 adjectives that were most characteristic. In S3, due to the need for briefer scales in EMA surveys, a subset of six NVS items were given (see Supplemental Table 1 for items used in EMA); these were administered using a 100-point sliding scale with *Not at all* and *Extremely* anchoring the slider bar.

Results

Expert Ratings and Item Selection

The full list of 24 adjectives and their expert ratings appear in Supplemental Table 1. Inter-rater reliability of the 15 raters was assessed using a two-way random effects, absolute agreement, average-measures ICC (McGraw & Wong, 1996). The ICC was excellent, ICC = .82, indicating a high degree of agreement among experts on the items most characteristic of narcissistic vulnerability (e.g., Hallgren, 2012). Ratings of each item were averaged across raters to identify a single mean score. The 12 items identified as most characteristic served as the initial Narcissistic Vulnerability Scale (NVS) to be analyzed in the MTurk samples.[4] Responses to the 12 NVS items were correlated to identify item overlap. Inter-item correlations identified one item pair with a correlation greater than .70, self-centered and self-absorbed (S1: r = .74; S2: r = .70). Of these, self-absorbed was selected for continued inclusion as it appeared more often in our experts' top 12 adjectives. The

remaining 11 items were selected and evaluated for factor structure, convergent, discriminant, and criterion validity (See Appendix 2 for a final version of the scale and example trait-oriented and state-oriented instructions).

Factor Structure

Dimensionality of the dispositional NVS (i.e., 11 item measure collected in Samples 1 and 2) was evaluated through multiple methods. In S1 and S2 a principal axis factoring method was used. Parallel analyses were conducted and eigenvalues were examined (see supplemental materials; Horn, 1965). The parallel analysis in both samples identified a one-factor structure. Velicer's minimum average partial (MAP; Velicer, 1976) reached a minimum with one factor in both samples. Taken together, these analyses provide strong support for a one-factor structure with strong internal consistency (αs = .90 and .91).

Multilevel EFA in Mplus Version 8 (Muthén & Muthén, 1998-2017) was used to evaluate structure in S3 because the data have a multilevel structure, with NVS responses nested within participants. Total variance in each NVS item is thus a function of within- and between-person portions. An intraclass correlation (ICC = $\sigma^2_{BETWEEN}/\sigma^2_{BETWEEN} + \sigma^2_{WITHIN}$) can be used to evaluate proportion of between-person variance in each item. ICCs for individual items ranged from .43 (Ignored) to .55 (Insecure), suggesting that approximately half of each item's variance was between-person variance. Consistent with the dispositional NVS, a single-factor model was supported at both the within- and between-person levels of analysis. The first and second eigenvalues were 3.15 and .73 at the within-person and 4.85 and .42 at the between-person levels of analysis. Model fit was good for a single factor model (RMSEA = .043; CFI = .95; $SRMR_{within}$ = .034; $SRMR_{between}$ = .039). Within-person (α = .82) and between-person (α = .95) internal consistencies were adequate to strong. Over half the variance in momentary NVS scores was attributable to between-person differences (ICC = .60).

Scale Validation

The NVS was correlated with common measures of grandiose and vulnerable narcissism (see Table 1)[5]. It manifested good convergent validity with positive correlations with all measures of narcissistic vulnerability including the FFNI-V (S1 r = .72; S2 r = .71; S3 r = .42), (B)PNI-V (S1 r = .65; S2 r = .61; S3 r = .44), and the HSNS (S1 r = .63; S2 r = .60). The NVS also manifested good discriminant validity in that it exhibited relatively small associations with common measures of narcissistic grandiosity. For instance, in S1, associations ranged from −.05 (NPI G/E) to .30 (PNI-G). Criterion validity of the NVS was examined in relation to traits from the FFM, self-esteem, symptoms of narcissistic personality disorder, as well as components of narcissism from measures such as the FFNI and NARQ. As expected, the NVS demonstrated a negative association with Agreeableness (S1 FFNI-A r = .39, S2 FFNI-A r = .27; S1 Agreeableness r = −.23, S2 Agreeableness r = −.30) and positive association with Neuroticism (S1 FFNI-N r = .57, S2 FFNI-N r = .54; S1

[4]We wanted to limit the scale to only the most representative items while also including enough items to effectively capture the construct. Selecting the top 50% of items seemed appropriate for these goals. It is also noteworthy that the 12 selected items were the only 12 items that had at least 50% of the expert reviewers include them in their list of the most representative items.

[5]For Sample 3, the random intercept of the momentarily assessed NVS was correlated with the validity scales in Tables 1 and 2.

Neuroticism $r = .63$, S2 Neuroticism $r = .77$). The NVS also manifested negative correlations with self-esteem (S1 $r = -.68$; S2 $r = -.67$), Extraversion (S1 $r = -.24$; S2 $r = -.42$), and Conscientiousness (S1 $r = -.43$; S2 $r = -.52$). The NVS demonstrated a null association with FFNI-E, a factor characteristic of grandiose but not vulnerable narcissism. In S2, a strong correlation was found with narcissistic rivalry (NARQ-Rivalry $r = .39$) as well as moderate associations with DSM-IV NPD ($r = .28$).

Double-entry ICCs indicated that the NVS had a correlational profile consistent with the HSNS (S1 $r_{ICC} = .96$; S2 $r_{ICC} = .86$) and (B)PNI-V (S1 $r_{ICC} = .95$; S2 $r_{ICC} = .81$). In S1, all three measures of vulnerable narcissism had congruent associations with the FFNI-N, and the NVS and HSNS were no different in their association with Mini-IPIP Neuroticism. In S2, the NVS was again comparable to the HSNS in its association with the FFNI-N, but it was unique in the strength of its association with IPIP NEO PI-R Neuroticism. When correlated with antagonism, the NVS had a consistently smaller association with the FFNI-A, and in S2 it had the weakest association with Agreeableness. Given this smaller association, it is no surprise that the NVS evinced a weaker relation with NPD and NARQ subscales. The NVS also had a uniquely strong negative association with self-esteem.

Discussion

In order to answer key questions regarding the nature of narcissism and potential oscillations between grandiosity and vulnerability, new and efficient measures of narcissistic vulnerability must be developed to complement the existing measure of grandiosity (e.g., NGS) that are suitable for use in both trait- and state-based assessments. The goal of the current study was to create a measure that could be both an efficient trait-based and state based measure of narcissistic vulnerability; the latter use being particularly important as it can be used in EMA methodologies that are most appropriate for examining dynamic change. Expert ratings were used to select adjective-based items, which were then evaluated across three samples using both a cross-sectional approach and an EMA state-oriented design. Findings were broadly consistent across all three samples. Factor analyses revealed that the NVS is an internally consistent, unidimensional measure at both the between- and within-person levels. The NVS revealed minimal associations with common measures of narcissistic grandiosity and substantial correlations with measures of narcissistic vulnerability. The scale's strongest associations with measures of narcissistic grandiosity were with the (B)PNI-G and NPI E/E. Such associations are consistent with previous findings indicating that the PNI-G and NPI E/E have stronger associations with emotional vulnerability relative to others measures of narcissistic grandiosity (Miller et al., 2014). While the NVS had strong positive associations with other measures of narcissistic vulnerability in all three samples, the strength of the associations was somewhat smaller for the EMA-based NVS. This divergence might be explained by the cross-method nature of the associations and the smaller item set selected.

The NVS manifested expected and meaningful relations with the criterion variables including substantial correlations with Neuroticism (+), Antagonism (+), and self-esteem (-). When quantified, the NVS's correlational profile was strongly consistent with those generated by validated measures of narcissistic vulnerability (i.e., HSNS; (B)PNI). The

divergences that did occur suggest that the NVS may emphasize low self-esteem more than the HSNS and (B)PNI-V and place less emphasis on interpersonal antagonism. While this study has many strengths including the use of multiple samples and administration techniques (i.e., trait-oriented and state-oriented approaches), there are limitations that warrant mention. All samples relied entirely on self-report and thus some correlations between the NVS and criterion variables may be inflated. Future studies would benefit from the collection of informant reports as well as self-reports. It will also be important for future research using the NVS to collect information on additional personality and affective pathologies. Previous research has established substantial overlap between vulnerable narcissism traits and such pathologies (Miller et al., 2017), but the NVS's association with such domains is currently unclear.

Overall, the NVS appears to be a valid and efficient measure of vulnerable narcissism that can be administered in state and trait forms. Like other measures of vulnerable narcissism, it is substantially associated with neuroticism, low self-esteem, and antagonism. The NVS could be effectively used within a trait-oriented narcissism assessment battery to supplement other measures of grandiose and vulnerable narcissism. Among other measures of vulnerable narcissism, the scale is unique due to its brevity and adjective-based item content that makes it well-suited for the methodological designs (e.g., EMA) most appropriate to answer important questions in the study of narcissism.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Public Significance Statement

A short adjective-based measure of vulnerable narcissism was developed. Its results are consistent with popular measures of trait vulnerable narcissism, but is suitable for measuring more temporary vulnerable narcissism states. It is the first validated measure of vulnerable narcissism well-suited for measuring short-term fluctuations in vulnerable narcissism.

Table 1

NVS in Relation to Measures of Narcissism and Narcissistic Personality Disorder

NVS and Vulnerable Narcissism				NVS and Grandiose Narcissism				NVS and Other Narcissism Measures			
	Sample 1 (*N* = 654)	**Sample 2 (*N* = 591)**	**Sample 3 (*N* = 368)**		**Sample 1 (*N* = 654)**	**Sample 2 (*N* = 591)**	**Sample 3 (*N* = 368)**		**Sample 1 (*N* = 654)**	**Sample 2 (*N* = 591)**	**Sample 3 (*N* = 368)**
HSNS	.63*	.60*	–	NPI L/A	.00	−.13*	.12	FFNI–A	.39*	.27*	.20*
FFNI-V	.72*	.71*	.42*	NPI G/E	−.05	−.01	.15*	FFNI–E	−.03	−.02	.11
(B)PNI-V	.65*	.61*	.44*	NPI E/E	.27*	.13*	.23*	FFNI–N	.57*	.54*	.30*
				FFNI–G	.10	.02	.16*	PDQ–N		.28*	
				(B)PNI–G	.30*	.23*	.20*	NARQ–R		.39*	.31*
				GNS	–	.05	–	NARQ–A		−.11	.06
				NGS	–	−.11*	–				

Note. BPNI = Brief PNI (G = Grandiose, V = Vulnerable), FFNI = Five Factor Narcissism Inventory (V = Vulnerable; G = Grandiose; A = Antagonism; E = Extraversion; N = Neuroticism), HSNS = Hypersensitive Narcissism Scale, NPI = Narcissistic Personality Inventory (L/A = Leadership/Authority, G/E = Grandiose Exhibitionism, E/E = Entitlement/Exploitativeness), PNI = Pathological Narcissism Inventory (G = Grandiose, V = Vulnerable), NGS = Narcissistic Grandiosity Scale, PDQ-N = Personality Diagnostic Questionnaire-4 Narcissism Scale. The Brief PNI was used in Samples 1 and 3.

*$p < .01$

Table 2

NVS, Self-esteem, and IPIP NEO-PI-R

	NVS		HSNS		(B)PNI-V	
	S1	**S2**	**S1**	**S2**	**S1**	**S2**
Self-esteem	−.68[1]	−.67[a]	−.47[2]	−.47[b]	−.50[2]	−.54[c]
Neuroticism	.63[1]	.77[a]	.60[1]	.61[b]	.52[2]	.61[b]
Extraversion	−.24[1]	−.42[a]	−.21[1]	−.30[b]	−.11[2]	−.16[c]
Openness	−.11	0.1	−.16	.02	−.13	.03
Agreeableness	−.23[1]	−.30[a]	−.35[2]	−.45[b]	−.22[1]	−.37[c]
Conscientiousness	−.43[1]	−0.52	−.27[2]	−.45	−.33[2]	−.41

Note. BPNI-V = Brief Pathological Narcissism Inventory Vulnerable Scale. HSNS = Hypersensitive Narcissism Scale. NVS = Narcissistic Vulnerability Scale. PNI-V = Pathological Narcissism Inventory Vulnerable Scale. S1 = Sample 1. S2 = Sample 2. Correlations with different superscripts are different from each other at ($p < .01$). Sample 1 correlation differences are indicated by numeric superscripts. Sample 2 differences are indicated by letters. In Sample 1, all $|r| > .10$ are significant at $p < .01$. In Sample 2, all $|r| > .11$ are significant at $p < .01$.