Brief Report

Comparing self-report measures of grandiose narcissism, vulnerable narcissism, and narcissistic personality disorder in a male offender sample

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Abstract

Despite a growing interest in the use of self-report measures of narcissism among student, community and clinical samples, the research on narcissism in prison samples is sparse, despite elevated rates of narcissism in these samples. The current study examined the relations between commonly used measures of grandiose narcissism (Narcissistic Personality Inventory-13; NPI-13), vulnerable narcissism (Hypersensitive Narcissism Scale; HSNS) and narcissistic personality disorder (NPD) (Personality Diagnostic Questionnaire; PDQ) in a sample of adult male offenders ($N = 179$). The NPI-13 and PDQ NPD scales overlapped substantially with one another and manifested similar empirical profiles ($r_{ICC} = .81$) with both being substantially correlated with interview-based symptoms of NPD, entitlement, psychopathy, and externalizing behaviors. Conversely, the HSNS manifested more limited relations with other measures of NPD and related traits (e.g., entitlement), as well as externalizing behaviors and was more strongly related to internalizing symptoms. Consistent with previous work, NPD appears to be a blend of grandiose and vulnerable narcissism as the PDQ's empirical profile overlapped with that of the HSNS ($r_{ICC} = .51$), which was not true for the NPI-13 ($r_{ICC} = .18$). Analyses of the incremental validity of the three measures suggested that the NPI-13 was particularly successful in accounting for unique variance in these relevant criteria. These results underscore the benefit of utilizing multiple measures to distinguish empirical correlates of grandiose narcissism, vulnerable narcissism and NPD.

Keywords: Narcissism, grandiose, vulnerable, narcissistic personality disorder, adult male offenders

Public Significance Statement: This study examines the relations between measures of narcissistic grandiosity, vulnerability and narcissistic personality disorder (NPD) in a sample of male offenders. Results highlight the utility of examining measures of grandiose narcissism, vulnerable narcissism and NPD simultaneously to understand where they converge and diverge in relation to relevant constructs such as psychopathy, antisocial behavior, and internalizing symptoms of psychopathology.

Comparing self-report measures of grandiose narcissism, vulnerable narcissism, and narcissistic personality disorder in a male offender sample

Researchers and clinicians have long debated the conceptualization and measurement of pathological narcissism. Specifically, a major debate surrounds the varying conceptualizations of narcissism across social-personality and clinical disciplines (e.g., Miller & Campbell, 2008). Social-personality studies conceptualize narcissism as a dimensional construct that exists along a continuum, whereas clinical studies often focus on more categorical based notions and emphasize emotional and ego-based vulnerability (Pincus & Lukowitsky, 2010). Research to date suggests that DSM-5 NPD is a blend of both grandiose and vulnerable narcissism with a stronger emphasis on the former than the latter in theory, although empirical relations differ depending on the scales used (e.g., Miller et al., 2014).

Central to the debate in this area is the validity of the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), which is one of the most commonly used self-report measures of narcissism, particularly in the social-personality literature. Critics of the NPI have argued that it assesses only ‘normal’ or adaptive forms of narcissism rather than pathological narcissism, even at a subthreshold level (Pincus & Lukowitsky, 2010). Others have countered that the NPI measures narcissism in a manner that is consistent with how expert raters conceptualize narcissism and NPD and point to supportive data from studies that use an empirical approach to quantify construct validation (e.g., Miller, Lynam, & Campbell, 2016; Miller et al., 2014). For instance, while NPI scores show positive relations with adaptive traits such as self-esteem and psychological resilience (e.g., Sedikides, Rudich, Gregg, Kumashiro & Rusbult, 2004), they are also related to traits reflecting antagonism (e.g., Miller et al., 2011) hostility, poor interpersonal functioning (Campbell, Foster, & Finkel, 2002) and aggression.

Self-report assessments of NPD are difficult to characterize in terms of whether they align more with grandiose or vulnerable dimensions of narcissism. For instance, Miller et al. (2016) found that the NPD scale from the Personality Diagnostic Questionnaire (PDQ-4; Hyler, 1994) generated an empirical profile that was reasonably well-matched to expert-generated profiles for DSM-5 conceptualizations of NPD. However, similar work has suggested that the scale may capture vulnerable narcissism to a greater degree than grandiose narcissism (Hopwood et al., 2013; Miller et al., 2014). Contrary to the debates about the assessment of grandiose narcissism and NPD, there is relatively little debate about how to assess vulnerable narcissism as all measures appear to work equally well (Miller et al., 2014). Given its brevity, one commonly used measure is the Hypersensitive Narcissism Scale (HSNS; Hendin & Cheek, 1997), which demonstrates good validity (Miller et al., 2014).

Considering the numerous debates surrounding the best practices of conceptualizing and measuring narcissism along with the realization that these different dimensions or types of narcissism yield different empirical profiles (e.g., Miller et al., 2011), an increasing number of studies have included multiple measures of narcissism/NPD so as to be able to more effectively comment on narcissism's nomological network. Much of this work to date has studied these differences in undergraduate (e.g., Pincus et al., 2009), online community (e.g., Miller, Gentile, Wilson, & Campbell, 2013), or clinical samples (e.g., Ogrodniczuk, Piper, Joyce, Steinberg, & Duggal, 2009). Surprisingly, little work has been conducted in offender samples (e.g., Hepper et al., 2014) despite the fact that narcissism is generally related to externalizing difficulties such as aggression and antisocial behavior (Miller & Campbell, 2010) and is thought to be a "near neighbor" of antisocial personality disorder (PD) and psychopathy (Harpur, Hare, & Hakstian, 1989). Research does suggest that individuals with a criminal history report more NPD

symptoms (Blickle, Schlegel, Fassbender, & Klein, 2006) and violent offenders diagnosed with antisocial PD and NPD have more extensive histories of crime (Blackburn, & Coid, 1999). These findings suggest that narcissism is an important factor in criminal behavior and underscore the importance of further validating narcissism measures in prison samples (Miller, Lynam, Hyatt, & Campbell, 2017).

The present study compares the empirical correlates – including interview-based ratings of NPD, psychopathy scores, externalizing behaviors, and internalizing symptoms – of three commonly used measures of narcissism, a shortened version of the NPI that assesses grandiose narcissism (NPI-13; Gentile et al., 2013), the HSNS as a measure of vulnerable narcissism, and the PDQ NPD as a measure of DSM-5 NPD. Specifically, we examined the convergent and criterion validity of these measures with relevant constructs using bivariate correlations and quantified the absolute similarity of their empirical profiles using double-entry Q correlations (McCrae, 2008). Additionally, we tested the incremental validity of these three measures using multiple regression models in order to examine the unique variance in relation to these relevant criteria.

Method

Participants and Procedure

Participants were incarcerated adult males from two medium security prison facilities in Wisconsin (mean age: 31.71 years, $SD=7.08$). The sample consisted of 179 participants (43% Black, 56% White, and 1% Native American). Individuals were invited to participate if they were 18 to 55 years old, had no history of psychosis or bipolar disorder, were not currently taking psychotropic medication, and had an IQ score ≥ 70 . Participants provided informed consent, which was approved by the University of Wisconsin IRB, and were told that their

decision to participate would have no impact on their institutional status. Inmates were interviewed for a portion of the assessments and were paid \$3 for completing questionnaires. Descriptive data are presented in Table 1.

Narcissistic Personality Inventory-13 (NPI-13). The NPI-13 (NPI-13; Gentile et al., 2013) is a brief, 13-item version of the original 40-item, forced-choice self-report measure that measures grandiose narcissism and NPD¹.

Hypersensitive Narcissism Scale (HSNS). The HSNS is a 10-item self-report measure that assesses hypersensitivity to criticism, vulnerability and entitlement (Hendin & Cheek, 1997).

Narcissistic Personality Disorder Symptoms (NPD). Participants were assessed for NPD during a semi-structured interview (Structured Clinical Interview for Diagnostic and Statistical Manual-IV Disorders; SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997), and were conducted by research assistants with extensive training and supervision.

Personality Disorder Questionnaire (PDQ-4+). The PDQ-4 (Hyler, 1994) is a 99-item self-report measure used to assess DSM-IV/5 personality disorder traits. Nine items corresponding to NPD symptoms were administered.

Psychological Entitlement Scale (PES). The PES scale is a 9-item self-report measure of the degree to which individuals believe they deserve positive outcomes and special treatment (Campbell et al., 2004).

Psychopathy Checklist-Revised (PCL-R). Participants were screened for psychopathy during a semi-structured interview completed using information from prison files. The PCL-R (Hare, 2003) contains 20 items that rate the degree to which a characteristic is present that can be scored into four facets of psychopathic traits. Interrater reliability for PCL-R total scores was

¹ We also examined the differential pattern of relations between the three subscales of the NPI-13 (Leadership/Authority: LA, Grandiose Exhibitionism: GE, and Entitlement/ Exploitativeness: EE), other narcissism measures and external criterion variables. These results can found in Supplemental Table 1.

based on 9 dual ratings in this sample. Interviews were conducted by research assistants with similar training and supervision as mentioned above.

Psychopathic Personality Inventory Short Form (PPI-SF). The PPI-SF is a 56-item self-report measure of psychopathic traits representing a brief version of the original full-length inventory (Tonnaer et al., 2013). Research supports a two-factor structure titled Fearless Dominance (PPI-FD) and Self-Centered Impulsivity (PPI-SCI) with a single “orphan” subscale of Coldheartedness.

Antisocial Personality Disorder Symptoms (APD). Participants were assessed for APD symptoms during the same interview used for the PCL-R assessment. Following DSM-IV criteria, the number of APD symptoms was determined by summing the number of childhood conduct disorder symptoms (≤ 15 years; out of a possible 15 symptoms) and adult antisocial behaviors (≥ 18 years; out of a possible 7 symptoms).

Criminal History Measures. Four indices of criminal activity were examined: number of different types of offenses, number of charges for violent offenses, number of charges for nonviolent offenses, and total number of offenses. For each participant, the number of different types of offenses was tallied across all crime categories while the total number of charges for violent and nonviolent charges was tallied across each of the two categories.

Addiction Severity Index (ASI-X). A modified version of the Addiction Severity Index (McLellan et al., 1992) was administered which assessed self-reported regular substance use that occurred at least 3 times in a week. We report the total duration of substance use in years, collapsing across all substance categories assessed.

Welsh Anxiety Scale. Participants completed the Welsh Anxiety scale, which is a 39-item self-report measure used to assess negative emotionality and introversion (Welsh, 1956).

Beck Depression Inventory (BDI-II). The BDI-II is a 21-item self-report measure that examines depressive thoughts, emotions, behaviors and physical symptoms (Beck et al., 1996).

Results

Relations among narcissism scales

The self-report measures of narcissism/NPD were generally interrelated with correlations ranging from .19 (NPI-13 – HSNS) to .50 (NPI-13 – PDQ NPD; see Table 2). Using tests of dependent correlations (Steiger, 1980), comparisons between correlations for the NPI-13 and the HSNS indicated that the NPI-13 was significantly more strongly related to PDQ NPD as well as interview-based reports of NPD than the HSNS. All three self-report narcissism measures were correlated with psychological entitlement, which is thought to be a core feature of all narcissism constructs, although the relation was stronger for the NPI-13 than the HSNS. Results from the multiple regression analyses indicated that only the NPI-13 accounted for significant unique variance in the interview-based NPD symptom counts². All measures were unique correlates of entitlement.

Relations between narcissism scales and psychopathy

The NPI-13 and PDQ NPD both generally produced small to moderate positive correlations with PCL-R psychopathy scores, whereas the HSNS was generally unrelated to PCL-R scores. The correlations differed significantly for the NPI-13 and HSNS in relation to the PCL-R total score. With regard to differences between the HSNS and PDQ NPD, there was a significant difference in the correlations only for PCL-R facet 1. With respect to the self-report psychopathy scores, the NPI-13 was positively related to PPI FD and SCI but not

² Several criterion variables included count data with non-normal distributions. Therefore, we log-transformed these variables for correlational analyses and conducted negative binomial regression analyses with NPD symptoms, number of violent and nonviolent crimes, and years of substance abuse in order to estimate change in criterion for every one unit change in each predictor (Coxe, West & Aiken, 2009).

Coldheartedness. Similar results were found for PDQ NPD. The HSNS manifested a different pattern such that it was positively related to PPI SCI and was significantly negatively related to PPI FD and Coldheartedness. The relations manifested by the three narcissism scales differed for PPI FD in terms of NPI-13 and PDQ NPD with HSNS, although no differences were found for PPI-SCI. There was also a significant difference in the relations manifested with PPI Coldheartedness between the NPI-13 and HSNS.

Multiple regression analyses revealed that the NPI-13 was the only scale that accounted for positive unique variance in PCL-R total scores, PCL-R facet 4, and PPI-SF FD. Both the NPI-13 and HSNS were significantly and uniquely related to PPI-SF SCI, whereas both the NPI-13 and PDQ NPD were significantly and uniquely related to PCL-R facet 1. Finally, the HSNS was uniquely negatively related to both PPI FD and Coldheartedness.

Relations between narcissism scales and externalizing and internalizing symptoms

The NPI-13 and PDQ NPD generally manifested small to moderate positive correlations with antisocial behavior including conduct disorder symptoms and adult antisocial behaviors (NPI-13: r s ranging from .32 to .39; PDQ: .16 - .25). The NPI-13 scores were also significantly positively related to violent crime, total number of crimes, and substance use, although unrelated to nonviolent crime and types of crime. Neither the HSNS nor the PDQ-NPD scores were generally related to criminal behavior or substance use. The NPI-13 manifested stronger positive relations with conduct disorder symptoms, adult antisocial behavior, and both violent and total crimes compared to the HSNS. Although the correlational profiles for the NPI-13 and the PDQ NPD were similar with regard to antisocial behavior overall, the NPI-13 showed a significantly stronger correlation with adult antisocial behavior, number of crimes, and nonviolent crimes than the PDQ NPD. Compared to the HSNS, the PDQ showed significantly stronger correlations with

conduct disorder symptoms. Results from the regression analyses demonstrated that the NPI-13 was the only scale that accounted for significant unique variance in externalizing behaviors such as violent crime.

As expected, the HSNS was moderately to strongly related to internalizing symptoms and these correlations were stronger than those found for the NPI and PDQ NPD. The NPI-13 manifested null correlations with measures of depression and anxiety, whereas the PDQ NPD manifested a small but significant correlation with anxiety. The HSNS was the only scale that accounted for significant unique variance in internalizing symptoms.

The absolute similarity of the correlational profiles was assessed for the three narcissism measures using double-entry Q correlations. The NPI-13's correlates overlapped substantially with those from PDQ NPD scales ($r_{ICC} = .81$) but not the HSNS ($r_{ICC} = .18$) (see Table 2). The correlates of the PDQ NPD and HSNS scales manifested moderate agreement ($r_{ICC} = .51$).

Discussion

An upsurge of research in narcissism has confirmed the existence of several narcissism dimensions with divergent nomological networks. Grandiose narcissism refers primarily to immodest, entitled, callous and agentic manifestations whereas vulnerable narcissism reflects entitlement and self-absorption paired with psychological distress. DSM-based NPD tends to blend both dimensions such that grandiosity and entitlement are present with muted but present agency and distress. In the present research, we examined the links between measures of three narcissism dimensions (i.e., grandiose, vulnerable and NPD) and (a) alternate measures of narcissism (i.e., the diagnostic interviews of NPD; psychological entitlement), (b) two measures of psychopathy, and (c) externalizing and internalizing symptoms. To this end, we assessed the validity of these three scales in an offender sample in line with calls for a greater focus on

narcissism in these samples where elevated rates of it and related traits (e.g., psychopathy) and behaviors (e.g., antisocial behavior) are found (e.g., Miller et al., 2017).

In general, the self-report measures of grandiose narcissism (i.e., NPI-13) and NPD (PDQ) manifested overlapping profiles in which they were related to interview-based ratings of NPD, entitlement, psychopathy, and histories of antisocial behavior. As expected, the measure of vulnerable narcissism (i.e., HSNS) yielded an empirical profile that was divergent from that of grandiose narcissism in that it was characterized by substantial negative affectivity (e.g., symptoms of depression and anxiety) and entitlement, but only modest relations with interview-based ratings of NPD, psychopathy (i.e., PCL-R), and externalizing behaviors. As seen previously (e.g., Hopwood et al., 2013), PDQ NPD blends grandiose and vulnerable narcissism in that its empirical profiles overlap with both dimensions ($r_{ICCS} = .81$ and $.51$, respectively).

Given the relevance of externalizing behaviors and the traits/constructs that predict them, it appears that measures of grandiose narcissism and NPD are likely of greater interest and relevance in offender settings like these compared to vulnerable narcissism where the psychopathology tends to manifest in more internalizing based symptoms. Based on the overlap among these measures and limited time and resources for assessment, analyses of incremental validity are important in settings such as the current one; these findings suggest that one may get the biggest return by using the NPI-13 given that it generally demonstrated the strongest unique relations with the criterion variables of interest (psychopathy; entitlement; externalizing behaviors). The NPI-13, which generally takes one minute to complete (Gentile et al., 2013), appears to provide quite a bit of relevant information, especially if used as a screener.

This research informs several debates surrounding narcissism. First, there is an ongoing discussion about grandiose narcissism as measured by the NPI being non-pathological. For

instance, it has become popular to suggest that the NPI does not measure subclinical or pathological narcissism and instead measures “normal narcissism” (Pincus & Lukowitsky, 2010). These criticisms persist despite robust evidence that the NPI assesses traits very closely aligned with experts’ conceptualizations of NPD and grandiose narcissism (e.g., Fossati, et al., 2016a&b; Miller et al., 2014). The current findings, paired with several recent studies, belie such an argument. In the current study, NPI-13 scores were associated with interview-based symptoms of NPD, self-reports of entitlement, as well as both self-report and interview-based reports of psychopathy even when using the PCL-R to measure psychopathy, which many consider the gold-standard assessment of this construct. It is untenable to claim that NPI-based assessments of narcissism are measuring normal self-confidence and self-esteem. Second, there is a similar debate about grandiose and vulnerable trait narcissism and NPD (Miller et al., 2014). These data show again that PDQ NPD contains aspects of both grandiose and vulnerable narcissism. Notably, some measures of NPD do not assess the interpersonal agency/assertiveness captured by the NPI and instead assess more of the psychological distress captured by the HSNS.

Limitations and Conclusions

The sample included inmates recruited from two prison facilities but the data were not derived from a random sample of correctional facilities, so generalization across the entire prison population – and of course to non-offender populations – needs to be done with caution. Further, the sample is all male, which limits generalizability to female samples in which narcissism is also relevant. An important limitation relates to the lower internal consistencies for the NPI-13 and PDQ, respectively. Finally, the current study was limited in the criteria by which to compare the measures of narcissism and most notably did not include institutional behaviors of relevance.

Evidence from the present study illustrates that three self-report measures of narcissism

demonstrated convergent and discriminant validity in their relations to psychopathy, externalizing behaviors, and internalizing symptoms in a sample of male offenders. Measures of grandiose narcissism and NPD converged on core features of narcissism and psychopathy, although the NPI-13 demonstrated the strongest incremental validity, supporting the notion that this measure may be of unique value in these settings. The measure of vulnerable narcissism manifested weak relations with core features of narcissism and psychopathy, and moderate incremental validity for internalizing symptoms; the relevance of this construct in prison settings remains unclear and requires further investigation. Finally, consistent with previous assertions, these data illustrate that measures of NPD reflect a combination of grandiose and vulnerable narcissism.

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Table 1. Descriptive information.

Variable	N	M (SD)	Range	Skew	Kurtosis	Alpha
Age	179	31.71 (7.08)	18 - 54	.37	-.30	
NPI-13	179	4.54 (3.08)	0 - 13	.50	-.41	$\alpha = .77$
Leadership/Authority (LA)	179	1.53 (1.41)	0 - 4	.45	-1.13	$\alpha = .69$
Grandiose/Exhibitionism (GE)	179	2.20 (1.46)	0 - 5	.21	-.88	$\alpha = .56$
Exploitative/Entitlement (EE)	179	0.80 (1.07)	0 - 4	1.37	1.19	$\alpha = .61$
HSNS	179	26.30 (6.10)	12 - 40	.01	-.61	$\alpha = .75$
NPD Symptoms (SCID II Interview)^	94	0.90 (1.27)	0-6	2.86	9.19	ICC= .84 (n=47)
PDQ	176	4.13 (1.81)	1 - 9	.23	-.72	$\alpha = .62$
PES	178	34.66 (12.04)	9 - 63	.10	-.56	$\alpha = .80$
Psychopathy						
PCL-R Total	179	23.73 (5.76)	8.4 - 36.8	-.19	-.29	ICC=.98 (n=18)
PCL Facet 1	179	3.15 (1.89)	0 - 8	.40	-.35	
PCL Facet 2	179	5.78 (1.49)	2 - 8	-.40	-.39	
PCL Facet 3	165	7.14 (1.57)	2 - 10	-.71	.34	
PCL Facet 4	178	5.67 (2.43)	0 - 10	-.26	-.46	
PPI Factor 1 Fearless Dominance (FD)	179	1.55 (0.12)	-2.37 - 1.55	-.30	.25	.79
PPI Factor 2 Self-Centered Impulsivity (SCI)	179	0.05 (0.72)	-1.47 - 3.09	.62	.95	.83
Coldheartedness	179	16.48 (3.65)	7 - 27	.54	.26	.59
APD/Externalizing Problems						
APD Adult and CD	179	7.20 (3.86)	0 - 18	.63	-.02	
APD CD Only	179	3.50 (1.60)	0 - 7	.74	-.05	
APD AAB Only	179	3.70 (2.96)	0 - 12	-.15	-.52	
Number Types of Crimes (Criminal Versatility)	178	4.77 (1.85)	1 - 10	.20	-.14	
Number of Violent Crimes^	178	3.44 (4.81)	0 - 45	4.56	32.29	
Number of Nonviolent Crimes^	178	13.24 (20.33)	0 - 235	7.78	80.44	
Total Number of Crimes^	179	16.74 (20.89)	1 - 237	7.16	70.53	
Addiction Severity Index (ASI-X)^	179	18.69 (15.39)	0 - 89	1.48	3.71	
Personality and Internalizing Symptoms						
Welsh Anxiety	179	12.90 (8.93)	0 - 36	.62	-.37	.89
Beck Depression Inventory	179	15.80 (10.43)	0 - 51	.87	.47	.88

*Note: NPI-13: Narcissistic Personality Inventory-13 item; HSNS: Hypersensitive Narcissism Scale; NPD Symptoms (SCID): Number of Narcissistic Personality Disorder symptoms from Structured Clinical Interview from the Diagnostic and Statistical Manual-IV; PDQ: Personality Diagnostic Questionnaire; PES: Psychological Entitlement Scale; PCL-R: Psychopathy Checklist-Revised; PPI: Psychopathic Personality Inventory; APD: Antisocial Personality Disorder; CD: Conduct Disorder; AAB: Adult Antisocial Behavior. Variables with a ^ indicate non-normally distributed values.

Table 2.

Relationships between narcissism measures and external criteria.

		<i>Bivariate Correlations</i>			<i>Standardized Coefficients</i>			
Variable	<i>N</i>	NPI-13	HSNS	PDQ	NPI-13	HSNS	PDQ	<i>R</i> ²
Narcissism/NPD								
NPI-13	179	--	--	--	--	--	--	--
HSNS	179	.19*	--	--	--	--	--	--
PDQ	176	.50*** ^a	.29*** ^b		--	--	--	--
NPD Symptoms (SCID-II Interview) [^]	94	.49*** ^a	.15 ^b	.40*** ^a	IRR= 1.19** CI= 1.06, 1.32	1.02 0.97, 1.08	1.23 0.99, 1.51	--
PES	178	.55*** ^a	.36*** ^b	.47*** ^{ab}	.40**	.23**	.20**	.39
Psychopathy								
PCL-R Total	179	.32*** ^a	.09 ^b	.23*** ^{ab}	.29**	.03	.08	.12
PCL Facet 1	179	.29*** ^{ab}	.12 ^a	.31*** ^b	.19*	.03	.20**	.12
PCL Facet 2	179	.18* ^{ab}	.01 ^a	.15* ^{ab}	.14	-.06	.10	.04
PCL Facet 3	165	.22**	.13	.25**	.16	.09	.14	.09
PCL Facet 4	178	.20*** ^a	.02 ^{ab}	.05 ^b	.25**	.00	-.07	.05
PPI-I Factor Fearless Dominance	179	.18* ^a	-.28*** ^b	.04 ^a	.24**	-.31**	.01	.13
PPI-II Factor Self-centered								
Impulsivity	179	.37**	.45**	.32**	.25**	.38**	.08	.28
PPI Coldheartedness	179	-.05 ^a	-.27*** ^b	-.14 ^{ab}	.05	-.25**	-.09	.08
APD/Externalizing Problems								
APD <i>CD</i> + AAB	177	.39*** ^a	.06 ^b	.25*** ^c	.37**	-.02	.07	.16
APD <i>CD</i> Only	179	.34*** ^a	.01 ^b	.24*** ^a	.31**	-.08	.10	.13
APD AAB Only	179	.32*** ^a	.14 ^b	.16* ^b	.31**	.10	-.03	.11
Number Types of Crimes	178	.12 ^a	-.01 ^{ab}	-.03 ^b	.17	-.02	-.11	.02
Number of Violent Crimes [^]	178	.18* ^a	-.02 ^b	.10 ^{ab}	1.08** 1.02, 1.15	0.98 0.95, 1.01	1.03 0.92, 1.14	--
Number of Nonviolent Crimes [^]	178	.14 ^a	-.04 ^{ab}	-.02 ^b	1.03 0.97, 1.10	0.98 0.96, 1.01	1.03 0.93, 1.13	--
Total Number of Crimes [^]	179	.19* ^a	-.05 ^b	.03 ^b	1.04 0.99, 1.09	0.98 0.96, 1.01	1.03 0.95, 1.11	--
Addiction Severity Index (ASI-X) [^]	179	.15*	.14	.09	1.01 0.96, 1.06	1.02 0.99, 1.04	1.01 0.93, 1.09	--
Internalizing Symptoms								
Welsh Anxiety	179	.14 ^a	.52*** ^b	.23*** ^a	-.01	.49**	.10	.27
Beck Depression Inventory	179	.06 ^a	.43*** ^b	.07 ^a	-.01	.45**	-.05	.19
Similarity Analyses (<i>r</i>_{ICC})								
HSNS		.18						
PDQ		.81**	.51**					

Note: Correlations are significant at * $p \leq .05$, ** $p < .01$; Correlations in the same row with different superscripts are significantly different from one another at $p \leq .05$. Regression coefficients are derived from multiple regression analyses in which each criterion variable was regressed on all three self-report narcissism scales simultaneously. Standardized coefficients represent linear regression coefficients unless otherwise noted. [^]Bivariate correlations were conducted with log transformed variables due to non-normal distribution. Negative binomial regression models used for these variables estimate exponentiated regression coefficients for each predictor resulting in a multiplicative factor (incident rate ratio: IRR) that predicts a change in criterion for every one unit change in the predictor (Coxe, West & Aiken, 2009). CI: 95% Confidence Interval.

Supplemental Table 1. Bivariate information for NPI-13 subscales.

		Bivariate Correlations				Standardized Coefficients			
Variable	N	NPI-LA	NPI-GE	NPI-EE	PES	NPI-13	HSNS	PDQ	PES
Narcissism/NPD									
NPI-13	179	.81**	.78**	.75**	.55**				
Leadership/Authority (LA)	179	--	.39**	.50**	--				
Grandiose/Exhibitionism (GE)	179	--	--	.37**	--				
Exploitative/Entitlement (EE)	179	--	--	--	--				
HSNS	179	.13	.07 ^a	.27** ^b	.36**				
PDQ	176	.36**	.37**	.45**	.47**				
NPD Symptoms (SCID) [^]	94	.38**	.34**	.41**	.40**	IRR= 1.15** CI= 1.05, 1.24	1.02 0.98, 1.06	1.18* 1.01, 1.37	1.02 0.99, 1.04
PES	178	.44**	.33** ^a	.56** ^b					
Psychopathy									
PCL-R Total	179	.31**	.17*	.29**	.23**	.27**	.02	.06	.05
PCL Facet 1	179	.25**	.18*	.27**	.21**	.19*	.03	.20**	.01
PCL Facet 2	179	.17*	.08	.20**	.25**	.04	-.10	.04	.24*
PCL Facet 3	165	.24**	.12	.16*	.15*	.18	.10	.14	-.03
PCL Facet 4	178	.22**	.07	.20**	.08	.26**	.01	-.08	-.02
PPI-I Factor Fearless Dominance	179	.19 ^a	.18 ^a	.01 ^b	-.06	.29**	-.29**	.04	-.13
PPI-II Factor Self-centered Impulsivity	179	.26** ^a	.19 ^a	.45** ^b	.25**	.30**	.41**	.11	-.13
PPI Coldheartedness	179	.07 ^a	-.15* ^b	-.03 ^{ab}	-.01	-.03	-.29**	-.14	.19*
APD/Externalizing Problems									
APD Adult and CD	179	.29** ^{ab}	.24** ^a	.41** ^b	.21**	.38**	-.01	.06	-.03
APD CD	179	.24** ^{ab}	.21** ^a	.37** ^b	.15*	.33**	-.06	.11	-.06
APD AAB	179	.26**	.20**	.29**	.23**	.30**	.09	-.05	.05
Number Types of Crimes (Criminal Versatility)	178	.13	.12	.02	.16*	.09	-.06	-.15	.19*
Number of Violent Crimes [^]	178	.17*	.08	.18*	.25**	1.03 0.97, 1.10	0.98 0.95, 1.00	0.98 0.88, 1.10	1.02** 1.01, 1.04
Number of Nonviolent Crimes [^]	178	.15*	.12	.03	.07	1.02 0.96, 1.09	0.98 0.96, 1.01	1.01 0.91, 1.11	1.01 0.99, 1.02
Total Number of Crimes [^]	179	.21**	.14	.09	.17*	1.02 0.97, 1.08	0.98 0.96, 1.00	1.00 0.93, 1.08	1.01 0.99, 1.02
Addiction Severity Index (ASI-X) [^]	179	.09	.09	.18*	.18*	1.01 0.96, 1.06	1.01 0.99, 1.04	0.99 0.92, 1.09	1.00 0.99, 1.02
Internalizing Symptoms									
Welsh Anxiety	179	.08 ^a	.05 ^a	.23** ^b	.16*	.03	.51**	.12	-.11
Beck Depression Inventory	179	.03 ^{ab}	-.03 ^a	.17* ^b	.01	.09	.50**	-.01	-.24**

*Note: Correlations are significant at * $p \leq .05$, ** $p < .01$; Correlations for NPI-13 subscales in the same row with different superscripts are significantly different from one another at $p \leq .05$. Standardized coefficients represent linear regression coefficients unless otherwise noted. [^]Bivariate correlations and regression analyses were conducted with log transformed variables due to nonnormal distribution. IRR: Incident Rate Ratio. CI: 95% Confidence Interval.