

# Factor Structure and Psychometric Properties of the Pathological Narcissism Inventory (PNI) in Croatian sample

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## INTRODUCTION

Pathological narcissism is a personality construct popular in the fields of social/personality psychology, clinical psychology, and psychiatry, and the currently predominant perspective in this domain includes grandiose and vulnerable features of narcissistic pathology (Miller et al., 2010; Pincus & Lukowitsky, 2010). However, self-report measures of narcissism to date have been criticized for their exclusive focus on grandiose traits of narcissism as well as for their questionable psychometric properties (Pincus & Lukowitsky, 2010). Motivated by these controversies, Pincus et al. (2009) developed the Pathological Narcissism Inventory (PNI), a multidimensional self-report measure of pathological narcissism spanning both aforementioned features. The PNI was validated in large American (Pincus et al., 2009; Wright et al., 2010) and Chinese (You et al., 2012) student samples.

**AIM** The aim of this study was to provide psychometric support for the Croatian adaptation of the PNI. More specifically, we wanted to examine reliability, as well as factorial and concurrent validity of the PNI in Croatian student sample.

**METHOD** **Participants** Study sample consisted of 651 students from various faculties of the University of Zagreb (389 female and 260 male) with the mean age of 21.73 years (SD = 1.94).

**Measures**

**Pathological Narcissism Inventory** (PNI; Pincus et al., 2009) is a 52-item multidimensional self-report measure of pathological narcissism. Respondents are asked to use a 6-point scale ranging from 0 (*not at all like me*) to 5 (*very much like me*) to rate each item. Higher scores reflect higher levels of pathological narcissism. The instrument consists of seven subscales that measure different characteristics of pathological narcissism: Contingent Self-Esteem (CSE), Exploitativeness (EXP), Self-Sacrificing Self-Enhancement (SSSE), Hiding the Self (HS), Grandiose Fantasy (GF), Devaluing (DEV), and Entitlement Rage (ER). Because of the variability in scale length, mean scores are used instead of sums for easy comparison across scales. Two higher-order factors encompassing these 7 subscales, narcissistiy grandiosity and narcissistic vulnerability, have been documented in previous studies (Tritt et al., 2010; Wright et al., 2010; You et al., 2012).

**Narcissistic Personality Inventory -16** (NPI-16; Ames et al., 2006) is a unidimensional short self-report measure of trait narcissism that consists of 16 pairs of statements. The respondent is asked to choose the statement that is closer to his feelings about himself. Higher scores reflect higher levels of trait narcissism.

**Narcissism Subscale of the Short Dark Triad** (D3-28; Paulhus & Williams, 2002) is a unidimensional measure of trait narcissism. This subscale consists of 9 items on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores are indicative of higher levels of trait narcissism.

**Emotional Stability Subscale of the IPIP50 Big-Five Domains** (IPIP50; Mlačić & Goldberg, 2007) was used to assess the Big-Five personality dimension of emotional stability. This subscale consists of 10 items rated on a 5-point scale, ranging from 1 (*very inaccurate*) to 5 (*very accurate*). Higher scores are indicative of higher levels of emotional stability.

**Depression Anxiety and Stress Scales – 21** (DASS-21; Lovibond & Lovibond, 1995) is a short self-report instrument consisting of 21 items, designed to measure the negative emotional states of depression, anxiety and stress. Participants are asked to report how much the item applied to them over the past week. The items are scored on a 4-point scale, ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). Higher scores on all three scales are indicative of higher levels of acute negative emotionality.

## RESULTS

**Table 1.** Pathological Narcissism Inventory first-order subscales intercorrelations, second-order scales correlations with first-order subscales

PNI Scale	CSE	EXP	SSSE	HS	ER	DEV	GF	NG	NV	PN
CSE	(.92)									
EXP	-.16 **	(.76)								
SSSE	.47 **	.09 *	(.77)							
HS	.49 **	-.02	.27 **	(.71)						
ER	.61 **	.16 **	.35 **	.38 **	(.82)					
DEV	.63 **	-.08 *	.36 **	.52 **	.52 **	(.85)				
GF	.47 **	.21 **	.43 **	.30 **	.47 **	.30 **	(.84)			
NG	.42 **	.54 **	.72 **	.28 **	.49 **	.30 **	.85 **	(.83)		
NV	.90 **	-.06	.47 **	.69 **	.78 **	.81 **	.50 **	.47 **	(.93)	
PN	.85 **	.15 **	.62 **	.64 **	.78 **	.74 **	.69 **	.73 **	.95 **	(.93)

*Note.* N= 651. Cronbach's alpha appears on the diagonal.  
CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; ER = Entitlement Rage; DEV = Devaluing; GF = Grandiose Fantasy; NG = Narcissistic Grandiosity; NV = Narcissistic Vulnerability; PN = Pathological Narcissism.

**Table 2.** Summary of the confirmatory factor analysis results for the three second-order factor models of the Pathological Narcissism Inventory

Model	χ <sup>2</sup>	df	GFI	AGFI	CFI	NFI	RMSEA[90%CI]	AIC
General second-order factor	696.25	163	.90	.87	.93	.91	.071 [.066, .076]	790.25
Two second-order factors (Pincus et al., 2009)	674.93	162	.90	.88	.93	.91	.070 [.064, .075]	770.93
Two second-order factors (Wright et al., 2010)	671.57	162	.90	.88	.93	.91	.070 [.064, .075]	767.57

*Note.* N=651. χ<sup>2</sup> = chi-square fit statistic; df = degrees of freedom; GFI = goodness of fit index; AGFI = adjusted goodness of fit; NFI = normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI=confidence interval; AIC = Akaike information criterion.

**Table 3.** Standardized Factor loadings of the Pathological Narcissism Inventory first-order factors

PNI First-Order Factors							
PNI Second-Order Factors	GF	SSSE	EXP	CSE	DEV	ER	HS
Narcissistic Grandiosity	.72	.70	.06	-	-	-	-
Narcissistic Vulnerability	-	-	-	.89	.78	.78	.69

*Note.* N=651. CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.

**Table 4.** Correlations of the Pathological Narcissism Inventory first-order and second-order subscales with validity measures

	CSE	EXP	SSSE	HS	ER	DEV	GF	Narcissistic Grandiosity	Narcissistic Vulnerability	Pathological Narcissism
NPI-16	-.14 **	.54 **	-.07	-.09 *	.26 **	-.11 **	.24 **	.31 **	-.04	.08 *
N_SDT	-.01	.49 **	.16 **	-.07	.31 **	-.03	.33 **	.44 **	.06	.21 **
DASS_D	.43 **	-.16 **	.10 *	.35 **	.24 **	.41 **	.18 **	.08 *	.45 **	.38 **
DASS_A	.37 **	-.12 **	.16 **	.27 **	.22 **	.38 **	.20 **	.14 **	.39 **	.35 **
DASS_S	.44 **	-.10 *	.20 **	.30 **	.35 **	.41 **	.24 **	.19 **	.47 **	.44 **
ES_IPIP	- .55 **	.20 **	-.17 **	-.29 **	-.45 **	-.48 **	-.24 **	-.14 **	-.57 **	-.49 **

*Note.* N=651. CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage; NPI = Narcissistic Personality Inventory; N\_SDT = Narcissism Short Dark Triad; DASS\_D = Depression DASS; DASS\_A = Anxiety DASS; DASS\_S = Stress DASS; ES\_IPIP = Emotional Stability IPIP.

## CONCLUSION

Findings of this study suggest that the Croatian adaptation of the PNI is a highly reliable instrument with satisfactory factorial and concurrent validity among Croatian university students. In addition to documenting seven lower- and two higher-order factors of the PNI, a meaningful pattern of correlations with other psychological constructs assessed in this study also supports the use of the PNI as a measure of multidimensionally defined pathological narcissism.

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