

Tracking the hypersensitive dimension in narcissism: Reliability and validity of the Hypersensitive Narcissism Scale

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ABSTRACT

The aim of the study was to assess the reliability and the validity of the Italian translation of the Hypersensitive Narcissism Scale (HSNS) in a sample of consecutively admitted psychiatric outpatients (N = 366) and in an independent sample of non-clinical volunteers (N = 385). In both samples, data from the HSNS had adequate internal consistency, considering its limited length. Consistent with our hypothesis, a two-factor structure explained the HSNS item intercorrelations. Among clinical participants, the HSNS and the Narcissistic Personality Inventory (NPI) showed radically different patterns of correlations with the fourth edition of the Diagnostic and Statistical Manual for Mental Disorders (DSM-IV) Personality Disorder diagnoses. In both samples, the HSNS and the NPI showed distinct and theoretically consistent correlations with temperament and character dimensions. As a whole, these findings seem to support the reliability and the validity of the HSNS as a measure of hypersensitive narcissism. Copyright © 2009 John Wiley & Sons, Ltd.

The inclusion of Narcissistic Personality Disorder (NPD) on Axis II of the third edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1980) and its subsequent revisions stimulated increased interest in the construct of narcissism across the fields of clinical psychology, social/personality psychology and psychiatric diagnosis (Cain, Pincus, & Ansell, 2008; Ronningstam, 2005).

Prominent contemporary theorists and clinicians conceptualize narcissism and its disorders as a constellation of personalities rather than an individual Personality Disorder (PD) diagnosis (see, for

a review, Cain et al., 2008). For instance, a vulnerable (Wink, 1991) or hypersensitive (Hendin & Cheek, 1997) dimension of narcissism has been frequently reported. If the recognition of this heterogeneity of pathological narcissism is valid, overlooking hypersensitive narcissism may lead to diagnostic bias either because narcissistic pathology may get undiagnosed or because it may be misdiagnosed as a different PD (Dickinson & Pincus, 2003). It has been suggested that hypersensitive narcissistic pathology may be misdiagnosed with several PDs, and particularly with Avoidant Personality Disorder (APD) and Borderline

Personality Disorder (BPD; Dickinson & Pincus, 2003). For instance, the dependency in close relationships, the inadequacy feelings and the pseudo-humbleness that are frequently present in hypersensitive narcissism (Gabbard, 1998) may be erroneously considered as Dependent Personality Disorder (DPD) features. The ideas of reference due to oversensitivity to social cues, prominent social anxiety, inability to trust other people, as well as social withdrawal and a poor sexual life, which are frequently present in the lives of subjects suffering from hypersensitive narcissistic pathology (Gabbard, 1998), may be misdiagnosed as Cluster A PD features.

Thus, the inadequacy of the current fourth edition of the Diagnostic and Statistical Manual for Mental Disorders (*DSM-IV*; American Psychiatric Association, 1994) criteria to capture the vulnerable, hypersensitive dimension of pathological narcissism makes hypersensitive narcissism likely to scatter across several *DSM-IV* PD diagnoses. In other words, measures of hypersensitive narcissism are expected to show small correlations with several PD diagnoses and moderate correlation with general indices of personality psychopathology, as the presence of any *DSM-IV* PD diagnosis or the overall number of *DSM-IV* PD diagnoses. To the best of our knowledge, up to now, no study on hypersensitive narcissistic pathology has been carried out on clinical subjects.

In order to overcome the current ambiguities surrounding the conceptualization and measurement of narcissism, Hendin and Cheek (1997) proposed a new measure of hypersensitive narcissism that was derived by correlating the items of H. A. Murray's (1938) Narcissism Scale with a composite measure of hypersensitive narcissism from the Minnesota Multiphasic Personality Inventory (MMPI). In three samples of college students (total $N = 403$), 10 items formed a reliable measure: the Hypersensitive Narcissism Scale (HSNS). In Hendin and Cheek's (1997) study, the HSNS showed adequate reliability with an average Cronbach α value of 0.71 (standard deviation (SD) = 0.07). The HSNS and the MMPI-based compos-

ite showed similar patterns of correlations with external variables, which were highly consistent with Wink's (1991) distinction between vulnerable and grandiose narcissistic dimensions. Although Hendin and Cheek (1997) reported that factor analyses of the 10 items of the new HSNS in all three samples revealed that all 10 items loaded significantly (average > 0.30) on the first unrotated factor, they did not perform a formal dimensionality analysis of the HSNS item factor structure.

Starting from these considerations, the present study aimed at assessing the psychometric properties of the Italian translation of the HSNS in a sample of clinical participants. In particular, we aimed at testing if

- (1) the HSNS is a reliable and unidimensional scale or if two different albeit correlated factors could be extracted from the 10-item correlation matrix;
- (2) the correlations between the HSNS and the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979) total scores show divergent validity;
- (3) the HSNS and the NPI show different patterns of association with interview-based measures of dimensionally assessed *DSM-IV* PD diagnoses;
- (4) the HSNS and the NPI are associated with different trait measures. In particular, based on the correlation patterns with Big Five measures that were reported in previous studies (see, for instance, Hendin & Cheek, 1997; Widiger & Trull, 1992), we expected that the HSNS would show positive correlations with measures of trait anxiety and behavioural inhibition (which are akin to the construct of Neuroticism) and negative correlations with measures of interest in social involvement (which is a core feature of Extraversion), whereas the NPI was expected to correlate positively with measures of novelty seeking (which is akin to the stimulus-seeking component of E) and negatively with measures of behaviour inhibition.

The three-month test–retest reliability of the HSNS scores was formally assessed in a small ($n = 30$) subsample of clinical participants and in a subsample of 124 non-clinical participants.

In order to evaluate the generalizability of these findings, we tested these hypotheses—with the only exception of the relationship between the HSNS and the *DSM-IV* PDs—also in a sample of non-clinical participants.

Method

Subjects

Clinical participants. The clinical sample was composed of 366 psychiatric outpatients consecutively admitted to the Clinical Psychology and Psychotherapy Unit of the San Raffaele Hospital in Milan, Italy. All subjects volunteered to take part in the study after being presented with a detailed description and all were treated in accordance with the 'Ethical Principles of Psychologists and Code of Conduct'.

In order to be included in the sample, participants did not meet any of the following exclusion criteria: (1) $IQ < 75$ as assessed by the official Italian version of the Wechsler Adult Intelligence Scale-Revised (20); (2) Diagnosis of Schizophrenia, Schizoaffective Disorder, Schizophreniform Disorder, Delusional Disorder, Dementia or Organic Mental Disorder according to the diagnostic criteria listed in the *DSM-IV*; and (3) level of education lower than primary school.

The sample included 128 (35%) males and 238 (65%) females. The mean age was 35.06 years ($SD = 10.11$). Among the 366 subjects, 167 (45.6%) received at least one *DSM-IV* Axis I diagnosis. Because of multiple Axis I diagnoses, the cumulative rate of Axis I diagnosis exceeds the rate of subjects with at least one Axis I diagnosis. The most frequently diagnosed Axis I disorders were Anxiety Disorders ($n = 73$, 19.9%), Substance Abuse/Dependence Disorders ($n = 35$, 9.6%), Eating Disorders ($n = 33$, 9%) and Mood Disorders ($n =$

21, 5.7%); 13 subjects (3.6%) received other *DSM-IV* Axis I diagnosis (Sleeping Disorders, Sexual Disorders, Somatoform Disorders, etc.).

According to the Structured Clinical Interview for *DSM-IV* Axis II Personality Disorders (SCID-II, Version 2.0), 242 subjects (66.1%) received at least one *DSM-IV* PD diagnosis, with an average number of 1.32 PD diagnoses ($SD = 0.62$). Among participants with any PD diagnosis, 25.2% ($n = 61$) received two or more PD diagnoses. The most frequently diagnosed *DSM-IV* PDs were NPD ($n = 50$, 13.7%), not Otherwise Specified diagnosis ($n = 42$, 11%), Obsessive–Compulsive Personality Disorder ($n = 35$, 9.6%), BPD ($n = 35$, 9.6%), APD ($n = 31$, 8.5%) and Histrionic Personality Disorder (HPD; $n = 31$, 8.5%).

Non-clinical participants. The non-clinical sample was composed of 385 participants living in Milan urban and suburban areas who had responded to advertisements requesting potential volunteers for psychological studies. All subjects volunteered to participate after being presented with a detailed description, and all were treated in accordance with the 'Ethical Principles of Psychologists and Code of Conduct'. In order to be included in the study, subjects needed to possess a level of education equal to or higher than primary school and should have never been treated for any psychiatric disorder. None of the participants was funded either directly or indirectly in order to participate in the study. All subjects were White. One hundred and sixty-three (42.3%) participants were male and 222 (57.7%) female; participants' average age was 32.59 years ($SD = 9.26$). Three hundred and seven participants (79.7%) were active community workers, whereas 78 participants (20.3%) were undergraduate college students.

Despite all active efforts to match non-clinical participants with clinical participants on gender and age characteristics, a higher rate of female subjects was observed among clinical participants than among non-clinical participants, Yates-corrected $\chi^2 = 3.98$ (1, $N = 751$), $p < 0.05$; however, effect size measures (i.e., phi coefficient and odds

ratio) showed that this difference was trivial, $\phi = 0.07$, odds ratio = 1.37. Similar considerations were also true for age differences. On average, clinical participants were older than non-clinical participants, $t(749) = 3.35$, $p < 0.001$, although the effect size (i.e., standardized mean difference) for this difference was small, $d = 0.24$.

Measures

HSNS (Hendin & Cheek, 1997). The HSNS is a 10-item, Likert-type self-report questionnaire explicitly designed to dimensionally assess hypersensitive narcissism. The items are simply summed up to obtain the HSNS total score; the higher the HSNS total score, the higher the presence of hypersensitive narcissistic features.

SCID-II, Version 2.0 (First, Spitzer, Gibbon, Williams, & Benjamin, 1994). As mentioned earlier, observer ratings of DSM-IV PDs were gathered by administering the SCID-II (First et al., 1994) to all clinical participants. The SCID-II is a 140-item semi-structured clinical interview structured by diagnosis, yielding both a categorical and a dimensional (i.e., number of symptoms) assessment of DSM-IV PDs. Participants with Axis I diagnoses were administered the SCID-II by expert-trained raters after acute symptom remission according to the judgement of the clinicians who were following the participants in treatment. SCID-II interviews were carried out blind to the self-report questionnaire scores. Inter-rater reliability of SCID-II PD dimensional diagnoses was assessed using the first 50 consecutively admitted patients with a pair-wise interview design. Inter-rater reliability coefficients (i.e., intra-class correlations) ranged from 0.59 (Schizotypal Personality Disorder (SZPD)) to 0.97 (DPD). On average, the internal consistency (i.e., Cronbach α) of the SCID-II PD diagnoses was adequate, $M = 0.75$, $Mdn = 0.74$, $SD = 0.05$, with the exception of Passive-Aggressive Personality Disorder (PAPD) diagnosis, which showed a Cronbach α value of 0.68; all other SCID-II PD

diagnoses showed internal consistency values > 0.70 (max = 0.87, Antisocial Personality Disorder).

NPI (Raskin & Hall, 1979). The 40-item revised form of the NPI (Raskin & Terry, 1988) is a true-false scale created by factor analysis of Raskin and Hall's (1979) original pool of 54 items. Raskin and Terry (1988) found the alpha for the 40-item scale to be 0.83. In the present study, we found alpha reliabilities of 0.81 and 0.83 for the clinical and non-clinical participants respectively.

Temperament and Character Inventory-Revised (TCI-R; Cloninger, 1999; Cloninger, Przybeck, Svrakic, & Wetzel, 1994). This 240-item, Likert-type, self-administered questionnaire, a revised version of the Temperament and Character Inventory, is designed to measure four temperament and three character dimensions. The temperament dimensions are Novelty Seeking (NS), Harm Avoidance (HA), Reward Dependence (RD) and Persistence (PE). The character dimensions are Self-Directedness (S), Cooperativeness (C) and Self-Transcendence (ST). In the present study, Cronbach alpha values for the TCI-R scales ranged from 0.79 (PE) to 0.91 (SD) in the clinical sample and from 0.75 (HA) to 0.85 (RD) in the non-clinical sample.

The Italian version of the HSNS was translated by one of the authors (A. F.) and two additional psychologists. The adequacy of the Italian version compared with the original English version was iteratively checked through back-versions by a professional English mother-tongue translator. The translation of the SCID-II, NPI and TCI-R into Italian followed the same procedure that was described for the HSNS. In the present study, all questionnaires in the clinical sample were scored blind to SCID-II interview results. Order effects were controlled for by randomizing the order in which the questionnaires were presented to the participants.

Statistical analyses

Item and internal consistency analyses. Average inter-item correlation and Cronbach α coefficient were used to assess the internal consistency of the HSNS scale in clinical and non-clinical samples. Item-total correlations corrected for item-total overlap were computed to evaluate the HSNS item discriminatory power.

Procrustes analyses. Although Hendin and Cheek (1997) developed the HSNS as a unidimensional scale, alternative models of the scale may be tested. In particular, we hypothesized that the emotional and social vulnerabilities—i.e., social anxiety and alienation—and the deficits in self-esteem regulation—i.e., egocentrism—might represent distinct facets of a common vulnerable narcissistic dimension. Thus, we hypothesized that items 1, 2, 3, 6, 7 and 9 may define an ‘Oversensitivity to Judgement’ component, whereas we expected that items 4, 5, 8 and 10 tap an ‘Egocentrism’ component.

In these situations, confirmatory factor analysis (CFA) is frequently proposed as the method of choice (Bollen, 1989). However, despite its mathematical elegance, there are consistent evidences that CFA, as it has typically been applied in investigating personality structure, is systematically flawed. For instance, Church and Burke (1994) concluded that parsimonious personality models are unlikely to meet conventional goodness-of-fit criteria in CFA because of the limited simple structure of personality measures and the personality domain itself. Although CFA models may be refined using modification indices, these changes may easily lead to violations of model identification, with pseudo-confirmatory results (Bollen, 1989). McRae, Zonderman, Costa, Bond, and Paunonen (1996) showed that CFA statistical indices reject models that are empirically replicable and accept models that are not, at least when CFA was applied to Big Five measures.

The issues raised by several prominent personality researchers (Church & Burke, 1994; McRae et al., 1996) as to the applicability of CFA to personality variables suggested the use of targeted (i.e., Procrustes) rotations to answer the question of whether the factor structure in a replication sample matches a hypothesized structure (McRae et al., 1996).

Starting from these considerations and following McRae and colleagues’ (1996) suggestions, we assessed the correct number of factors to be extracted from the polychoric correlation matrices using three different methods, namely Everett’s (1983) factor comparability method, quasi-inferential parallel analysis (Buja and Eyuboglu, 1992) and the scree plot. Principal component analysis was used to decompose the HSNS item correlation matrix. Most applied factor analysts recognize that principal component analyses yield results that are very similar to common factor analyses (Goldberg & Digman, 1994; Velicer & Jackson, 1990), and principal-components analysis has its own elegance of mathematical and computational simplicity (for instance, it avoids communality estimation). Factors were expected to be correlated, with promax rotation ($k = 4$) of the extracted components.

In order to examine the extent to which the promax empirical matrix matched the target matrix, we used the oblique Procrustes rotation. Congruence coefficients (CC) were then computed in order to evaluate if the varimax rotated factors matched the binary target matrix of 1s and 0s representing the hypothesized factor loadings based on the HSNS model of item assignment; a CC value of 0.90 is typically considered necessary to define matching factors. The CC significance was tested by comparing the observed CC values with the distribution of CC values obtained after Procrustes rotation of the data to 10 000 independent random targets.

Hypotheses with regard to dimensionally assessed DSM-IV PDs and TCI-R scales were tested with regression models.

Results

*Reliability statistics and item analyses*¹

The internal consistency reliability of the HSNS in the Italian clinical sample was adequate, $\alpha = 0.71$, average inter-item $r = 0.20$, with no difference between male ($\alpha = 0.72$) and female ($\alpha = 0.71$) participants. The internal consistency of the HSNS composite score in the non-clinical sample was 0.69, with an average inter-item r of 0.20. As a whole, these data were consistent with the internal consistency reliabilities reported in Hendin and Cheek's (1997) study.

The item-total correlation patterns were similar in the two samples, as indicated by a root mean square difference between the two sets of correlation coefficient of 0.07 and a CC value of 0.99. None of the HSNS items showed poor discriminatory power (i.e., item-total r corrected for overlap < 0.20). On average, HSNS items correlated with the scale total score 0.37 (median = 0.36) and 0.35 (median = 0.35) in clinical and non-clinical samples respectively; the dispersion of the correlation around their mean value was relatively small, as suggested by SD values of 0.09 and 0.05 among clinical and non-clinical participants respectively.

The HSNS retest reliability was assessed on a subsample of 30 clinical participants who were re-administered the HSNS after three months from the first assessment. The HSNS test ($M = 31.03$, $SD = 7.37$) and retest ($M = 30.00$, $SD = 6.94$) mean scores did not differ significantly, $t = 0.92$ (29), $p > 0.30$; the test–retest correlation of the HSNS total scores in the clinical subsample was 0.63, $p < 0.001$. This result seemed to suggest a moderate temporal consistency over a three-month interval of the HSNS scores among treated clinical participants with axis I Anxiety Disorder diagnoses. The three-month stability of HSNS scores in non-clinical

participants ($n = 124$) was somewhat larger than the test–retest correlation observed in the clinical retest subsample, $r = 0.82$, $p < 0.001$. No significant mean difference between baseline ($M = 27.93$, $SD = 5.99$) and retest ($M = 27.90$, $SD = 5.48$) scores was observed in the non-clinical group either, $t(123) = 0.10$, $p > 0.90$.

Procrustes analyses

Everett's (1983) method supported a two-factor structure of the HSNS items. In the clinical sample, factor comparability coefficients were 0.99 for the one-factor model and 0.97 and 0.93 for the two-factor model. When a three-factor model was tested, factor comparability was 0.94, 0.92 and 0.56. Similar findings were obtained in the non-clinical sample, with factor comparability coefficients of 0.98 and 0.97 for the two-factor model and 0.92, 0.92 and 0.53 for the three-factor model. A two-component structure of the HSNS item correlation matrices was also suggested by the scree plots and quasi-inferential parallel analysis results.²

The first two principal components explained 42.7 and 41.1% of the total variance of the HSNS items in the clinical and non-clinical samples respectively. Procrustes analysis results in clinical and non-clinical samples are shown in Table 1. All factor CC values were highly significant and greater than 0.90, thus suggesting a substantial matching of the theoretical structure of the HSNS items to the real data. Thus, the first principal component seemed to identify an Oversensitivity to Judgement dimension, whereas the second principal component was akin to the Egocentrism dimension. The principal components were significantly correlated in both clinical ($r = 0.56$, $p < 0.001$) and non-clinical ($r = 0.45$, $p < 0.001$) samples. Moreover, all the HSNS items showed substantial

¹Descriptive statistics, and gender and age differences are available upon request from the authors.

²Detailed results of parallel analyses in clinical and non-clinical participants are available upon request from the authors.

Table 1: Oblique Procrustes analysis results in clinical ($N = 366$) and non-clinical ($N = 385$) participants

Hypersensitive Narcissism Scale items	Clinical sample		Non-clinical sample	
	O-S	E	O-S	E
1. I can become entirely absorbed...	0.36	0.02	0.50	-0.02
2. My feelings are easily hurt...	0.58	-0.17	0.61	-0.05
3. When I enter a room...	0.67	-0.05	0.63	-0.11
4. I dislike sharing the credit...	0.09	0.42	0.09	0.57
5. I feel that I have enough...	-0.05	0.64	-0.06	0.69
6. I feel that I am temperamentally...	0.45	0.23	0.44	0.15
7. I often interpret the remarks...	0.54	0.02	0.51	0.10
8. I easily become wrapped up...	0.19	0.56	0.36	0.42
9. I dislike being with a group...	0.51	0.10	0.33	0.32
10. I am secretly 'put out'...	-0.11	0.67	-0.07	0.71
Factor Congruence Coefficients	0.97 ^a	0.95 ^a	0.94 ^a	0.94 ^a

Note: The Hypersensitive Narcissism Scale items are abridged; O-S, Oversensitivity to Judgement; E, Egocentrism.

^a $p < 0.01$ (i.e., congruence coefficient higher than that of 99% of rotation from random data).

(i.e., greater than 0.30) positive loadings on the first unrotated principal component in both clinical (median loading = 0.52) and non-clinical (median loading = 0.51) participants, suggesting a second-order unidimensional structure of the HSNS items.

Median variable CC values were 0.98 and 0.99 among clinical and non-clinical participants respectively; only HSNS item 9, 'I dislike being with a group unless I know that I am appreciated by at least one of those present', showed a loading pattern in the non-clinical sample that was not consistent with the theoretical assignment. The component structure was highly consistent across the two samples, as indicated by factor score r values of 0.98 and 0.97 (all $ps < 0.001$) for Oversensitivity to Judgement and Egocentrism principal components respectively. In the clinical sample, Cronbach alpha values were 0.66 and 0.62 for Oversensitivity to Judgement and Egocentrism sub-scales respectively. Similar findings were obtained in the non-clinical sample.

HSNS, NPI and dimensionally assessed DSM-IV PD diagnoses

As expected (Hendin & Cheek, 1997), the HSNS total score correlated poorly, albeit significantly, with the NPI composite score both in the clinical— $r = 0.12$, $p < 0.025$ —and in the non-clinical sample, $r = 0.20$, $p < 0.001$. Only the Egocentrism dimension of the HSNS was significantly, albeit weakly, correlated with the NPI both in clinical, $r = 0.18$, $p < 0.001$, and non-clinical participants, $r = 0.20$, $p < 0.001$.

Regression analysis summary findings are listed in Table 2. The HSNS and the NPI showed almost opposite patterns of correlations with interview-based measures of DSM-IV PDs. The HSNS total score was a weak albeit significant predictor of several dimensionally assessed (i.e., number of symptoms) DSM-IV PDs, as well as of the overall number of SCID-II PD diagnoses. Consistent with previous observations and with our hypotheses, it predicted significantly APD and BPD as well as

Table 2: Hypersensitive Narcissism Scale (HSNS), Narcissistic Personality Inventory (NPI) and DSM-IV Personality Disorders: regression analysis results ($N = 366$)

	APD β	DPD β	OCPD β	PAPD β	DEPD β	PPD β	SZPD β	SPD β	HPD β	NPD β	BPD β	ASPD β	N. of PDs β
HSNS	0.21 ^c			0.16 ^b	0.12 ^a	0.23 ^c	0.19 ^c			0.13 ^b	0.16 ^b		0.27 ^c
NPI	-0.31 ^c	-0.18 ^b		0.18 ^c	-0.23 ^c				0.35 ^c	0.44 ^c	0.11 ^a		
Model R^2_{adj}	0.12 ^c	0.03 ^b	0.01	0.06 ^c	0.05 ^c	0.05 ^c	0.03 ^b	0.01	0.12 ^c	0.22 ^c	0.03 ^b	0.00	0.09 ^c

Note: For ease of presentation only significant (i.e., $p < 0.05$) standardized regression coefficients (β weights) are displayed. Personality Disorder diagnoses are listed in SCID-II order. APD, Avoidant Personality Disorder; DPD, Dependent Personality Disorder; OCPD, Obsessive–Compulsive Personality Disorder; PAPD: Passive–Aggressive Personality Disorder; DEPD, Depressive Personality Disorder; PPD, Paranoid Personality Disorder; SZPD, Schizotypal Personality Disorder; SPD, Schizoid Personality Disorder; HPD, Histrionic Personality Disorder; NPD, Narcissistic Personality Disorder; BPD, Borderline Personality Disorder; ASPD, Antisocial Personality Disorder; N. of PDs, Number of Personality Disorder Diagnoses; R^2_{adj} : adjusted R^2 statistic.

^a $p < 0.05$.

^b $p < 0.01$.

^c $p < 0.001$.

Paranoid Personality Disorder (PPD), SZPD, PAPD and Depressive Personality Disorder (DEPD). The HSNS Oversensitivity to Judgement sub-scale was a significant predictor of dimensionally assessed APD ($\beta = 0.20$, $p < 0.001$), DPD ($\beta = 0.18$, $p < 0.01$), DEPD ($\beta = 0.11$, $p < 0.05$), PPD ($\beta = 0.16$, $p < 0.01$), SZPD ($\beta = 0.15$, $p < 0.01$) and BPD ($\beta = 0.25$, $p < 0.001$) diagnoses (as well as of the number of PD diagnoses, $\beta = 0.31$, $p < 0.001$), whereas the Egocentrism dimension selectively predicted dimensionally assessed DPD ($\beta = -0.18$, $p < 0.01$), PAPD ($\beta = -0.12$, $p < 0.05$) and NPD ($\beta = 0.13$, $p < 0.05$) diagnoses.

On the contrary, the NPI total score was a negative predictor of APD, DPD and DEPD, and a positive predictor of HPD and PAPD. As expected, the NPI total score was a substantial, positive predictor of the interview-based dimensional diagnosis of DSM-IV NPD.

Relationships with TCI-R dimensions

Regression analysis results in clinical and non-clinical participants are listed in Table 3. In both

samples, the HSNS and the NPI showed somewhat opposite patterns of predictions with the TCI-R temperament scales. The NPI total score seemed to be associated with a temperamental profile that was characterized by high NS and low HA; at the opposite, the HSNS total score significantly predicted high HA scores (Cloninger et al., 1994) and low RD in both clinical and non-clinical participants. Despite these almost opposite temperamental profiles, both the HSNS and the NPI total scores showed significant negative β coefficients with respect to the C character scale in both clinical and non-clinical participants. Among clinical participants, the HSNS Oversensitivity to Judgement sub-scale significantly predicted only HA ($\beta = 0.31$, $p < 0.001$) and ST ($\beta = 0.22$, $p < 0.001$); high scorers on the HSNS Egocentrism sub-scales showed low scores on RD ($\beta = -0.23$, $p < 0.001$) and C ($\beta = -0.27$, $p < 0.001$). Although similar findings were observed also in the non-clinical sample, in this latter group, S was negatively predicted by both Oversensitivity to Judgement ($\beta = -0.31$, $p < 0.001$) and Egocentrism ($\beta = -0.17$, $p < 0.001$) sub-scales, whereas ST

Table 3: Hypersensitive Narcissism Scale (HSNS), Narcissistic Personality Inventory (NPI) and the Temperament and Character Inventory-Revised Scales: regression analysis results in clinical ($N = 366$) and non-clinical ($N = 385$) participants

	NS β	HA β	RD β	PE β	SD β	C β	ST β
Clinical Participants ($N = 366$)							
HSNS		0.32 ^c	-0.14 ^b	-0.16 ^b		-0.20 ^c	0.18 ^c
NPI	0.25 ^c	-0.22 ^c		0.32 ^c		-0.18 ^c	0.11 ^a
Model R^2_{adj}	0.06 ^c	0.13 ^c	0.02 ^a	0.11 ^c	0.00	0.08 ^c	0.04 ^b
Non Clinical Participants ($N = 385$)							
HSNS		0.40 ^c	-0.25 ^c		-0.41 ^c	-0.38 ^c	
NPI	0.34 ^c	-0.37 ^c	0.13 ^a	0.39 ^c		-0.16 ^b	
Model R^2_{adj}	0.11 ^c	0.23 ^c	0.06 ^c	0.14 ^c	0.16 ^c	0.19 ^c	0.01

Note: For ease of presentation only significant (i.e., $p < 0.05$) standardized regression coefficients (β weights) are displayed. NS, Novelty Seeking; HA, Harm Avoidance; RD, Reward Dependence; PE, Persistence; SD, Self-Directedness; C, Cooperativeness; ST, Self-transcendence; R^2_{adj} : adjusted R^2 statistic.

^a $p < 0.05$.

^b $p < 0.01$.

^c $p < 0.001$.

showed opposite relationships with Oversensitivity to Judgement ($\beta = 0.25$, $p < 0.001$) and Egocentrism ($\beta = -0.19$, $p < 0.001$).

Discussion

As a whole, our findings suggest that the HSNS is a self-report measure of hypersensitive narcissism provided with adequate reliability—particularly when its limited length is taken into account—and construct validity, both in clinical and non-clinical participants; although test–retest data were available only for limited subgroups of subjects, nonetheless they are suggestive of a moderate consistency of the HSNS scores on a three-month interval.

Principal component results were highly consistent with our hypotheses. Dimensionality analysis results suggested a two-factor structure of the HSNS item correlation matrices both in clinical and non-clinical participants. Procrustes rotation and Monte Carlo analyses clearly showed that factor matching was not simply the result of rota-

tion biases or capitalization on chance. Rather, according to our findings, the latent construct measured by the HSNS seems to represent the intersection of two dissociable albeit correlated facets that were called ‘Oversensitivity to Judgement’ and ‘Egocentrism’. As a whole, these findings were consistent with our hypotheses and seemed to indicate that the HSNS Oversensitivity to Judgement and Egocentrism sub-scales should be conceptualized as distinct facets of an underlying common dimension rather than independent constructs. Thus, the HSNS total score may be legitimately used in the overall assessment of hypersensitive narcissism, whereas the two sub-scales may provide additional information as to specific aspects of this personality dimension.

Overall, our data suggest that hypersensitive narcissism may represent a dimension of personality pathology that is relevant for several PD diagnoses; this result was consistent with previous findings suggesting that pathological narcissism represents a core of PD (Morey, 2005). Interestingly, the NPI, a well-known measure of grandiose narcissism, showed specific relations to NPD and

HPD. This finding was consistent with the fact that the diagnostic criteria for NPD in the *DSM-IV* were designed to assess only the grandiose subtype of narcissistic psychopathology (Cooper, 1998; Gabbard, 1989, 1998). Considering the HSNS sub-scales, our findings suggest to think of self-absorbed hypersensitivity as a characterological feature that is common to a number of PDs, whereas Egocentrism seemed to be specifically, albeit weakly, related to NPD, suggesting that the HSNS identifies a dimension of narcissistic personality only marginally described by the *DSM-IV* NPD model. The positive association between HSNS and NPI total scores, and *DSM-IV* PAPD was consistent with previous studies suggesting that this PD may represent a variant of pathological narcissism (Fossati et al., 2007).

Finally, the presence of a diffuse pattern of weak predictions of the HSNS total score with respect to several *DSM-IV* PD diagnoses strongly supports previous observations that the lack in the *DSM-IV* of a set of criteria explicitly designed to assess hypersensitive narcissism may end in both neglecting this variant of narcissistic pathology and misdiagnosing it as other distinct *DSM-IV* PDs (Dickinson & Pincus, 2003).

In the present study, the HSNS and the NPI showed radically different patterns of regression coefficients with respect to the TCI-R temperament scales, but they shared similar negative correlations with the cooperativeness character scale. These findings seemed to suggest that the two faces of narcissism share to some extent a common core of lack of empathy, vengefulness, intolerance and interpersonal exploitation (i.e., low C; Cloninger et al., 1994), although they are characterized by different implicit patterns of emotion regulation. Interestingly, TCI-R findings seem to suggest that hypersensitive and grandiose dynamics in narcissistic personality constellations may at least partially reflect different temperamental dispositions.

In particular, grandiose narcissism seemed to be associated with boredom susceptibility, impulsiveness (i.e., high NS; Cloninger et al., 1994), confi-

dence in the face of danger and uncertainty up to unresponsiveness to danger (i.e., low HA; Cloninger et al., 1994), and ambitiousness and perfectionism (i.e., high PE; Cloninger et al., 1994).

On the contrary, hypersensitive narcissism is characterized by inhibition in social situations, unnecessary worry and pessimism (i.e., high HA; Cloninger et al., 1994). In other words, these results suggest that hypersensitive and grandiose narcissism share a common deficit in the representation of self- and other images, which may be expressed in radically different ways according to the different patterns of emotion regulations that characterize the two faces of narcissism. Although it was not replicated in the clinical sample, the negative relation in the non-clinical sample between the total HSNS total score and the S total score was interesting because low scores on S (and C) are considered predictors of general personality pathology, i.e., presence of any PD diagnosis (Ball, Tennen, & Kranzler, 1999; Ball, Tennen, Poling, Kranzler, & Rounsaville, 1997; Fossati et al., 2007; Svrakic, Whitehead, Przybeck, & Cloninger, 1993).

Within the hypersensitive narcissism realm, Oversensitivity to Judgement and Egocentrism had different implications for temperament and character profile. In particular, Oversensitivity to Judgement was related to behavioural inhibition (i.e., HA), whereas Egocentrism was the marker of narcissistic dysfunction, since it predicted low cooperativeness and poor interest in social relationships (i.e., low RD).

In a sense, these results seem to suggest that hypersensitive and grandiose narcissism seemed to represent two sides of the same coin. In what we think is grandiose narcissism, the person's narcissistic posture and defences very frequently prevents the individual from truly experiencing his or her feeling of inadequacy. In hypersensitive narcissism, the person is constantly and consciously trying to fend off being overwhelmed by the same feelings of inadequacy that the grandiose narcissist is quite successful in accomplishing most of the time. Indeed, our findings suggest that problems

with self and other images are central to both hypersensitive and grandiose dimensions of narcissism and that narcissistic vulnerabilities may be significantly present in several *DSM-IV* PD diagnoses. These results are consistent with Kernberg's (1998) hypothesis that narcissistic pathology is embedded within the borderline level of personality organization, i.e., a severely disturbed level of personality organization, characterized by the use of primitive defences, identity diffusion and deficit in reality testing, which is thought to cut across the *DSM-IV* PD diagnoses.

The grandiose–hypersensitivity distinction may be a split inherent to the dynamics of narcissism, i.e., narcissistic individuals can be both vulnerable and self-absorbed at the same time (Murray, 1938). This perspective raises another relevant issue—which was beyond the aims of the present study—that is, whether hypersensitive and grandiose manifestations of narcissism do in fact represent two different and stable narcissistic personality constellations, or rather if they are different manifestations in different occasions of a single narcissistic disorder. In other words, the so-called hypersensitive narcissism could not be a dissociable narcissistic personality but an extreme reaction of narcissistic subjects when their egotism is severely threatened or frustrated by reality (Baumeister, Boden, & Smart, 1996).

Drawing a conclusion, the results of this study supported the reliability and construct validity of the HSNS as a measure of hypersensitive narcissism; they also evidenced the existence of dissociable sub-domains within the realm of hypersensitive narcissism and stressed the existence of selected personality features that may be useful in differentiating hypersensitive narcissism from grandiose narcissism. Consistent with previous observations (Dickinson & Pincus, 2003; Emmons, 1987; Otway & Vignoles, 2006), our results showed that hypersensitive and grandiose dimensions represent dissociable aspects of narcissistic personality that share a common core of low cooperativeness but are characterized by distinct temperament profiles.

However, we would like to stress that the results of these findings should be considered in the light of several limitations. Although the two samples involved in the present study were moderately large, they were convenient study groups rather than random samples; moreover, the clinical sample was only composed of outpatient participants. These aspects inherently limit the generalizability of our findings; however, including inpatients may be problematic, since an inpatient sample might 'over-endorse' narcissistic issues and problems. Finally, the retest sample sizes were too small to draw any conclusion; the retest data provided by our study should be considered at best as suggestive. Our factor analyses were basically exploratory in nature; although our findings supported a two-factor solution, it is possible that a one-factor solution would fit better in a CFA.

The *DSM-IV* PD diagnoses were assessed using a semi-structured interview, whereas the assessment of hypersensitive narcissism relied on a self-report instrument (i.e., the HSNS); this may have been helpful in controlling for spurious associations due to method effects. The same was not true in the case of associations between the HSNS—as well as the NPI—with the TCIR scales since they are both self-report questionnaires; in this case, it cannot be excluded that method factors—say, item wording, halo effects etc.—may have biased to some extent the observed correlations. Finally, although in the present study the dimensional PD diagnoses were provided with adequate inter-rater reliability (by the way, it should be taken into account that pair-wise interview design is likely to produce inflated estimates of the actual inter-rater reliability), it should be stressed that SCID-II is only one of several semi-structured interviews whose diagnostic convergence is a somewhat debated topic (Zimmerman, 1994). It cannot be excluded that the use of different interviews for diagnosing PDs could end in a different pattern of associations with the HSNS as well as with the NPI.

Measuring and evaluating narcissism in a general psychiatric sample with a multiplicity of

diagnoses, including also axis I diagnoses, may lead to biased results; future studies based on samples of subjects with NPD diagnosis only will be necessary before accepting our results. However, it should be stressed that in this study, the majority of the results that were obtained in the clinical sample was replicated in an independent sample of non-clinical subjects.

Even bearing these limitations in mind, we feel that the results of this study suggest that the HSNS is a reliable and valid instrument that could be useful in the process of 'carving narcissism at its joints', that is, in differentiating hypersensitive narcissism from other constructs.

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