When grandiosity and vulnerability collide: Implicit and explicit self-esteem in patients with narcissistic personality disorder

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ABSTRACT

Background and objectives: Narcissistic personality disorder (NPD) is characterized by reports of grandiosity including exaggerated illusions of superiority and entitlement (DSM-IV-TR, APA, 2000). Based on clinical theories (e.g., Kernberg, 1975), many researchers argue that high explicit self-esteem in narcissists masks underlying implicit vulnerability (low implicit self-esteem). Conversely, based on social learning theories (i.e., Millon, 1981), people with NPD are characterized by implicit grandiosity (high implicit self-esteem). We test these competing hypotheses in patients diagnosed with NPD.
Methods: The present study examined implicit self-esteem (using an Implicit Association Test) and explicit self-esteem (using a self-report questionnaire) in patients with NPD in comparison to non-clinical and clinical, non-NPD (Borderline Personality Disorder, BPD) control groups.
Results: Patients with NPD scored lower on explicit self-esteem than non-clinical controls. In comparison to patients with BPD, NPD patients scored higher on explicit and implicit self-esteem. Moreover, within the group of NPD patients, damaged self-esteem (i.e., low explicit, high implicit) was associated with higher narcissistic psychopathology.
Limitations: In both clinical groups we included participants seeking psychiatric treatment, which might influence explicit self-esteem. Longitudinal studies are needed to further assess self-esteem stability in NPD patients in comparison to the control groups.
Conclusions: Our findings are indicative of vulnerable facets in patients with NPD (i.e., low explicit self-esteem). Furthermore, damaged self-esteem is connected to specific psychopathology within the NPD group. Implications for research on NPD are discussed.

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1. Introduction

According to the DSM-IV-TR (APA, 2000), narcissistic personality disorder (NPD) is characterized by a "pervasive pattern of grandiosity, need for admiration, and lack of empathy" (Saß, Wittchen, & Zaudig, 2003, p. 781). One question that inspires enduring debates is whether narcissistic grandiosity reflects exaggerated ego robustness or an attempt to mask underlying implicit vulnerability. In the present study, we addressed a gap in

the literature by providing a clearer description of the grandiose self in patients with NPD. Furthermore, we investigated whether pathological narcissism is accompanied by deep-seated feelings of insecurity; if so, this would represent a vulnerable aspect of NPD.

Here, we use the term 'pathological narcissism' to refer to a diagnosis of NPD as defined in the DSM-IV-TR (APA, 2000), and the term 'normal narcissism' to refer to non-clinical levels of narcissistic tendencies (e.g., Miller & Campbell, 2008; Pincus & Lukowitsky, 2010; Zeigler-Hill, Green, Arnau, Sisemore, & Myers, 2011). Although no study has empirically assessed the difference between normal and pathological narcissism, most authors agree that they are associated but distinct dimensions of personality (e.g., Pincus et al., 2009). Before describing our study in detail, we provide information on implicit and explicit self-esteem.

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1.1. Implicit and explicit self-esteem

Several studies provide evidence that individuals may report grandiose feelings of self-worth but simultaneously have negative attitudes about themselves of which they are unaware (Bosson, Brown, Zeigler-Hill, & Swann, 2003; Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003). The deliberative evaluation of the self that is assessed with direct self-report measures is called explicit self-esteem (e.g., Kernis, 2003). The automatic, overlearned, presumably non-conscious evaluation of the self is called implicit self-esteem (Greenwald & Banaji, 1995; Pelham & Hetts, 1999) and is assessed with indirect measures that infer self-evaluations from reactions to self-relevant stimuli (Bosson, Swann, & Pennebaker, 2000). According to dual-process models, explicit and implicit self-esteem reflect two separate systems of information processing (Epstein, 1994; Strack & Deutsch, 2004; Wilson, Lindsey, & Schooler, 2000): Explicit self-esteem is part of the reflective system while implicit self-esteem is part of the impulsive system of information processing. This duality is also emphasized in recent studies which showed that explicit self-esteem predicts reflected and controlled responses, while implicit self-esteem predicts spontaneous and affective behavior (Conner & Barrett, 2005; Rudolph, Schröder-Abé, Riketta, & Schütz, 2010).

Implicit and explicit self-esteem are usually uncorrelated or only weakly correlated (Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005; Krizan & Suls, 2008). Thus, individuals can show different combinations of explicit and implicit self-esteem levels. In particular, two types of self-esteem discrepancies occur: (a) fragile self-esteem (a combination of high explicit and low implicit self-esteem; Bosson et al., 2003), and (b) damaged self-esteem (a combination of low explicit and high implicit self-esteem; Schröder-Abé, Rudolph, & Schütz, 2007). Individuals with fragile self-esteem are assumed to possess high explicit self-esteem that masks low implicit self-esteem (see Bosson et al., 2003). Recent research provided evidence that this self-esteem combination is associated with defensive efforts to protect high explicit self-esteem after ego-threats (e.g., Jordan et al., 2003; McGregor & Marigold, 2003). The term damaged self-esteem was first described by Schröder-Abé et al. (2007). Some researchers assume that individuals with damaged self-esteem have high explicit self-esteem that decreases with time while their implicit self-esteem remains high, given that implicit self-esteem is relatively resistant to negative life events (see Schröder-Abé et al., 2007).

According to some authors, explicit and implicit self-esteem are established during different stages of the life span, which could account for some cases of discrepant self-esteem. For instance, Bowlby (1982) assumed that the foundation of judgments about the self develops during interactions with primary caregivers. According to Bowlby, if information from early interactions is threatening, it is selectively excluded and consequently exists primarily on an implicit level. During meaningful interactions with others throughout life, positive judgments might develop and coexist with former negative judgments about the self along an explicit–implicit continuum (also see Shaver & Mikulincer, 2003). Even though Bowlby did not use the term implicit and explicit self-esteem, he concluded that an individual may report a certain conscious attitude, while holding a contrasting attitude at a deeper, less conscious level of information processing. Similarly, Wilson et al. (2000) argue that people adopt explicit attitudes that coexist with their older (and sometimes contradictory) implicit attitudes. Moreover, Greenwald and Banaji (1995) argue that explicit attitudes reflect recent and accessible events, while implicit attitudes have their origins in past inaccessible experiences. Explicit self-esteem changes until adulthood and reaches core stability around the age of 30 (Robins & Trzesniewski, 2005), while implicit self-esteem is presumably established in early childhood during interactions with primary caregivers. A recent empirical finding supports this assumption. According to a study by DeHart, Pelham, and Tennen (2006), implicit self-esteem levels are related to people's early interactions with their parents (e.g., higher implicit self-esteem is demonstrated by individuals with more nurturing parents). Early experiences (e.g., overvaluation or devaluation in early childhood years) might therefore affect implicit self-esteem while divergent later experiences (e.g., critical life events) could impact explicit self-esteem, thus leading to implicit–explicit discrepancies. Nevertheless, implicit self-esteem might be also malleable. Recent studies provide preliminary evidence that implicit measures show short-term fluctuations in reaction to social cues (Weisbuch, Sinclair, Skorinko, & Eccleston, 2009) or academic feedback (Park, Crocker, & Kiefer, 2007). Thus, it is not clear whether implicit attitudes change over the long term.

Recent findings link specific psychiatric disorders with certain patterns of explicit and implicit self-esteem. For example, people with body dysmorphic disorder exhibit low implicit self-esteem in comparison to non-clinical controls (Buhlmann, Teachman, Gerbershagen, Kikul, & Rief, 2008). Moreover, several studies also examined the relation between depression and implicit self-esteem. While all studies point to lower explicit self-esteem among depressed persons compared to non-clinical and clinical control groups (e.g., Valiente et al., 2011), the findings for implicit self-esteem are inconsistent. One recent study provided evidence that remitted depressed patients with three or more episodes had lower implicit self-esteem than remitted depressed patients with less than three episodes (Risch et al., 2010). In contrast, other studies suggest that high implicit self-esteem is prevalent in depressed individuals in comparison to healthy controls (De Raedt, Schacht, Franck, & De Houwer, 2006; Franck, De Raedt, & De Houwer, 2007; Gemar, Segal, Sagrati, & Kennedy, 2001; Valiente et al., 2011) and in depressed patients with suicidal ideation (Franck, De Raedt, Dereu, & Van den Abbeele, 2007).

These findings with psychiatric patients highlight the fact that high implicit self-esteem is not necessarily advantageous (Schröder-Abé et al., 2007). In particular, the combination of explicit and implicit self-esteem seems to correlate with psychological dysfunction. For instance, within a group of BPD patients those with larger discrepancies between implicit and low explicit self-esteem exhibited more symptoms (e.g., autoaggression; Vater, Schröder-Abé, Schütz, Lammers, & Roepke, 2010). Furthermore, damaged self-esteem is associated with lower psychological well-being and emotion regulation difficulties among non-clinical individuals (Schröder-Abé et al., 2007).

1.2. Self-esteem and narcissism

Several authors have proposed that specific parenting styles lead to narcissistic features that compensate for unmet narcissistic needs. Kernberg (1975) provided a theoretical approach to understanding grandiosity in narcissists which has been labeled the 'mask model' (Campbell, Bosson, Goheen, Lakey, & Kernis, 2007; Gregg & Sedikides, 2010). According to Kernberg, individuals possess multiple self-representations which become integrated during empathic interactions with significant others during childhood. In Kernberg's view, pathological narcissism arises from invalidating and inconsistent interactions with primary nurturing figures. Specifically, inadequate parenting leads to deep-seated feelings of inferiority which are accompanied by attempts to maintain positive explicit self-concepts despite a general lack of (implicit) confidence. Consequently, narcissists possess colliding self-representations. Furthermore, narcissistic grandiosity develops as a defense against

a frustrated, empty self-concept stemming from devaluation by parents (Kernberg, 1975).

Millon (1981) provides a contrasting perspective and proposes that grandiose self-appraisals in narcissists stem from parental pampering rather than from devaluation in early life. According to Millon's view, parents of narcissists engage in excessive over-valuation of their child leading to the development of a grandiose self-image. This excessive unconditional praise also represents a form of invalidation, as parental responses to the child's behaviors do not reflect objective reality.

Until now, there is only preliminary evidence for the roles of parental devaluation and overvaluation in the development of narcissism, and this evidence is based on non-clinical (non-path-ological) individuals who are high in narcissism. Some self-report studies emphasize the role of parental devaluation: Individuals high in narcissism remember their parents as being cold and indifferent (Otway & Vignoles, 2006), insufficiently empathic (Trumpeter, Watson, O'Leary, & Weathington, 2008), and control-ling (Horton, Bleau, & Drwecki, 2006). In contrast, however, narcissistic individuals also report recollections of their parents as being praising and uncritical (Otway & Vignoles, 2006), overly permissive, and rarely setting restrictions (Horton et al., 2006). Although the precise origins of narcissism are not yet clear, these studies all suggest that invalidation by parents (either devaluation or overvaluation) is prevalent in non-clinical narcissistic individ-uals. Even though invalidation during childhood might be prevalent in patients with NPD, this does not necessarily mean that parental behavior culminates in severe childhood maltreatment such as sexual, physical, or emotional abuse and emotional or physical neglect (Lobbestael, Arntz, & Bernstein, 2010).

To date, several studies have indicated that normal narcissism is associated with high explicit self-esteem in non-clinical samples (e.g., Bosson et al., 2008; Bushman & Baumeister, 1998; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004). Within clinical samples, however, evidence that narcissism is accompanied by high levels of explicit self-esteem is inconsistent. Some studies provide evidence that narcissism (measured with the Narcissistic Person-ality Inventory or NPI, which supposedly captures normal narcis-sism; see Miller & Campbell, 2008, for a review) in inpatient samples with psychiatric disorders is positively correlated with explicit self-esteem (Pincus et al., 2009; Svindseth, Nøttestad, Wallin, Roaldset, & Dahl, 2008). In contrast, Pincus et al. (2009) suggest that narcissism (assessed with the Pathological Narcis-sism Inventory or PNI, which supposedly captures pathological narcissism; see Miller & Campbell, 2008) is negatively correlated with explicit self-esteem in patients with psychiatric disorders. Nevertheless, all of these studies consist of samples of individuals with various psychiatric disorders or students; none of them included patients specifically diagnosed with NPD and compared them with other non-clinical groups.

Within social and personality psychology, researchers have examined the implicit self-esteem levels of non-clinical individuals who were high or low in narcissism, as measured with the NPI (Bosson et al., 2008; Jordan et al., 2003). Some empirical studies showed that narcissism in college students reflects high explicit self-esteem that masks low implicit self-esteem (Jordan et al., 2003; Zeigler-Hill, 2006), but other empirical investigations failed to replicate this pattern (Bosson et al., 2008; Campbell et al., 2007; Gregg & Sedikides, 2010). Clinical theories on the development of narcissism might help to explain these inconsistent findings con-cerning implicit and explicit self-esteem.

Despite researchers' widespread interest in the associations of self-esteem and narcissism, no past studies have assessed either explicit or implicit self-esteem in a clinical group of individuals with a diagnosis of NPD. As already mentioned, most of the existing

evidence regarding narcissism and (explicit and implicit) self-esteem was derived from studies with non-clinical individuals. However, the models used to predict associations between self-esteem and narcissism are clinical–theoretical approaches established to provide insight in the personality structure of individuals with NPD. We assume that a true test of these models requires studying the connections between self-esteem and narcissism among patients who fulfill the diagnostic criteria for NPD, as NPD patients report higher psychological strain in comparison to non-clinical individuals with normal narcissism (Foster & Campbell, 2007).

As grandiosity is a core feature of NPD, narcissistic patients might show higher scores on explicit self-esteem in comparison to non-clinical controls. Furthermore, explicit self-esteem is positively related to narcissism as measured with the NPI in non-clinical individuals (Campbell et al., 2007). However, recent studies provided evidence that pathological narcissism (assessed with the PNI) is negatively associated with explicit self-esteem in groups of psychiatric patients who do not have NPD (e.g., Pincus et al., 2009). Recent studies with non-clinical individuals (Besser & Priel, 2010; Zeigler-Hill, Clark, & Pickard, 2008) also suggest that individuals with normal narcissism (measured with the NPI) exhibit contingent self-esteem (i.e., explicit self-esteem that is strongly dependent on external sources). Moreover, most NPD patients entering treatment experience a temporary or recurrent crisis that should result in lower levels of explicit self-esteem in comparison to non-clinical individuals (Morf & Rhodewalt, 2001). Therefore we hypothesize that patients with NPD will exhibit lower explicit self-esteem in comparison to a non-clinical control group.

Regarding implicit self-esteem, we tested two opposing hypotheses. As already mentioned, early experiences with parents seem to be connected to implicit self-esteem levels: Individuals with less nurturing parents exhibit lower levels of implicit self-esteem compared with those whose parents were more nurturing (DeHart et al., 2006). Moreover, Kernberg (1975) assumes parental devaluation to be prevalent in patients with NPD. This devaluation might lead to *lower* implicit self-esteem in comparison to non-clinical controls. Considering the assumptions of Millon (1981), however, one might predict instead that individuals with narcis-sism experienced parental overvaluation and therefore display *higher* implicit self-esteem in comparison to non-clinical controls. As these theoretical perspectives contradict each other, we tested which one was supported by the data.

To investigate whether our findings are specific to NPD or instead reflect a general characteristic of psychopathology we used a group of patients with Borderline Personality Disorder (BPD) as an additional clinical control group. We selected this disorder because NPD and BPD show substantial comorbidity (Westen, Shedler, & Bradley, 2006) and an overlap of symptoms (e.g., affect dysregulation, instability of relationships; Blais, Hilsenroth, & Castlebury, 1997). Recent studies found that patients with BPD reported low levels of explicit self-esteem compared to both non-clinical controls (Roepke et al., 2010) and patients with Avoidant Personality Disorder (Lynum, Wilberg, & Karterud, 2008). According to Jacob et al. (2010), low explicit self-esteem in BPD patients culminates in self-injurious behavior and self-punishment. As grandiosity is absent from BPD patients, we hypothesize that Borderline patients will score lower on explicit self-esteem in comparison to both NPD patients and non-clinical controls. As there are no studies that measure implicit self-esteem in patients with BPD, we treated this question as exploratory. In line with past findings on explicit self-esteem, one could assume that patients with BPD might show lower implicit self-esteem than non-clinical controls. Furthermore, patients with BPD report negative childhood experiences (e.g. Lobbestael et al., 2010) that may account for low levels of implicit self-esteem. However, the literature provides no guidance for hypothesizing how BPD and NPD patients might differ

Table 1
Comorbidities and medication of NPD and BPD patients.

	(1) NPD patients (N = 51)		(2) Subgroup: NPD without BPD (N = 24)		(3) BPD without NPD (N = 26)	
	N	%	N	%	N	%
Any affective disorder						
Major depression current	20	39.22	12	50.00	8	30.77
Dysthymia	17	33.33	4	16.67	8	30.77
Any substance use disorder	17	33.33	7	29.17	10	38.46
Any anxiety disorder	7	13.73	3	12.50	11	42.31
Any eating disorder	10	19.61	3	12.50	5	19.22
Any cluster A PD	13	25.49	6	25.00	0	.00
Any cluster B PD	16	31.37	9	37.50	4	15.38
Any cluster C PD	27	52.94	11	45.83	8	30.77
Without psychotropic medication	28	54.90	17	70.83	10	38.46
Antipsychotic	6	11.76	0	.00	11	42.31
Antidepressant	23	45.10	6	25.00	13	50.00
Mood stabilizer	0	.00	0	.00	1	3.85

Note. Any cluster B PD only includes histrionic and antisocial personality disorder. NPD = narcissistic personality disorder; BPD = borderline personality disorder.

with regard to implicit self-esteem. We therefore explored whether implicit self-esteem among patients with NPD differs from that found among patients with BPD.

The second aim of our study was to determine the role of discrepancies between explicit and implicit self-esteem in predicting the severity of pathological narcissism and more general psychological impairment (e.g., depression) among patients with NPD. Recent research has shown that self-esteem discrepancies in both directions are dysfunctional and associated with lower psychological well-being and higher symptom severity within clinical and non-clinical groups (e.g., Schröder-Abé et al., 2007; Vater et al., 2010). We hypothesize that discrepancies between explicit and implicit self-esteem will predict higher narcissism scores within the NPD group.

2. Method

2.1. Participants

Fifty-one participants with a diagnosis of NPD according to the DSM-IV-TR (APA, 2000; German version, Saß et al., 2003) and forty-four non-clinical controls participated in the study. Furthermore, we recruited twenty-six participants with a diagnosis of BPD and no comorbid NPD diagnosis. For comparisons between NPD patients and non-clinical controls, we used the whole NPD group, whereas for analyses comparing NPD and BPD groups, we used a subsample of NPD patients without comorbid BPD.

All clinical patients were enrolled in a broad multicenter clinical study on NPD at the Department of Psychiatry, Charité — Universitätsmedizin Berlin, along with cooperating hospitals and

outpatient settings in Germany. Exclusion criteria for all clinical patients included a history of psychotic disorder, current mania or hypomania, current substance-induced disorder or mental retardation (IQ < 80; German intelligence test "Leistungsprüfsystem", LPS; Horn, 1983), or non-native speaker status. Comorbid Axis I diagnoses and medication details for NPD (with and without comorbid BPD) and BPD patients are provided in Table 1. We recruited all non-clinical participants from the general population using newspaper advertisements. The NPD, non-clinical, and BPD groups were matched with respect to years of education, age, and gender (see Tables 2 and 3). The study was approved by the ethics committee of the Charité — Universitätsmedizin Berlin. All participants provided written informed consent after receiving a thorough explanation of the study.

2.2. Measures

2.2.1. Implicit self-esteem: Implicit Association Test (IAT)

The IAT (Greenwald & Farnham, 2000; Greenwald, McGhee, & Schwartz, 1998) is a reaction time task which measures the strength of associations between target (self and non-self words) and attribute (pleasant and unpleasant) categories. The labels for the target and attribute categories are depicted on the upper left and right side of the computer screen. Participants are required to categorize items that appear in a random order in the center of the screen into the left or right category by pressing a left or right key. The IAT is composed of seven blocks of trials. Blocks 1, 2 and 5 are practice trials during which the participant has to make single categorizations (i.e., pleasant/unpleasant or self/non-self). The remaining blocks 3, 4, 6, and 7 are combined blocks. In blocks 3 and

Table 2
Descriptive statistics and ANOVA output for all variables.

	REI	NPD (N = 51) (male = 26 female = 25)		CG (N = 44) (male = 20 female = 25)		ANOVA			
		M	SD	M	SD	F	df	p	Partial η^2
Age	—	31.82	8.17	29.09	11.82	1.74	92	.191	.02
Years of education	—	11.08	1.65	11.70	1.57	3.28	91	.071	.04
Depression (BDI)	.94	24.22	11.96	4.74	8.51	80.76	92	.000	.47
GSI (SCL-90)	.99	1.50	.68	.39	.51	78.43	93	.000	.46
Implicit SE (IAT D-Ind)	.76	.77	.34	.72	.32	.74	92	.392	.01
Explicit SE (MSES)	.96	117.38	39.52	161.59	29.94	36.08	90	.000	.29
Narcissism (DAPP-BQ)	.86	3.07	.64	2.46	.62	15.45	73	.000	.18
Narcissism (SCID-II)	.80	21.29	2.99	3.55	2.75	323.78	89	.000	.78

Note. REI = reliability index (Split-half reliability for the IAT, Cohen's kappa for SCID-II, Cronbach's alpha for all other measures); NPD = narcissistic personality disorder; CG = control group; M = mean score; SD = standard deviation; SE = self-esteem; BDI = Beck Depression Inventory; SCL-90-R = Symptom Check List − 90 − Revised; IAT = Implicit Association Test (D-Index: higher scores indicate higher implicit self-esteem); MSES = Multidimensional Self-Esteem Scale; DAPP-BQ = Dimensional Assessment of Personality Pathology; SCID-II = Structured Clinical Interview for DSM-IV Personality Disorders.

Table 3
Descriptive statistics and ANOVA output for NPD patients without BPD, BPD patients without NPD and non-clinical controls.

	(1) NPD without BPD (N = 24)		(2) BPD without NPD (N = 26)		(3) CG (N = 44)		ANOVA				POST-HOC (Bonferroni)		
	M	SD	M	SD	M	SD	F	df	p	Partial η^2	1–2	1–3	2–3
Age	34.50	9.00	28.67	6.73	29.09	11.82	2.85	91	.063	.06	.115	.104	1.000
Years of education	10.78	1.24	10.38	1.36	10.97	1.14	1.88	89	.159	.04	.786	1.000	.169
Depression (BDI)	21.81	11.51	34.11	10.92	4.74	8.51	62.26	83	.000	.60	.000	.000	.000
GSI (SCL-90-R)	1.35	.61	1.73	.70	.39	.51	47.12	92	.000	.51	.084	.000	.000
Implicit SE (IAT D-Ind)	.80	.27	.49	.57	.67	.32	3.88	90	.024	.08	.021	.589	.219
Explicit SE (MSES)	133.13	38.75	74.19	27.60	161.59	29.94	62.12	90	.000	.58	.000	.002	.000

Note. NPD = narcissistic personality disorder; BPD = Borderline Personality Disorder; CG = control group; M = mean score; SD = standard deviation; SE = self-esteem; BDI = Beck Depression Inventory; SCL − 90 − R = Symptom Check List − 90 − Revised; IAT = Implicit Association Test (D-Index: higher scores indicate higher implicit self-esteem); MSES = Multidimensional Self-Esteem Scale.

4, respondents categorize self-relevant and pleasant words using the same response key. In blocks 6 and 7, the categories are switched and participants have to categorize self-relevant words with *un*pleasant words. We kept critical block order constant because we were interested in individual differences and wanted to avoid obstructing rank order for correlation analyses.

The lists of stimuli were adapted from Greenwald and Farnham (2000). In a pilot study, we had non-clinical participants (N = 25) rate a list of 40 positive and negative words on a 6-point bipolar Likert scale according to their positivity/negativity. Stimuli were chosen according to their highest average rating in positivity *or* negativity and word length. Pleasant stimuli used in the main study were: happiness [Freude], peace [Frieden], health [Gesundheit], luck [Glçk], smile [Lachen], and love [Liebe]. Unpleasant stimuli were disgust [Ekel], war [Krieg], agony [Qual], grief [Trauer], death [Tod], and failure [Versagen]. Self stimuli were myself [ich], my [mein], and me [mir]. Not-self stimuli were it [es], that [das], and one [ein].

We computed the IAT index using the improved scoring algorithm (the *D*-index) which is computed as the difference in mean latencies between blocks 6/7 and 3/4, divided by the inclusive standard deviation of trials within the respective blocks (Greenwald, Nosek, & Banaji, 2003). Thus, scores reflect the ease with which respondents associate pleasant versus unpleasant words with the self, and higher IAT scores represent higher implicit self-esteem.

2.2.2. Explicit self-esteem: Multidimensional Self-Esteem Scale (MSES)

Explicit SE was measured using the total score of the MSES (Schütz & Sellin, 2006), which is a German adaptation of a scale by Fleming and Courtney (1984). Responses were made on seven-point scales with endpoints labeled *not at all* (1) and *very much* (7) or *never* (1) and *always* (7), respectively.

2.2.3. Narcissism: Dimensional Assessment of Personality Pathology (DAPP-BQ)

The DAPP-BQ (Livesley & Jackson, 2002; German version, Angleitner, Ostendorf, & Riemann, 2001) is a reliable and valid dimensional measure of pathological narcissism. Due to the length of the questionnaire, we only used the Narcissism subscale which consists of 16 items. This subscale has been shown to distinguish between normal controls and patients with personality disorders (Pukrop, 2002). The 5-point Likert scale ranges from 1 (*very unlike me*) to 5 (*very like me*).

2.2.4. Depression: Beck Depression Inventory (BDI)

The BDI (Beck, Steer, & Garbin, 1998; German version, Hautzinger, Bailer, Worall, & Keller, 1995) was employed to assess severity of depression. Participants responded to 21 items on 4-point scales, each of which consisted of four different statements

that reflected varying degrees of depressive severity. The BDI is a widely used and well-validated self-report measure of depression and reflects the individual's experience of specific symptoms over the past week.

2.2.5. General psychopathological impairment: Symptom Check List − 90 − Revised (SCL-90-R)

The Symptom Check List − 90 − Revised (Derogatis, 1997; German version, Franke, 2002) was employed to assess general psychopathological and physical impairments during the last week. Responses were made on 5-point Likert scales with endpoints labeled *not at all* (0) and *very much* (4). The GSI (Global Severity Index) mean score of the SCL-90-R indicates psychopathological impairment in general.

2.3. Procedure

To establish individual diagnoses, the German versions of the Structured Clinical Interview-IV Axis I Psychiatric Disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1996; German version: Wittchen, Zaudig, & Fydrich, 1997) and the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997; German version: Fydrich, Renneberg, Schmitz, & Wittchen, 1997) were administered by trained research assistants. All NPD and BPD patients underwent SCID-I and SCID-II interviews. Each diagnosis of a personality disorder was verified with the patients' therapists (psychiatrist or psychologist) and the therapists' supervisor (last author SR, senior psychiatrist). Participants from the non-clinical control group were screened for current or lifetime diagnosis of any Axis I or Axis II disorder through SCID-I screening (First et al., 1996; German version: Wittchen et al., 1997) and the SCID-II questionnaire (First et al., 1997; German version: Fydrich et al., 1997). We excluded individuals from the control group that met criteria for any present or past Axis I disorder assessed by SCID-I or more than three criteria for any personality disorders assessed by SCID-II.

3. Results

3.1. Descriptive statistics and intercorrelations of all measures

Table 2 presents the means and standard deviations of all measures in the current study. The indices of reliability of all scales ranged from satisfactory (.77) to excellent (.99). Table 4 presents the intercorrelations among all variables. Consistent with previous findings (Bosson et al., 2000; Hofmann et al., 2005; Krizan & Suls, 2008), implicit and explicit self-esteem were only weakly correlated or uncorrelated. Depressive symptoms, general psychopathological impairment, and explicit self-esteem were all highly intercorrelated, indicating that higher scores on explicit self-

Table 4
Intercorrelations of all variables.

	(1) BDI	(2) GSI	(3) IAT	(4) MSES	(5) DAPP-BQ
(1) Depression (BDI)		.84***	−.12	−.80***	−.25*
(2) GSI (SCL-90-R)			−.06	−.70***	.29*
(3) Implicit SE (IAT)				.13	.23*
(4) Explicit SW (MSES)					−.31*
(5) Narcissism (DAPP-BQ)					

Note. SE = self-esteem; BDI = Beck Depression Inventory; SCL-90-R = Symptom Check List − 90 − Revised; IAT = Implicit Association Test (D-Index: higher scores indicate higher implicit self-esteem); MSES = Multidimensional Self-Esteem Scale; DAPP-BQ = Dimensional Assessment of Personality Pathology. ***$p < .001$, *$p < .05$.

esteem were associated with lower symptom severity. Further, higher implicit self-esteem was associated with higher narcissism.

3.2. Group differences on all measures

Results of ANOVAs comparing individuals with NPD to those in the non-clinical control group can be found in Table 2. According to our results, NPD patients had lower scores in explicit self-esteem in comparison to non-clinical controls. Regarding implicit self-esteem, ANOVAs did not reveal a significant difference between patients with NPD and non-clinical controls. Furthermore, NPD patients had higher scores on depression and general psychopathological impairment in comparison to non-clinical individuals.

To provide evidence for the specificity of self-esteem levels in patients with NPD, we compared NPD patients (without BPD, $N = 24$), BPD patients (without NPD, $N = 26$), and non-clinical controls ($N = 44$). The results of these ANOVAS can be found in Table 3. Patients with NPD (without BPD) had significantly higher implicit and explicit self-esteem in comparison to patients with BPD (without NPD). Participants in the control group had significantly higher explicit self-esteem than both BPD and NPD patients, but did not differ significantly from the patient groups with respect to implicit self-esteem. Furthermore, patients with NPD (without BPD) scored lower on general symptom severity and depression in comparison to patients with BPD (without NPD).

3.3. Discrepant self-esteem and symptom severity

Patients with NPD showed considerable within-group variance in self-esteem scores (see Table 2), and explicit and implicit self-esteem were only weakly correlated within this group. This suggests that different self-esteem profiles (e.g., 'fragile self-esteem', 'congruent high/low self-esteem') exist within this group. To investigate whether specific combinations of implicit and explicit self-esteem are related to the severity of clinical symptoms, we conducted multiple regression analyses with explicit self-esteem, implicit self-esteem, and the interaction between these two variables as predictors. Scores on the MSES and the IAT were first centered, and the interaction was represented by the cross-product vector (Aiken & West, 1991). We regressed narcissism (DAPP-BQ), depression (BDI), and general psychological impairment (SCL-90-R) onto these predictor variables. We computed separate regression analyses for the total NPD group and the non-clinical control group. As the sample size in the group of BPD patients was too small ($N = 26$), we did not conduct regression analyses on these participants.

In the sample of NPD patients, we found significant main effects for explicit self-esteem when predicting depression scores and general psychological impairment (BDI: $\beta = −.19$, $t[45] = −5.42$, $p = .000$; GSI of the SCL-90-R: $\beta = −.77$, $t[45] = −3.56$, $p < .001$). These results indicate that higher explicit self-esteem was associated with lower depression scores and lower general psychological

impairment. There were no significant main effects of implicit self-esteem or interaction effects between explicit and implicit self-esteem predicting depression or general psychological impairment (all $ps > .12$).

When predicting narcissism, however, we found a significant main effect of implicit self-esteem ($\beta = .87$, $t[45] = 3.06$, $p = .004$), but no main effect of explicit self-esteem ($\beta = −.00$, $t[45] = −1.40$, $p = .168$). We also found a significant interaction between explicit and implicit self-esteem in this model ($\beta = −.02$, $t[45] = .12$, $p = .006$). To further explore this interaction within the clinical sample, we tested the simple slopes of implicit self-esteem at values one standard deviation above and below the mean of explicit self-esteem (Cohen & Cohen, 1983). The interaction of explicit and implicit self-esteem predicting overall narcissism (DAPP-BQ) is depicted in Fig. 1. Among NPD patients low in explicit self-esteem (−1 SD; see left side of Fig. 1), implicit self-esteem was positively related to the severity of pathological narcissism ($\beta = .88$; $t[45] = 4.26$, $p < .001$). In other words, NPD patients with damaged (low explicit, high implicit) self-esteem reported higher narcissism scores than NPD patients with congruent low self-esteem. Among NPD patients with high explicit self-esteem (+1 SD; see right side of Fig. 1), however, implicit self-esteem was unrelated to the severity of pathological narcissism ($\beta = −.06$; $t[45] = −.29$; $p = .774$). That is, NPD patients with fragile (low implicit, high explicit) self-esteem did not score higher in pathological narcissism than patients with congruent high self-esteem.

In the non-clinical control group, we found significant main effects for explicit self-esteem, but not for implicit self-esteem when predicting narcissism, depression, and general psychological impairment (all $ps > .100$). Interaction effects between explicit and implicit self-esteem were not significant ($p > .100$). Moreover, we conducted a multiple regression analysis with both the NPD group and the non-clinical control group to test whether the interaction effects differed between groups. The three-way interaction between implicit self-esteem, explicit self-esteem and group was not significant ($\beta = −.05$, $t(71) = −.17$, $p = .865$).

4. Discussion

The aims of the present study were twofold: First, we compared the levels of explicit and implicit self-esteem among patients with NPD to those found among a non-clinical control group and a clinical group of Borderline patients. Second, we explored the role of self-esteem discrepancies in pathological symptoms within the sample of patients with NPD.

The results of the present study indicate that patients with NPD report lower explicit self-esteem relative to a group of non-clinical
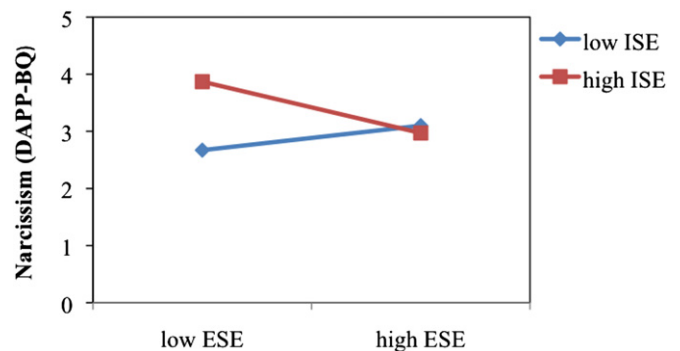
Fig. 1. Predicted values for narcissism (DAPP-BQ score) as a function of explicit SE and implicit SE. Note. $N = 51$ due to missing data; ESE = explicit self-esteem; ISE = implicit self-esteem; DAPP-BQ = dimensional assessment of personality pathology.

individuals. Regarding the level of implicit self-esteem, no differences emerged between NPD patients and the non-clinical group. Furthermore, we compared the self-esteem of NPD patients (without BPD) to that of BPD patients (without NPD). The results showed that NPD patients have higher implicit and higher explicit self-esteem in comparison to Borderline patients. Importantly, our findings go beyond past relevant research because we focused on patients with NPD, whereas past studies used either non-clinical individuals (Bosson et al., 2008; Bushman & Baumeister, 1998; Maples et al., 2010) or clinical in-patients with normal narcissism (Svindseth et al., 2008). By measuring both explicit and implicit self-esteem in patients with NPD, our study yielded several important findings and raised several questions that we address in the following sections.

4.1. Explicit self-esteem in patients with NPD

Our results suggest that patients with NPD possess relatively low explicit self-esteem in comparison to non-clinical controls. This finding contrasts with the common finding that narcissism in non-clinical individuals is associated with high explicit self-esteem (e.g., Brown & Zeigler-Hill, 2004; Morf & Rhodewalt, 1993; Sedikides et al., 2004). Nevertheless, our results are consistent with a recent study by Pincus et al. (2009) that found negative correlations between pathological narcissism and explicit self-esteem in a clinical sample. We assume that this inconsistency across studies stems from differences between normal and pathological narcissism. In what follows, we present two possible explanations for the decreased levels of explicit self-esteem we observed here in patients with NPD relative to that observed among individuals with normal narcissism as measured with the NPI in non-clinical samples.

A first plausible explanation might be the inpatient status of NPD patients in our sample. We assume that the mere existence of a temporary or recurrent crisis (the event that led to hospitalization) might temporarily reduce explicit self-esteem levels in highly narcissistic individuals. Data from our workgroup with NPD patients (Vater, Ritter, & Roepke, unpublished data) and other studies with non-clinical individuals (Besser & Priel, 2010; Zeigler-Hill et al., 2008) suggest that individuals with narcissism exhibit highly contingent self-esteem, or self-esteem that is dependent on achievement and approval from others. Individuals with normal and pathological narcissism may share a strong dependency on external sources of explicit self-esteem. Narcissism might thus be connected to high levels of explicit self-esteem as long as the individual experiences no difficulties. The occurrence of critical life events (e.g., loss of job), however, might lead to a temporary decline in explicit grandiosity as a consequence of the depleted or depreciated self in narcissistic patients. Should such self-depreciation endure, the patient might seek therapy. NPD patients in our study may thus have formerly possessed high explicit self-esteem, but a temporary crisis might result in the currently low explicit self-esteem levels we observed here. It remains unclear whether explicit self-esteem levels increase after NPD patients are released from clinical treatment.

Second, individuals with normal and pathological narcissism might both possess large self-discrepancies between their actual and ideal selves (Campbell, Reeder, Sedikides, & Elliot, 2000). While individuals with normal narcissism may exhibit personal resources (e.g., cognitive competencies, high achievement motivation) that allow them to bridge these discrepancies, patients with NPD may lack the competencies necessary for achieving their unrealistically high aims in life (Ronningstam, 2005). Therefore, patients with NPD who seek therapy may continually score low on explicit self-esteem as they fail to meet their own ideal standards due to a lack of personal resources. This assumption is supported by recent data indicating that the combination of high implicit and low explicit self-esteem is accompanied by higher scores in perfectionism — including high ideal standards (Zeigler-Hill & Terry, 2007).

When comparing NPD patients without BPD to BPD patients without NPD, we found that the latter had even lower explicit self-esteem. This is consistent with Jacob et al.'s (2010) assertion that extreme low explicit self-esteem is a core characteristic in patients with BPD. Moreover this finding indicates that similarly low explicit self-esteem is not a general feature of patient status or psychopathology, but that different personality disorders are characterized by different self-esteem patterns.

4.2. Implicit self-esteem in patients with NPD

Regarding implicit self-esteem, patients with NPD in our sample did not differ from non-clinical controls. It is important to note that implicit self-esteem measures consistently show a positivity bias across samples and even cultures (e.g., Greenwald & Farnham, 2000; Gregg & Sedikides, 2010; Rudolph, Schröder-Abé, Schütz, Gregg, & Sedikides, 2008), which indicates that implicit self-esteem is high in most individuals, including our sample of patients with NPD. Based on the social learning theory of Millon (1981), one might assume that patients with NPD formerly possessed high explicit and high implicit self-esteem but are currently experiencing a temporary decrease in explicit self-esteem due to current negative life events. From the perspective of psychoanalytical models, however, the results of this study raise serious questions about the credibility of the mask model (Kernberg, 1975), which suggests that a combination of low implicit and high explicit self-esteem should characterize patients with NPD.

Moreover, BPD patients (without NPD) exhibited lower implicit self-esteem than NPD patients (without BPD). This again indicates the specificity of self-esteem patterns among clinical groups with different disorders. We assume that severe childhood maltreatment might account for lower levels of implicit self-esteem in BPD patients. As noted earlier, some studies provide evidence that invalidation by parents (either devaluation or overvaluation) is prevalent in narcissistic individuals. However, there is also evidence that patients with NPD, in comparison to those with BPD, are less likely to report severe childhood maltreatment such as sexual, physical, or emotional abuse and emotional or physical neglect (Lobbestael et al., 2010). Therefore, it is possible that the relatively severe childhood maltreatment experienced by patients with BPD accounts for their lower implicit self-esteem compared to that of patients with NPD.

Of course, a conclusive interpretation of our results depends on the stability versus malleability of implicit self-esteem among patients with NPD and BPD. Whether our findings would persist across time is therefore a question for future research. Some authors suggest that implicit self-esteem is relatively stable as it emerges through early interactions with primary caregivers (e.g., DeHart et al., 2006). In contrast, some authors have shown that implicit measures are characterized by only moderate temporal stability (see Buhrmester, Blanton, & Swann, 2011; Park et al., 2007; Weisbuch et al., 2009). Depending on the malleability of implicit self-esteem, our findings may either indicate that narcissists' implicit self-esteem is consistently as high as that of non-clinical individuals, or that implicit self-esteem among NPD patients becomes diminished in response to temporary crises of the sort that compelled our participants to seek inpatient treatment. If the latter is true, then levels of both explicit and implicit self-esteem might increase after NPD patients are released from clinical treatment.

4.3. Relation of self-esteem discrepancies and psychopathological outcomes

Although the results of our group comparisons point to low explicit self-esteem and no difference in implicit self-esteem among patients with NPD, there is considerable variance in the data leaving room for different combinations of explicit and implicit self-esteem. Thus, NPD patients may possess discrepant or congruent (high and low) self-esteem. Our results indicate that NPD patients with relatively high implicit but low explicit self-esteem (as compared to other NPD patients) exhibit the highest narcissism scores. Our study therefore provides evidence that "colliding" high implicit and low explicit self-esteem is associated with especially high symptom severity within NPD patients.

These results are consistent with several studies showing that self-esteem discrepancies are connected with lower levels of psychological health in non-clinical populations (Schröder-Abé et al., 2007), increased severity of borderline (but not other) symptoms in BPD patients (Vater et al., 2010), and increased severity of depression in depressed patients (Franck, De Raedt, & De Houwer, 2007). The relationship between self-esteem and narcissism (but not depression or general impairment) in patients with NPD may thus be interpreted as further evidence that self-esteem discrepancies are specifically associated with symptoms that reflect the severity of psychological disorders. Future comparative studies should provide more evidence regarding the question of whether self-esteem discrepancies play a unique role in various disorders, or whether there are shared associations of self-esteem discrepancies and symptoms among both non-clinically and clinically disturbed individuals.

4.4. Limitations and implications for future studies

Our study has several limitations. A first critical issue pertains to the selection of patients with NPD, who tend to exhibit high comorbidity rates. Nevertheless, the observed comorbidity rates in our study are comparable to those reported in other studies (Russ, Shedler, Bradley, & Westen, 2008). We therefore assume that our clinical sample is representative of patients that seek treatment. Furthermore, we did not assess people's reasons for being in treatment. We assume that symptoms in NPD patients are rather ego-dystonic and that reasons for being in treatment are hard to assess. In general, however, narcissistic individuals might be less aware of maladaptive behavioral patterns (cf. Morf & Rhodewalt, 2001), or they might function quite well despite such behaviors and thus might possess high explicit self-esteem. It is possible that self-insight moderates the association of self-esteem and narcissism. Furthermore, most previous studies on this topic in social-personality psychology have used larger sample sizes. Future research should replicate these findings with bigger samples and pathological narcissism as an outcome measure.

Another important issue that merits critical debate is the measurement of implicit self-esteem (see Buhrmester et al., 2011). Several studies found that the IAT is a valid and reliable instrument for assessing implicit self-esteem (e.g., De Houwer, 2002; Rudolph et al., 2008), but it usually does not correlate significantly with other implicit self-esteem measures, such as the Name Letter Test (Nuttin, 1985). Furthermore, some methodological problems have been raised, such as salience asymmetry or the possibility of faking (for an overview see Fiedler, Messner, & Bluemke, 2006; Röhner, Schröder-Abé, & Schütz, 2011). As result of these methodological issues, the empirical literature on implicit self-esteem is occasionally inconclusive (e.g., contradictory findings regarding the links between implicit self-esteem and depression). We urge researchers to use caution when utilizing indirect methods, and to carefully choose assessment instruments given that not all indirect measures demonstrate equivalent validity and reliability (e.g., Bosson et al., 2000). In future studies, it might be profitable to compare different indirect measures, and to replicate findings with multiple indirect measures of implicit self-esteem.

Moreover, we did not assess the early childhood experiences that play an essential role in both Kernberg's (1975) and Millon's (1981) theories. However, we assume that self-reports of parental behavior such as devaluation or overvaluation might be biased by self-presentation (Lanyon, 2004), self-deception (Paulhus, 1984), or a lack of self-insight (Robins & John, 1997). Longitudinal studies that track measures of parental behavior and self-esteem are necessary to shed more light on the role of childhood experiences in self-esteem discrepancies and the severity of pathological narcissism. Finally, parental treatment is not the only precursor to explicit and implicit self-esteem. There is evidence for a substantial influence of genes on the level and stability of explicit self-esteem (Neiss, Sedikides, & Stevenson, 2006) and on implicit attitudes (Osinsky et al., 2010).

Our study has implications for therapy with patients with NPD. Enhancing explicit self-esteem might be one goal in the treatment of patients with NPD. However, one may also speculate that it is not only the *level* of explicit self-esteem that matters, but also its relation to implicit self-esteem. While enhancing explicit self-esteem may be advantageous to individuals with damaged (low explicit, high implicit) self-esteem, it may be detrimental to individuals with congruent low (low explicit, low implicit) self-esteem. An explicit self-esteem boosting intervention among persons with the latter self-esteem could result in high explicit and low implicit self-esteem (fragile self-esteem). As to whether interventions can change people's implicit self-esteem, we remain skeptical. Before attempting such interventions, researchers should continue to improve the reliability and validity of indirect measures. Moreover, although a few studies suggest that implicit self-esteem can be enhanced by using conditioning procedures (Baccus, Baldwin, & Packer, 2004; Dijksterhuis, 2004), the stability of these effects and their applicability to clinical settings are currently unknown. It is also possible that *buttressing* self-esteem (i.e., making self-esteem less vulnerable to ego-threats) as opposed to *increasing* self-esteem might be effective at reducing symptoms (i.e., aggression after ego-threats) in narcissistic individuals (Thomaes, Bushman, Orobio de Castro, Cohen, & Denissen, 2009). Thus, the findings reported here should be replicated with other direct and indirect measures before applying therapeutic techniques with NPD or BPD patients.

5. Summary

Narcissism researchers have called for a more fine-grained analysis of the phenotypic description of NPD patients in order to develop effective treatment strategies (Dickinson & Pincus, 2003; Hendin & Cheek, 1997; Kay, 2008; Millon & Ronningstam, 1998). In response to this call, the present study provided the first evidence that patients with NPD possess low explicit self-esteem in comparison to non-clinical controls. Thus, although NPD patients might report grandiose fantasies, they may simultaneously experience low explicit self-esteem. This finding provides important insight into the nature of the vulnerable self-views associated with NPD. The former DSM-III (1980) captured vulnerable aspects with the diagnostic criterion "reaction to criticism," indicating that NPD patients' "self-esteem is often fragile, the individual may be preoccupied with how well he or she is doing and how well he or she is regarded by others" (DSM-III, 1980, p. 316; also see Cain, Pincus, & Ansell, 2008 for a review). Future studies should continue to focus on (explicit and implicit) self-esteem in an attempt to understand NPD in a more comprehensive way.

Acknowledgments

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