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Reflections in a Cloudy Pond: Definition and Measurement of Narcissistic Personality Disorder

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Chapter 1 – Reflections in a Cloudy Pond

Introduction

The following headline appeared in *New York Times* one year after I started working on this dissertation: „Narcissists, much to the surprise of many experts, are in the process of becoming an endangered species. Not that they face imminent extinction — it's a fate much worse than that. They will still be around, but they will be ignored. The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (due out in 2013, and known as DSM-5) has eliminated five of the 10 personality disorders that are listed in the current edition." (November 20th, 2010). Moreover, the German newspaper *Süddeutsche* announced: "Welch eine Kränkung für Narzissten: Gemäß dem neuesten Stand der Forschung gibt es sie in ihrer Reinform gar nicht! [What an offence for narcissists! According to the current status of research, they don´t exist as prototype!]" (July 10th, 2011). However, it is likely that Narcissistic Personality Disorder (NPD) will be retained as an autonomous disorder in the upcoming DSM-5 (e.g., Miller et al., 2010; Ronningstam 2011; Alarcon & Sarabia, 2012) (dsm5.org).

Readers may wonder why this diagnosis was supposed to vanish from DSM-5. Two main arguments guided the planned deletion of NPD: The first argument was NPDs' restricted attention in research agendas (see Kendler et al., 2009; Pincus, 2011). Much to a surprise of scientists from different fields, research on NPD stagnated in the late 70s. According to a search with the database PsycINFO, only twelve peer-reviewed articles (note: excluding case studies, commentaries and reviews) were published on NPD within clinical psychology from 2002 to 2012 (keyword data base search, 1st of June 2012). NPD appears to be one of the least studied personality disorders (Boschen & Warner, 2009). Most of these studies at hand used mixed samples or non-clinical controls to explore common features of NPD. According to critical voices, this lack of research reflects rather restricted importance of NPD in clinical settings (e.g., Krueger, 2010). The second argument for deletion of NPD

pointed to severe construct problems of the diagnostic category (Pincus, 2011) - including low to moderate prevalence rates, inconsistent internal consistencies, moderate stability over time and inconsistent discriminant validity. Referring to these issues, I want to conceptualize NPD as a reflection in a cloudy pond, a metaphor taken from the Ovidian narrative of Narcissus[1] that captures the highly variant and blurred symptom catalogues currently used in the description of NPD.

Narcissistic Personality Disorder as Reflection in a Cloudy Pond

Why Narcissistic Personality Disorder is a Disorder in Flux

Havelock Ellis first introduced narcissism as an 'autoerotic disorder' in 1898. Afterwards, psychoanalytic theorists subsequently contributed to the popularization of narcissism as a clinical phenomenon (e.g., Freud, 1914). Clinical theorists agreed that narcissism is a normal aspect of self-development (Kohut, 1977; Kernberg, 1998). Within this conceptualization, individuals have narcissistic needs that require age-appropriate provisions to maintain self-cohesion. In contrast, pathological narcissism is thought to emerge from a defect in the normal development of the self, which results in an inability to establish a stable sense of self. Due to the frequent use of pathological narcissism as clinical syndrome by psychoanalysts, NPD was introduced in DSM-III (1980). Since then, criteria for defining NPD were constantly in flux.

The introduction of NPD in DSM-III reflects a bottom-up process: Especially psychoanalytic case descriptions guided the initial establishment of NPD criteria. In DSM-III, the set of criteria included intrapersonal (i.e., grandiosity or uniqueness, fantasies of unlimited success, exhibitionism, reaction to criticism) and at least two interpersonal disturbances (i.e., entitlement, exploitativeness, lack of empathy, idealization – devaluation) (see Cain et al., 2008 for a review).

[1] Ovid's Metamorphosis (written 1 A.C.E) describes the myth of the nymph Echo who tragically fell in love with the young and beautiful Narcissus. Narcissus rejects her love and is deemed to admire his own reflection in water. After his death, a narcissus flower remains in his place.

Several changes were performed from the initial announcement of NPD in DSM-III to the latest definition of NPD in DSM-IV-TR (APA, 1994; APA 2000). First of all, vulnerable criteria (e.g., reliance upon external feedback from others to manage self-esteem, shame in response to narcissistic injury) were deleted and grandiose criteria (e.g., arrogance, self-absorption and a sense of entitlement) were emphasized (Gunderson, Ronningstam, & Smith, 1995)[2]. Vulnerable characteristics are now described in the "Associated Features and Disorders" section where clinicians are also cautioned that NPD patients may not explicitly show such vulnerable characteristics (APA, 2000). Grandiosity and uniqueness were split into two independent criteria. Furthermore, arrogance and a preoccupation with feelings of envy were added. These changes were performed to increase the reliability of the diagnosis and to diminish existing overlap with other personality disorders (see Pincus, 2011). The current DSM-IV-TR criteria for NPD include (1) a grandiose sense of self-importance; (2) a preoccupation with fantasies of unlimited power, success, brilliance, beauty, or ideal love; (3) a belief of being special or unique and that he or she can be only understood by, and should associate with, other special or high status people or institutions; (4) requiring excessive admiration; (5) a sense of entitlement; (6) interpersonal exploitativeness; (7) a lack of empathy; (8) envy of others or the believe that others are envious of him/her; (9) and arrogant, haughty behaviors or attitudes.

The proposition of several changes in the upcoming DSM-5 underline this assumption of NPD being a disorder in flux. According to the recent information on DSM-5 proceedings, NPD will be characterized by impairments in self-functioning (i.e., identity and self-direction), interpersonal dysfunctions (i.e., empathy and intimacy) and pathological personality traits (i.e., grandiosity and attention seeking). Thus, grandiose aspects of NPD remain prominent, but are complemented by the description of vulnerable aspects (i.e., self-esteem fluctuation; for an overview see Tab. 1). Notwithstanding, the current DSM-5 proposal is not yet backed

[2] According to a recent publication by Pincus et al. (2009) narcissistic grandiosity (exploitativeness, grandiose fantasy, self-sacrificing self-enhancement) and narcissistic vulnerability (contingent self-esteem, entitlement rage, devaluing, hiding the self) are distinct facets of pathological narcissism. However, it has to be noted that reseachers disagree on the definition of grandiose and vulnerable narcissism. For an overview consider Pincus (2010).

by a fair amount of empirical research on the matter (see Verheul, 2012).

Why Narcissistic Personality Disorder is a Reflection in a Cloudy Pond

Several studies emphasize severe construct problems with its current conceptualization in DSM-IV-TR. First, several researchers that argue for deletion of NPD from DSM-5 refer to relatively low prevalence rates in inpatient and outpatient settings, which means that NPD is the least common personality disorder (e.g., Gunderson et al., 1994). However, considering recent empirical evidence prevalence rates of NPD are apparently inconsistent: Some studies provide low prevalence rates (e.g., 0% across five community samples, Mattia & Zimmerman, 2001; 1% in the general population, Pincus & Lukowitzki, 2010; Trull, Jahng, Tomko, Wood, & Sher, 2010) or medium prevalence rates (2,3% in an outpatient sample, Zimmerman, Rothschild, & Chelminski, 2005). Inconsistent prevalence rates conjecture severe problems with the current conceptualization of the construct. The current diagnostic criteria may lack clinical validity. However, due to the issue of assumed stigmatization or an apparent lack of treatment strategies, clinicians may hesitate to diagnose NPD in inpatient or outpatient settings.

According to several studies, internal consistency coefficients for NPD criteria have been acceptable, ranging from .63 to .88 (Blais, Holdwick, & Castlebury, 1997; Blais & Norman, 1997; Grilo et al., 2001; Maffei et al., 1997). However, Blais et al. (1997) noted that adjusted item to scale correlations for several NPD criteria were below acceptable values, indicating that NPD may not be a reliable diagnosis.

NPD further shows rather restricted discriminant validities. Morey (1988) provided evidence that DSM-III-R NPD had the greatest diagnostic overlap in comparison to all other personality disorders (mainly with histrionic personality disorder, borderline personality disorder, and antisocial personality disorder). Moreover, Gunderson et al. (1995) reported that the rate of overlap for DSM-III and DSMIII-R NPD with other personality disorders was about 50%. However, poor discriminant validity does not seem to be a specific problem of NPD: Blais and Norman (1997) found low discriminant validity for all personality disorders.

However, NPD was among the worst performers. In another study of Cluster B personality disorders, Holdwick, Hilsenroth, Castlebury, and Blais (1998) found that the criteria fantasies of unlimited success, belief that he/she is special or unique, and requires excessive admiration best distinguished NPD from antisocial personality disorder. Moreover, grandiosity, belief of uniqueness, entitlement and arrogance best distinguished NPD from antisocial personality disorder and borderline personality disorder. In contrast to these studies, Fossati et al. (2005) reported that DSM-IV NPD exhibited adequate discriminant validity in an outpatient sample. The two criteria that clearly predicted NPD diagnosis were: arrogant, haughty attitudes or behaviors and lack of empathy. The three criteria that were the worst predictors of NPD diagnosis were: grandiose fantasies, need for excessive admiration, and preoccupation with envy.

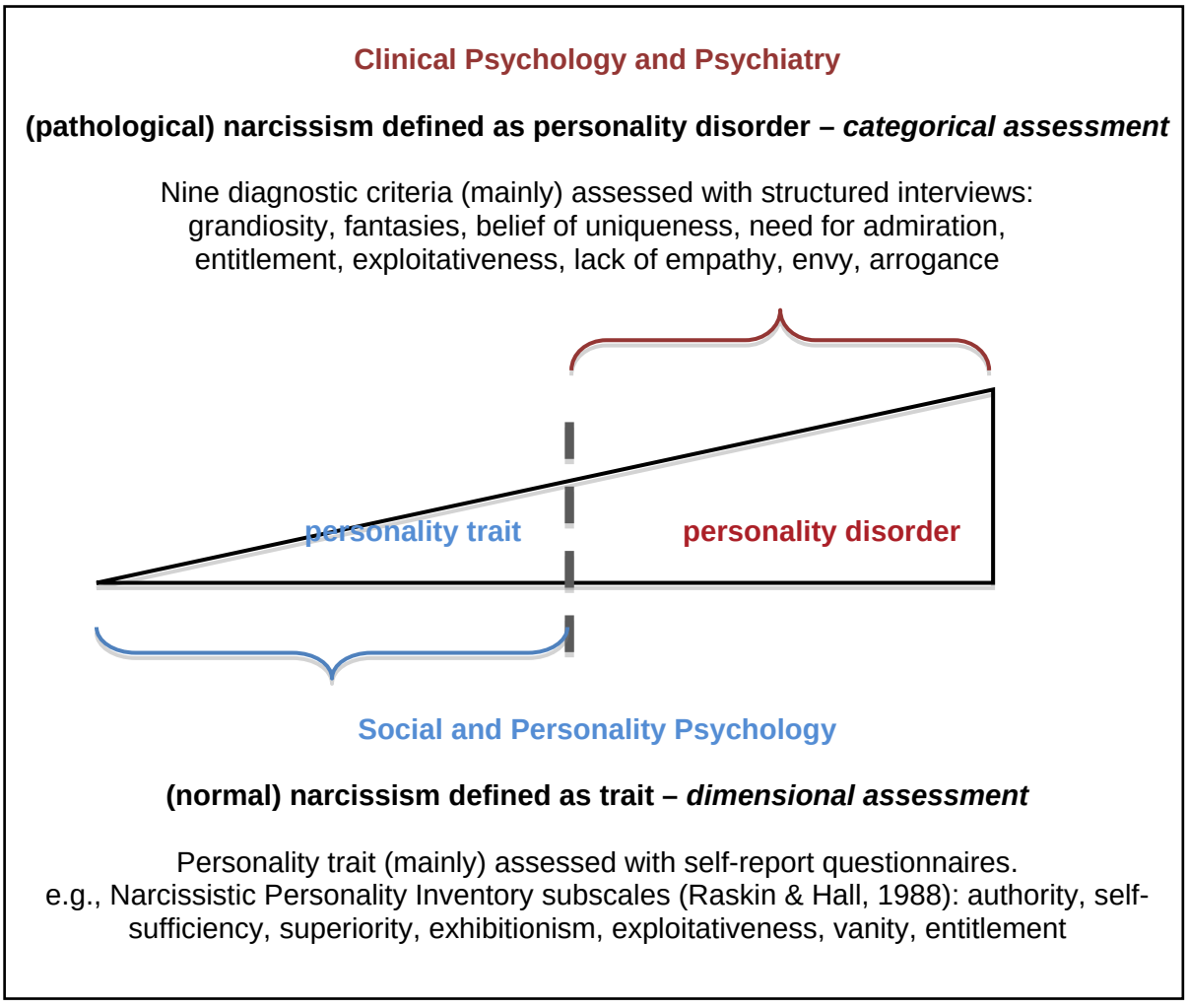
Although the list of peculiarities is incomplete at this point, it should be sufficient for now to underline the following statement: The ways in which NPD is defined is historically in flux and lacks the provision of clear rationales for far-reaching implications in the upcoming DSM-5. In sum, NPD suffers from construct problems that suggest its description as a reflection in a cloudy pond. As it contains a relatively indeterminate set of symptoms and features, it remains difficult to fixate a clear clinical picture of NPD.

Even though information on NPD is sparse and conflicting, there are some studies that emphasize the relevance of NPD in clinical settings: NPD is associated with severe impairments in psychosocial functioning (Miller, Campbell, & Pilkonis, 2011), it is characterized by a high co-occurrence rate of affective as well as substance use disorders (Stinson et al., 2008; Clemence, Perry, & Plakun, 2009), and an increased rate of suicidal behavior (Blasco-Fontecilla et al., 2009; Ronningstam, Wienberg, & Maltsberger, 2008). Thus, NPD is a severe mental disorder associated with impairments in intrapersonal and interpersonal domains (for a review see Cain et al., 2008; Maccoby, 2000; Miller, Campbell, & Pilkonis, 2007; Ronningstam, 2011; Volkan & Fowler, 2009).

How Other Fields of Research Contributed to Cloudiness

The inclusion of NPD in DSM-III led to an increase in research on narcissism as trait in the field of social-personality psychology. Turning to social psychology, we encounter a different way of defining narcissism. Clinical psychology defines Narcissistic Personality Disorder as categorical diagnosis (mainly assessed with diagnostic interviews). Social-personality psychology conceptualizes narcissism as personality trait (mainly assessed with questionnaires, such as the Narcissistic Personality Inventory by Raskin & Hall, 1988). Thus, it is described as dimensional rather than a taxonic expression. Yet, the overlap between these different conceptualizations remains unclear, which leads to further utterly cloudy definitions of narcissism. The following Figure 1 summarizes definitions and assessments of narcissism within different fields of psychology.

Figure 1. Definition and Assessment of Narcissism in different scientific fields



Even though the definitions and assessments of narcissism differ between these various disciplines, researchers from social psychology heavily rely on clinical theories when establishing hypotheses or interpreting research findings. In previous publications, cross-referencing is a common practice. This poor calibration between clinical psychology/psychiatry and social/personality psychology goes along with inconsistent usage of the term narcissism and may partly contribute to confusions surrounding the conceptualization of NPD (Cain, Pincus, & Ansell, 2008; Pincus & Lukowitski, 2010).

In contrast to findings on negative outcomes of NPD, results of studies from social-personality psychology suggest that the adaptive outcome of narcissism in non-clinical samples is rather controversial. On the one hand, non-clinical individuals high in narcissism manage to generate high levels of positive affect and carry high explicit self-esteem in comparison to individuals low in narcissism (Morf & Rhodewalt, 2001). On the other hand, narcissism is connected with self-enhancement (Campbell, Reeder, Sedikides, & Elliot, 2000), illusions on attractiveness and intelligence (Gabriel, Critelli, & Ee, 1994), contingent and instable self-esteem (Zeigler-Hill, Clark, & Pickard, 2008) and interpersonal costs (Campbell, Green, Wood, Tesser, & Holmes, 2008). Furthermore, individuals high in narcissism show counterproductive workplace behavior (Judge, Piccolo, & Kosalka, 2009) and receive poor performance ratings from supervisors at work in comparison to others (Blair, Hoffman, & Helland, 2008). In sum, inconsistencies regarding the definition and the assessment of narcissism within different disciplines lead to confusions surrounding the construct narcissism.

Towards Reflections in a Clear Pond: Research Agenda

The focal point of this thesis was to contribute to a comprehensive understanding of NPD. The first aim of this thesis was to investigate grandiose self-esteem in patients with NPD (Study 1, Chapter 2). This relates to the first diagnostic criterion in DSM-IV-TR – grandiosity. By definition, NPD is characterized by a grandiose sense of self (APA, 2000). One question that inspires enduring debates is whether narcissistic grandiosity reflects exaggerated ego

robustness or an attempt to mask underlying implicit vulnerability. In Kernberg's (1975) view, inadequate parenting leads to deep-seated feelings of inferiority that are accompanied by attempts to maintain positive explicit self-esteem. Consequently, narcissists possess colliding self-representations. This model was named "mask model" in previous publications (Bosson, Brown, Zeigler-Hill, & Swann, 2003; Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003). Study 1 examined implicit (i.e., automatic, not necessarily conscious) self-esteem (using an Implicit Association Test, Greenwald & Farnham, 2000) and explicit (i.e., reflected, conscious) self-esteem (using a self-report questionnaire, Multidimensional Self-Esteem Scale, Schütz & Sellin, 2006) in patients with NPD in comparison to non-clinical and clinical, non-NPD (Borderline Personality Disorder, BPD) control groups. By doing so, Study 1 aimed at providing evidence how self-relevant information is processed on an implicit and an explicit level. Additionally, Study 1 investigated whether discrepancies between explicit and implicit self-esteem (i.e., high implicit and low explicit self-esteem) are related to higher narcissism scores (assessed with a self-report questionnaire: the narcissism subscale of the Dimensional Assessment of Personality Pathology, Livesley & Jackson, 2002) in patients with NPD.

The second aim was to investigate the DSM-IV-TR criterion lack of empathy in patients with NPD (Study 2, Chapter 3). Even though a lack of empathy is a core feature of NPD, it is exclusively based on clinical observation. We used recent conceptualizations of empathy that distinguished between two related but distinct facets of the overall construct - cognitive and emotional empathy. Cognitive empathy captures the capacity to infer others' mental states and is also referred to as mentalizing and theory of mind (Blair, 2005). Emotional empathy has an affective component and signifies an appropriate emotional reaction to another person (Davis, 1993). We included patients with NPD and compared them to clinical and non-clinical controls. By doing so, we aimed at providing evidence for the question if deviations in empathy are a specific feature of NPD. Emotional and cognitive empathy were assessed with traditional questionnaire measures, the Multifaceted Empathy Test (MET; Dziobek et al., 2008), and the Movie for the Assessment of Social Cognition

(MASC; Dziobek et al., 2006).

Study 3 concentrated on the definition of NPD as being resistant to change over time (see Chapter 4). Even though stability over time is a defining feature of all personality disorders, evidence on change in NPD is widely lacking. Study 3 tracked the prevalence and remission rates of NPD over two years. A sample of ninety-six patients with a diagnosis of NPD was recruited at baseline. Forty patients participated in the follow-up study after two years. We identified rank-order hierarchies for each diagnostic criterion by their variance in prevalence and remission rates over time.

Following the suggestion by Cain et al. (2008), this thesis additionally used a multidisciplinary approach by evaluating assessment strategies implemented in different disciplines of psychology. Thus, Study 4 (Chapter 5) aimed at providing a more elaborated understanding on existing labels of narcissism that are present in the current scientific literature. The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1988) has dominated research on narcissism in the field of social and personality psychology. Studies using the NPI heavily refer to clinical theories. Surprisingly, it remains unclear whether the NPI is useful for identifying pathological narcissism in patients with NPD. We used an extreme-group approach by including NPD patients and healthy controls and comparing their narcissism scores. We further investigated whether self-esteem suppressed the relationship between group membership and NPI narcissism.

Chapter 2 – Grandiose or Fragile

Study 1: When Grandiosity and Vulnerability Collide:

Implicit and Explicit Self-Esteem in Patients with Narcissistic Personality Disorder

Article Reference:

Vater, A., Ritter, K., Schröder-Abé, M., Schütz, A., Lammers, C. H., Bosson, J., et al. (2012). When Grandiosity and Vulnerability Collide: Implicit and Explicit Self-Esteem in Patients with Narcissistic Personality Disorder. *Journal of Behavior Therapy and Experimental Psychiatry, 44(1),* 37–47. http://dx.doi.org/10.1016/j.jbtep.2012.07.001

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.

Keywords: implicit self-esteem, explicit self-esteem, fragile self-esteem, damaged self-esteem, discrepancies, narcissistic personality disorder

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 & Lukowitzky, 2010; Zeigler-Hill, Green, Arnau, Sisemore, & Myers, 2010). 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.

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 judgements about the self develop 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 judgements might develop and coexist with former negative judgements 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, 2007a; Gemar, Segal, Sagrati, & Kennedy, 2011; Valiente et al., 2011) and in depressed patients with suicidal ideation (Franck, De Raedt, Dereu & Van den Abbeele, 2007b).

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 within non-clinical individuals (Schröder-Abé et al., 2007).

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 labelled 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 overvaluation 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-pathological) 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 controlling (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 individuals. 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, Lakey, 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 Personality Inventory or NPI, which supposedly captures normal narcissism; see Miller & Campbell, 2008, for a review) in inpatient samples with psychiatric disorders is positively correlated with explicit self-esteem (Svindseth, Nøttestad, Wallin, Roaldset, & Dahl, 2008; Pincus, et al., 2009). In contrast, Pincus et al. (2009) suggest that narcissism (assessed with the Pathological Narcissism 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, Lakey, 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, Lakey, et al., 2008; Campbell, et al., 2007; Gregg & Sedikides, 2010). Clinical theories on the development of narcissism might help to explain these inconsistent findings concerning 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 narcissism 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, & Castleburry, 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 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) within 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.

Method

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.

Measures

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 centre 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 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 [Glück], 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.

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 labelled *not at all* (1) and *very much* (7) or *never* (1) and *always* (7), respectively.

Narcissism: The Dimensional Assessment of Personality Pathology – Basic Questionnaire (Livesley & Jackson, 2002; DAPP-BQ, German version, Angleitner, Ostendorf, Riemann, 2001). The DAPP-BQ 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*).

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.

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 labelled *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.

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.

Results

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

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).

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: $ß$ = -.19, t[45] = -5.42, p = .000; GSI of the SCL-90-R: $ß$ = -.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 ($ß$ = .87, t[45] = 3.06, p = .004), but no main effect of explicit self-esteem ($ß$ = -.00, t[45] = -1.40, p = .168). We also found a significant interaction between explicit and implicit self-esteem in this model, ($ß$ = -.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 Figure 1. Among NPD patients low in explicit self-esteem (-1 SD; see left side of Figure 1), implicit self-esteem was positively related to the severity of pathological narcissism (β = .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 Figure 1), however, implicit self-esteem was unrelated to the severity of pathological narcissism (β = -.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 (β = -.05, t (71) = -.17, p = .865).

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 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, Lakey, 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.

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, 2006).

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.

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 et al., 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 vs. 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.

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 nonclinical 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 et al., 2007a). 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.

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 early the 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 et al., 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, 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.

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 et al., 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.

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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	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	0.00	11	42.31
Antidepressant	23	45.10	6	25.00	13	50.00
Mood Stabilizer	0	0.00	0	0.00	1	3.85

Note. Any Cluster B PD only includes Histrionic and Antisocial Personality Disorder.

Table 2.

Descriptive Statistics and ANOVA Output for All Variables

		NPD (N = 51) (male = 26 female = 25)		CG (N = 44) (male = 20 female = 25)		ANOVA			
	REI	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. 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; BPD = borderline personality disorder; CG = control group; *M* = mean score; *SD* = standard deviation; SE = self-esteem; BDI = Beck Depression Inventory; IAT = Implicit Association Test (D-Index: higher scores indicate higher implicit self-esteem); MSES = Multidimensional Self-Esteem Scale.

Table 4.

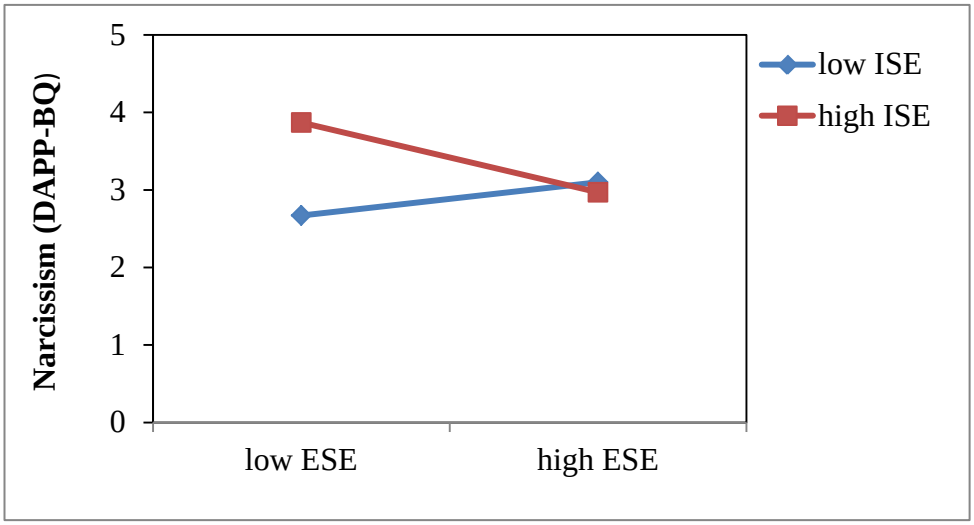
Intercorrelations of All Variables

	(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.
*** $p < .001$, * $p < .05$.

Figure Caption

Figure 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.

Chapter 3 – Empathic or Cold

Study 2: Lack of Empathy in Patients with Narcissistic Personality Disorder

Article Reference:

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Abstract

The study's objective was to empirically assess cognitive and emotional empathy in patients with narcissistic personality disorder (NPD). To date, “lack of empathy” is a core feature of NPD solely based on clinical observation. The study's method was that forty-seven patients with NPD, 53 healthy controls, and 27 clinical controls with borderline personality disorder (BPD) were included in the study. Emotional and cognitive empathy were assessed with traditional questionnaire measures, the newly developed Multifaceted Empathy Test (MET), and the Movie for the Assessment of Social Cognition (MASC). The study's results were that individuals with NPD displayed significant impairments in emotional empathy on the MET. Furthermore, relative to BPD patients and healthy controls, NPD patients did not show deficits in cognitive empathy on the MET or MASC. Crucially, this empathic profile of NPD is not captured by the Structured Clinical Interview for DSM-IV for Axis II Disorders (SCID-II). The study's conclusions were that while NPD involves deficits in emotional empathy, cognitive empathy seems grossly unaffected.

Introduction

Narcissistic personality disorder (NPD) is characterized by a “lack of empathy” as well as a pervasive pattern of grandiosity and need for admiration (American Psychiatric Association, 2000). It is a severe mental disorder with prevalence rates of up to 6% in the general population (Stinson et al., 2008; Ritter et al., 2010), severe functional impairment (Stinson et al., 2008; Miller et al., 2007), and high suicide rates (Pompili et al., 2004). Although narcissism as a personality trait and empathy have been shown to be negatively correlated (e.g., Watson et al., 1984; Watson and Morris, 1991; Watson et al., 1992; Porcelli and Sandler, 1995) the DSM-IV criterion “lack of empathy” in NPD is solely based on clinical observation and expert consensus (also personal communication with E. Ronningstam) (Kohut, 1966; Kernberg, 1970; Akhtar and Thomson, 1982; Millon, 1983). Thus, to date, a congruent conceptualization and empirical evaluation of the criterion “lack of empathy” in NPD are lacking. Therefore, the aim of the study was to empirical assess empathy in patients with NPD according to DSM-IV.

When NPD first appeared in the official psychiatric nomenclature in the DSM-III in 1980 (American Psychiatric Association, 1980) “lack of empathy” was established as a sub-criterion of the fifth criterion “characteristic disturbances in interpersonal relationships” (p. 317). Although DSM-III-based studies revealed that the criterion “lack of empathy” lacked discriminant validity (Morey, 1985; Gunderson et al., 1991; Gunderson and Ronningstam, 2001) (i.e., it had multiple significant correlations across other personality disorders; PDs), and offered poor interrater reliability (Pfohl et al., 1986) it was established as a separate criterion in the DSM-III-R (criterion 8), describing the “inability to recognize and experience how others feel” and was also maintained in the DSM-IV (American Psychiatric Association, 1994) and DSM-IV-TR (American Psychiatric Association, 2000) as criterion 7. Further studies based on the DSM-IV additionally revealed low diagnostic specificity of the criterion “lack of empathy” (Gunderson and Ronningstam, 2001; Blais et al., 1997; Holdwick et al., 1998; Fossati et al., 2005).

In summary, weak empirical evidence of convergent and divergent validity of the DSM criterion “lack of empathy” stands in sharp contrast to longstanding clinical (mostly psychoanalytic) case descriptions and the conceptualization of NPD (Kohut, 1966; Kernberg, 1970; Akhtar and Thomson, 1982; Millon, 1983). Our hypothesis is that this contradiction is due to the fact that no theoretical construct underlies the NPD criterion “lack of empathy” in the DSM (Millon, 1983), and thus, its assessment may be insufficient.

Research has already proposed a multidimensional model of empathy (Davis, 1983; Blair, 2005a), comprising two distinct but related constructs: cognitive and emotional empathy. A third dimension of motor empathy (Blair, 2005a) was later incorporated into the model of emotional empathy (Preston and de Waal, 2002). Thus, cognitive empathy (Baron-Cohen and Wheelwright, 2004) refers to the ability to take another person’s perspective and to represent others' mental states, and as such, broadly overlaps with the constructs “Theory of Mind” (Premack and Woodruff, 1978) and “mentalizing” (Frith and Frith, 2003). The construct of emotional empathy (Mehrabian and Ebstein, 1972; Eisenberg and Miller, 1987) describes an observer’s emotional response to another person’s emotional state. Based on the multidimensional facet model of empathy, our group recently developed the Multifaceted Empathy Test (MET, Dziobek et al., 2008), a task presenting photorealistic stimulus material and simultaneously assessing both cognitive and emotional empathy in a more ecologically valid manner than previous self-rating questionnaires. To further differentiate aspects of cognitive empathy we developed the Movie for the Assessment of Social Cognitions (MASC, Dziobek et al., 2006), a film-based task depicting social interactions, demanding the understanding of the emotions, thoughts, and intentions of movie characters.

To ascertain the specificity of a “lack of empathy” in NPD, we used a clinical comparison group of patients with borderline personality disorder (BPD) according to DSM-IV in which impaired cognitive empathy and unimpaired emotional empathy were found. We also compared both clinical groups to healthy controls (Fonagy et al., 1996; Harari et al., 2010).

Aims of the Study

The current study was conducted, first, to empirically assess cognitive and emotional empathy in a clinical sample of patients with NPD, and second, to compare the results to a clinical comparison group of patients with BPD. We hypothesized that patients with NPD would show significantly higher impairments in cognitive and emotional empathy compared to healthy controls. Compared to patients with BPD, we hypothesized significant impairment in emotional empathy and no difference in cognitive empathy for the NPD group. The third aim was to evaluate the convergence of the DSM-IV criterion “lack of empathy” with the empirical measures used in this study.

Materials and method

Sample

Forty-seven inpatients with NPD were recruited from the Department of Psychiatry, Charité – Universitätsmedizin Berlin and cooperating German hospitals.* Fifty-three age- and gender-paralleled healthy comparison subjects were recruited via media advertisements.

Previous studies of NPD and BPD have reported substantial comorbidity (Westen et al., 2006) between the two disorders and found overlap in the symptoms of affect dysregulation, impulsivity, and unstable relationships (Blais et al., 1997; Morey, 1988; Ronningstam and Gunderson, 1991). To show the more specific character of “lack of empathy” for NPD, we assessed a clinical comparison group with 27 BPD patients without comorbid NPD from the Department of Psychiatry, Charité - Universitätsmedizin Berlin. All BPD patients were inpatients and on a waiting list for an inpatient treatment program prior to admission, and none was admitted for acute care. Axis II diagnoses of patients and controls were assessed with the Structured Clinical Interview for DSM-IV for Personality Disorders (SCID-II, First et al., 1997, German version: Fydrich et al., 1997) by trained psychiatrists or psychologists. Interrater reliability of SCID-II diagnoses was assessed (N = 8) with a pairwise interview design. Interviewers were blind to PD diagnoses. Kappa was acceptable with κ = 0.797 for NPD diagnosis and κ = 0.820 for BPD diagnosis. For the NPD criterion “lack of

empathy," however, Kappa showed a perfect agreement, $\kappa = 1.0$. Internal consistencies for NPD items (Cronbach´s $\alpha = 0.896$) and BPD items (Cronbach´s $\alpha = 0.876$) were good. Axis I comorbidity was assessed with the Structured Clinical Interview for DSM-IV for Axis I Disorders (First et al., 1996, German version: Wittchen et al., 1997) in the NPD sample and with the Mini International Neuropsychiatric Interview (M.I.N.I., Sheehan et al., 1998, German version: Lecrubier et al., 1998) in the BPD sample. Exclusion criteria for all patients were history of psychotic disorder, a current bipolar I or II disorder, a current manic or hypomanic episode, or substance induced disorder (e.g., intoxication or withdrawal syndrome). All procedures were approved by the Human Subjects and Ethics Committee of Charité - Universitätsmedizin Berlin. Written informed consent was obtained from each participant. Socio-demographic and clinical data are presented in Table 1.

Psychometric assessment instruments

To assess psychopathology, the general severity index (GSI) of the Symptom Checklist 90 Revised (SCL-90-R, Derogatis, 1977, German version: Franke, 2002) was calculated. The internal consistency for the GSI was good (Cronbach´s $\alpha = 0.989$). For IQ screening, subtest 4 (recognizing rules) of the well-established German "Leistungs-Prüf-System" (LPS, Horn, 1983) was administered.

Measures of Cognitive and Emotional Empathy

The Interpersonal Reactivity Index (IRI; Davis, 1983; German version: Paulus, 2006) was employed as a multidimensional self-report estimate of empathy. In this study we focus on the scales "perspective taking" (the ability to assume another individual's point of view) and "empathic concern" (the capacity to experience sympathy for others). An example perspective-taking item is: "When I'm upset at someone, I usually try to 'put myself in his shoes' for a while." An example empathic-concern item is: "I often have tender, concerned feelings for people less fortunate than me." The IRI has been shown to correlate with other measures of empathy, providing support for the construct validity of the measure (Davis,

1980). Both subscales have good internal consistencies (perspective taking: α = 0.747, empathic concern: α = 0.776). In the sample of all participants of the present study both scales correlate moderately with $r = 0.457$, $P < 0.001$ (NPD: $r = 0.322$, $P = 0.144$, BPD: $r = 0.534$, $P = 0.004$; healthy controls: $r = 0.398$, $P = 0.004$).

The Multifaceted Empathy Test (MET, Dziobek et al., 2008) is a PC-assisted test consisting of photographs that show 23 pairs of picture stimuli with people in emotionally charged situations. To assess cognitive empathy, participants were required to infer the mental state of the subject in the photo, and were asked to indicate the correct one from a list of four. After giving feedback about the displayed people's actual mental states, emotional empathy was assessed. First, participants were required to rate the amount of mirroring of an emotion (i.e., emotional contagion) that took place in response to a picture (e.g., if the mental state of the person was anxious, subjects were asked to rate how anxious they felt). Participants indicated their responses on a visual analogue scale ranging from 0–9 (0 = not at all, 9 = very much). As an additional measure of more mature emotional empathy, subjects were also asked to rate the degree of empathic concern they felt for the person in the picture (visual analogue scale, 0 = not at all, 9 = very much). All pictures were presented in two forms: First, all emotionally charged situations (background) were presented without a person; then, in a second step, all of the situations were presented with a person expressing a relevant emotion. All background pictures were first independently rated for arousal in order to enable us to control for this general level of arousal when establishing group differences in empathic processing. Internal consistency of the MET's scales ranged from α = 0.71 to α = 0.92, and convergent and divergent validity were highly satisfactory (Dziobek et al., 2008). In the study sample, the scales emotion recognition and empathic concern were not correlated (All: $r = 0.146$, $P = 0.150$; NPD: $r = 0.125$, $P = 0.578$, BPD: $r = 0.297$, $P = 0.140$; healthy controls: $r = -0.071$, $P = 0.626$); nor were the scales emotion recognition and mirroring emotions (All: $r = 0.114$, $P < 0.265$; NPD: $r = -0.034$, $P = 0.879$, BPD: $r = 0.362$, $P = 0.069$; healthy controls: $r = -0.137$, $P = 0.341$). MET cognitive empathy was not correlated with emotional empathy assessed by the MET either for healthy controls (for empathic

concern: r = -0.071, P = 0.626, for mirroring emotions: r = -0.137, P = 0.341) or for NPD patients (for empathic concern: r = -0.010, P = 0.949; for mirroring emotions: r = -0.020, P = 0.893).

To assess cognitive empathy (in terms of Theory of Mind) we also used the video-based Movie for the Assessment of Social Cognition (MASC, Dziobek et al., 2006). Not only did the test prove to have high interrater reliability and internal consistency and sensitivity, the results also seem to be highly stable over time (Dziobek et al., 2006). The test involves watching a 15 min movie about four characters spending an evening together. It shows everyday social interactions, and is stopped 46 times for questions about the actors' feelings, thoughts, and intentions. Participants are required to choose the correct answer out of four possible ones. The test allows for a more differentiated analysis of specific patterns of social cognitive functioning with separate scores for the recognition of emotions, thoughts, and intentions. Sum scores for correct answers in all three sub-categories and a total score were computed. Moreover, the MASC also includes control questions that assess a participant's inferential processing concerning nonsocial stimulus material. The MASC has a good internal consistency with Cronbach´s α = 0.802. The MASC sum score was significantly correlated with the MET score for cognitive empathy for healthy controls (r = 0.448, P = 0.001).

Statistical Analysis

All statistical analyses were performed with SPSS version 15.0 (SPSS, Inc., 2006). Before the use of parametric tests (for socio-demographic variables) to compare groups, Kolmogorov-Smirnov tests to assess normality and Levene's tests to assess homogeneity of variance were performed. Two-group comparisons (NPD vs. healthy controls) were performed with t tests; for all data without homogeneity of variances, Mann-Whitney U tests for two (NPD vs. healthy controls) and Kruskal-Wallis tests for three groups (NPD vs. BPD vs. healthy controls) were used, and for all categorical data (e.g., comorbid axis I and axis II disorders, gender), Pearson's χ^2 test or Fisher's exact test was calculated. Quantitative group

mean measures (IRI, MET, MASC) were compared using univariate and multivariate analyses of variance or covariance. To analyze between-group differences, general linear model estimated means were compared with a priori simple contrasts (to control for Type I errors). Gender was used as a covariate in all linear models when group differences were present. Convergence was established with Spearman's nonparametric coefficient to assess correlative associations between "lack of empathy" and IRI and MET measures (convergent validity). All analyses were two-tailed and the alpha level was set at $P < 0.05$. Omega squares (ω^2) were used as measures of effect size (ω^2=0.010 small, ω^2=0.059 medium, ω^2=0.138 large effect size; Kirk, 1996).

Results

Comparison between NPD and Healthy Controls

To assess cognitive and emotional empathy in NPD as measured with the IRI, a MANOVA model with perspective taking and empathic concern as dependent variables was conducted, which revealed a significant influence of group (Wilks' $\lambda = 0.905$, $F_{2,95} = 4.99$, $P = 0.009$). Univariate between-subjects tests for IRI scales revealed significant differences in mean scores for cognitive empathy, but not for emotional empathy. Patients with NPD reported significantly lower scores on the IRI scale perspective taking (cognitive empathy) than healthy controls (Table 2). To assess cognitive and emotional empathy with the MET task, a MANCOVA model with the test's subscales as dependent variables and background arousal as a covariate revealed a significant influence of group, (Wilks' $\lambda = 0.764$, $F_{3,92} = 9.48$, $P < 0.001$). Univariate between-subjects tests displayed no significant differences of patients with NPD and healthy comparison subjects on cognitive empathy. Patients with NPD, however, showed significantly lower scores than healthy controls on the two emotional empathy scales (Table 2). To analyze cognitive empathy with the MASC, an ANOVA model with the MASC total score as the dependent variable revealed significantly lower scores for NPD patients than for controls, ($F_{1,95} = 6.15$, $P = 0.015$). MASC subscore analysis revealed no significant group effect (Wilks' $\lambda = 0.947$, $F_{3,93} = 1.748$, $P = 0.163$). Follow up ANOVAs displayed a

trend toward significance for all subscores, with lower values in the NPD group compared to healthy comparison subjects for the recognition of emotions, thoughts, and intentions (Table 2).

Comparison between NPD, BPD, and Healthy Controls

To test the specificity of impairments in empathy for NPD, only NPD patients without comorbid BPD were included in subsequent analyses and compared to a group of BPD patients without comorbid NPD and a group of healthy controls (for socio-demographic and clinical data see Table 1). Self-evaluation of empathy as measured by the IRI subscales (perspective taking and empathic concern) were included in a MANOVA as dependent variables, group (NPD, BPD, healthy controls) as a fixed factor, and gender as a covariate. Analysis showed a significant influence of group (Wilks' $\lambda = 0.902$, $F_{4,188} = 2.50$, $P = 0.044$). Comparison of a priori contrasts revealed significantly lower values for cognitive empathy in NPD and BPD patients compared to healthy subjects, whereas the emotional empathy scales only significantly differed between BPD and healthy controls (Table 3). To assess cognitive and emotional empathy with MET, a MANCOVA model with MET subscales as dependent variables (empathic concern, mirroring emotions, and emotion recognition) and background arousal and gender as covariates was conducted, and revealed a significant influence of group (Wilks' $\lambda = 0.762$, $F_{6,182} = 4.42$, $P < 0.001$). In the a priori contrasts for the MET's cognitive empathy, patients with NPD displayed no significant differences compared to controls, but compared to BPD, contrasts revealed significantly higher cognitive empathy scores for patients with NPD ($P = 0.022$, Table 3). By contrast, univariate between-subjects tests revealed significant differences between groups on the MET's emotional empathy scales but not on the cognitive empathy scale. For the a priori contrasts of the emotional empathy scales, patients with NPD showed significantly lower scores than controls on both emotional empathy scales (empathic concern, $P = 0.014$, mirroring emotions, $P = 0.019$). For a more detailed evaluation of cognitive empathy, an ANCOVA with the MASC's total score as the dependent variable and gender as a covariate revealed significant differences between

groups ($F_{2,95}$ = 3.53, P = 0.033), whereas contrasts solely revealed significant differences between patients with BPD and healthy controls (P = 0.011), indicating unaffected cognitive empathy in NPD and deficits in BPD compared to healthy controls. MASC subscale analysis using a MANOVA displayed no significant group effect (Wilks' λ = 0.943, $F_{6,186}$ = 0.92, P = 0.479).

Convergent Validity of "Lack of Empathy"

The DSM-IV criterion "lack of empathy" (measured as an ordinal variable by the SCID-II with: 1 = absent, 2 = subthreshold, 3 = threshold) was negatively associated (Spearman's ρ) with the self-reported values for cognitive empathy (IRI; perspective taking: ρ = -0.316, P = 0.030), but not with self-reported values for emotional empathy (IRI; empathic concern: ρ = -0.026, P = 0.400). No correlative associations could be found for "lack of empathy" and cognitive or emotional empathy as measured by the MET (emotion recognition: ρ = 0.026, P = 0.863; empathic concern: ρ = -0.142, P = 0.341; mirroring emotions: ρ = -0.140, P = 0.346) or cognitive empathy as measured by the MASC (total score: ρ = -0.159, P = 0.286).

Discussion

The NPD criterion "lack of empathy" has been listed in the DSM since 1980 although it has never been empirically established. In the current study we assessed emotional and cognitive empathy in a clinical sample of patients with a diagnosis of NPD. We used new ecologically valid instruments based on the multifaceted model of empathy. We could not confirm our a priori hypothesis; however, a different pattern of empathy impairment in NPD was found. Thus, the present data provide the first empirical evidence that NPD involves impaired emotional empathy, whereas cognitive empathy remains unaffected. Further, NPD patients overestimate their capacities for emotional empathy and show motivational deficits for cognitive empathy. A "near neighbor" comparison with BPD inpatients provided additional evidence that this pattern is characteristic of NPD. These findings challenge the way "lack of empathy" in NPD is currently conceptualized in the DSM-IV and illustrate that actual

standardized assessment tools (e.g., the SCID-II interview) are insufficient for correctly capturing all aspects of “lack of empathy” in NPD.

Cognitive Empathy

Assessing cognitive empathy via self-report (IRI) revealed significant impairment in patients with NPD. On the more objective and ecologically valid MET task, no deficit in cognitive empathy in the NPD patients could be detected. A closer look at the cognitive empathy items of the IRI reveals that they capture motivational aspects (all items include the phrasing “… I try to…”; Davis, 1980) rather than a capacity. Thus, underestimation of cognitive empathy on the IRI could reflect a motivational deficit; whereas unaffected performance on the cognitive empathy scale of the MET may capture normal capacity compared to controls.

Although the assessment of cognitive empathy by means of the sensitive MASC task revealed impairments in NPD patients, those impairments could not be replicated when comorbid BPD patients were excluded from the NPD sample. By contrast, but in accordance with prior research (Fonagy et al., 1996; Harari et al., 2010), BPD patients showed a trend toward impairment in cognitive empathy on the MET and clear deficits in cognitive empathy as measured by the MASC compared to controls, especially in recognizing the intentions of other persons. Thus, the subtle deficit in cognitive empathy as measured by the MASC sum score in the total NPD sample may be explained by BPD comorbidity. The finding of significantly better cognitive empathy measures in NPD patients compared to BPD patients on the MET, although not replicated with the MASC, also supports this argument. Further studies with a dimensional assessment of PD pathology should investigate the impact of subthreshold personality disorder pathology (e.g., BPD) on social cognition within NPD patients, in whom PD comorbidity is frequent (Westen et al., 2006).

Emotional Empathy

NPD patients do not report impairments in emotional empathy as measured by the IRI. However, the more objective MET task clearly indicates impairments in emotional empathy in

the NPD sample on both a mature (empathic concern) and more basic (mirroring emotions) level. Excluding patients with comorbid BPD from the NPD group, the emotional empathy impairment in NPD could be replicated. In the present study, both patient groups, NPD and BPD patients, displayed significantly impaired emotional empathy when compared to healthy controls. Our data suggest that patients with NPD are less able to mirror emotions and are less emotionally responsive to another person's emotional state compared to healthy controls. Interestingly, these deficits in emotional empathy are not perceived by NPD patients, as indicated by the unimpaired self-report IRI scales. Discrepancies in emotional empathy between the IRI and the MET/MASC may be related to an overestimation of competence in NPD patients. Subjects with narcissistic traits have been shown to overrate their task performance in social judgment and mind-reading skills, which was closely related to the typical narcissistic "self-aggrandizement" (Ames et al., 2004). In contrast to the more motivational IRI items on cognitive empathy, items for emotional empathy are more related to capacity/ability.

Thus, NPD patients show a characteristic pattern of empathy deficits compared to healthy controls, which includes overestimation of their capacity for emotional empathy with impairment in emotional empathy on a more ecologically valid task (MET). Further, they show preserved cognitive empathy ability with deficits in motivational aspects of cognitive empathy. Behavior specific to NPD could be ascribed to this characteristic pattern of an empathy deficit in NPD. As empathic concern or sympathy is often associated with prosocial behavior such as altruism (Decety and Hodges, 2006), a lack of emotional empathy could account for asocial behavior. Thus, arrogant, overtly disdainful, critical, or aggressive reactions toward others‘ feelings, or, in more severe forms, attempts to con, manipulate, or emotionally exploit others, could be due to an overestimation of emotional empathy with an actual lack of ability. Also, cognitive and emotional empathic functions have been found to be necessary for a person's relational competence, especially for maintaining romantic relationships (Davis and Oathout, 1987), which has been shown to be problematic for NPD patients. Also, in nonclinical samples of adults who show narcissism as a personality trait,

lack of empathy has been linked to entitlement, exploitativeness (Watson et al., 1984), need for power, control, and dominance (Wiehe, 2003).

The present results suggest that NPD patients display a similar pattern of empathic deficits as has been described for psychopathic individuals in whom empathic dysfunction is also an essentially diagnostic criterion (Wiehe, 2003; Blair, 2005b; Goldberg et al., 2007). Psychopathy is associated with deficits in emotional empathy (Blair, 2005b; Goldberg et al., 2007) and largely unimpaired cognitive empathy (Richel et al., 2003; Dolan and Fullam, 2004). The neuro-anatomical basis of psychopathy has been ascribed to a dysfunction of the amygdala (Kiehl et al., 2001), and one could speculate about a common amygdala dysfunction in psychopathy and NPD correlating to the deficit in emotional empathy.

With regard to BPD, our results argue for impaired emotional and cognitive empathy in these patients. The results of previous research on empathy in BPD had found impairment in cognitive empathy with preserved emotional empathy (Harari et al., 2010). In contrast to our study, BPD patients with comorbid axis I disorders were excluded in this study, which might explain discrepancies. Further research is needed to address this topic.

Convergent Validity

Assessment of the NPD criterion “lack of empathy” is based on DSM description or SCID-II interview, both of which are not explicitly based on a theoretical construct of empathy. The DSM-IV diagnostic criterion “lack of empathy” is described as: “lacks empathy: is unwilling to recognize or identify with the feelings and needs of others.” According to the wording “is unwilling,” the criterion does not imply someone’s *ability* to recognize or identify with the feelings and needs of others, but rather his/her *motivation*. Similarly, the exact wording in the SCID-II interview is as follows: “You’ve said that you’re NOT really interested in other people’s problems or feelings. (Tell me about that.)” And further: “You’ve said that people have complained to you that you don’t listen to them or care about their feelings. (Tell me about that.)” (p. 27). Again, the wording does not assess the ability, but rather the motivation. IRI items of cognitive empathy also assess motivation (all items include the phrasing “…I try

to…"; Davis, 1980) rather than ability. In our study, we found the self-report measure of cognitive empathy (IRI subscale "perspective taking") to be negatively correlated with the criterion "lack of empathy" as measured by the SCID-II in NPD patients. This indicates that the SCID-II mainly assesses the subjectively perceived motivational deficit in cognitive empathy.

By contrast, the more objective and ecologically valid measure of emotional empathy by means of the MET did not correlate with the SCID-II parameter "lack of empathy," indicating that ability was not assessed by the SCID-II. To our knowledge, all previous studies that assessed sensitivity, specificity, and convergent validity of the criterion "lack of empathy," used DSM criteria or the SCID-II interview (Morey, 1985; Gunderson and Ronningstam, 2001, Blais et al., 1997; Holdwick et al., 1998; Fossati et al., 2005; Ronnigstam and Gunderson, 1990). Thus, one conclusion of those data could be that the lack of convergent and divergent validity of the criterion "lack of empathy" in previous studies is mainly due to two points: First, the imprecise definition of empathy, focusing mainly on the motivational aspects and disregarding the multidimensional aspects of empathy, and second, the lack of appropriate assessment tools. Our data argue for a definition of "lack of empathy" based on an ability, at least in addition to motivation.

The study has some limitations. First, the presented results are based on a relatively small sample of psychiatric inpatients. Thus, our results have to be replicated in less impaired outpatient samples of patients with NPD. Also, further studies should take into account dimensional personality traits such as schizotypy (Henry et al., 2008) or psychopathy. Further studies should also address the topic of specificity of empathy impairment and behavioral consequences, for example, by including motor empathy (Blair, 2005a), using other complex social cognitive tasks (Golan et al., 2007, Zaki et al., 2008 and 2009), or using in- and out-group designs (De Dreu et al., 2010).

The data provide the first empirical evidence that patients with NPD display significant impairments in emotional empathy, that is, the ability to feel what other people feel. In contrast, patients with NPD did not show deficits in cognitive empathy, that is, in taking

another person's perspective. Furthermore, our data argue that subtle deficits in cognitive empathy in NPD patients are related to BPD comorbidity. Emotional empathy deficits seem to be shared with “near neighbor” BPD, whereas preliminary empirical evidence suggests that impairments in cognitive empathy abilities could to be more specific for BPD. In addition, NPD patients overestimate their abilities to show emotional empathy and report a motivational deficit for cognitive empathy compared to controls, whereas BPD patients don’t. The current DSM-IV-based NPD symptom “lack of empathy” and the assessment by the SCID-II interview do not capture the deficits in emotional empathy measured in the present study with more ecologically valid tasks. We suggest a more precise theory based definition of the criterion “lack of empathy,” and advocate for the use of more sensitive and multidimensional assessment tools for empathy in NPD.

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Table 1: Socio-demographic and clinical variables of patients with Narcissistic Personality Disorder (NPD), patients with Borderline Personality Disorder (BPD), and healthy comparison subjects.

	Total NPD Sample (*N* = 47)		NPD without BPD (*N* = 22)		Healthy Subjects (*N* = 53)		BPD without NPD (*N* = 27)	
	M	SD	M	SD	M	SD	M	SD
Age (years)	32.4	8.0	34.4	8.3	33.2	10.7	30.0	8.3
Fluid intelligence [a]	115.2[1]*	12.0	114.9[2]*	10.6	120.9	10.87	114.7	11.0
Number of comorbid diagnosis	4.7	1.9	2.9	1.8			3.4	2.4
Previous suicide attempts	2.9	3.8	1.3[3]***	2.0			5.3	6.5
Previous hospitalizations (weeks)	22.4	39.4	8.6[3]**	12.9			42.4	61.1
GSI of SCL 90-R [c]	1.7[1]***	0.7	1.6[3]*	0.6	0.3	0.2	2.0	0.7
	N	%	*N*	%	*N*	%	*N*	%
Women	24[4]	51.0	8[5]***	36.4	29	54.7	25	92.6
Any affective disorder	33	70.2	16[5]*	72.7			10	37.0
MDE current	17	36.2	12[5]*	54.6			6	22.2
MDE lifetime	21	44.7	14[5]*	63.6			7	25.9
Dysthymia	16	34.0	5	22.7			4	14.8
Any substance use disorder	20	42.6	8	36.4			15	55.6
Any anxiety disorder	13	27.7	5	22.7			11	40.7
PTSD	7	14.9	1[4]*	4.6			8	29.6
Any Eating disorder	10	21.3	4	18.2			8	29.6
Any Cluster A PD	19	40.4	6	27.3			4	14.8
Any other Cluster B PD [b]	26	55.3	4	18.2			8	29.6
Antisocial PD	12	25.5	4	18.2			4	14.8
Any Cluster C PD	21	44.7	7	31.8			14	51.9
Without psychotropic medication	14	29.8	10	45.5			10	37.0
Antipsychotic	9	19.1	1	4.6			7	25.9
Antidepressant	26	55.3	11	50.0			17	63.0
Mood Stabilizer	2	4.3	1	4.6			4	14.8

Note. NPD = narcissistic personality disorder, BPD = borderline personality disorder, MDE = major depression episode, PTSD = posttraumatic stress disorder, PD = personality disorder, [a] assessed with "Leistungs-Prüf-System" (LPS), [b] assessed with Symptom Checklist 90 Revised (SCL-90-R), [c] without NPD and BPD, [1] Mann-Whitney *U*-Test, [2] Kruskal-Wallis test, [3] ANOVA *F*-Test, [4] Fisher's exact test, [5] Pearson's χ^2, significance levels: * $p<0.05$, ** $p<0.01$,*** $p<0.001$.

Table 2: Means, standard deviations (SD), and group comparisons for sub-scales of IRI, MET, and MASC for patients with NPD and healthy comparison subjects.

	Group						
	NPD (*N* = 47)		HC (*N* = 51)		ANCOVA		
Measure	Mean	SD	Mean	SD	*F*	*P*	ω^2
IRI							
Cognitive Empathy - *perspective taking*	21.32	4.39	23.84	3.59	9.726	0.002	0.082
Emotional Empathy - *empathic concern*	24.80	4.33	26.04	3.18	2.626	0.108	0.016
MET[a]							
Cognitive Empathy - *emotion recognition*	22.47	7.33	21.82	1.70	0.648	0.423	-0.002
Emotional Empathy - *empathic concern*	4.68	1.57	5.80	1.40	25.405	<0.001	0.199
Emotional Empathy - *mirroring emotions*	4.45	1.37	5.42	1.39	23.703	<0.001	0.188
MASC							
Cognitive Empathy (Total Score)	30.77	4.94	33.34	5.26	6.150	0.015	0.049
Recognize Emotions	10.38	2.35	11.10	2.15	2.474	0.119	0.015
Recognize Thoughts	3.13	0.80	3.36	0.72	2.260	0.136	0.013
Recognize Intentions	9.33	2.25	10.10	2.29	2.815	0.097	0.023

Note. NPD = narcissistic personality disorder, HC = Healthy Controls, IRI = Interpersonal Reactivity Index, MET = Multifaceted Empathy Test, MASC = Movie for the Assessment of Social Cognitions, [a] The *F* tests the group effect. This test (ANCOVA) is based on the linearly independent pair wise comparisons among the estimated marginal means (covariate = background arousal). Degrees of Freedom: IRI and MASC: $d.f._{numerator} = 1$, $d.f._{denominator} = 95$; MET: $d.f._{numerator} = 1$, $d.f._{denominator} = 94$

Table 3. Means, standard deviations (SD), and group comparisons for sub-scales of IRI, MET, and MASC for patients with NPD, patients with BPD, and healthy controls.

	Group											
	1: NPD without BPD (*N* = 22)		2: BPD without NPD (*N* = 27)		3: HC (*N* = 53)		ANCOVA			Simple Contrasts (*P*)		
Measures	Mean	SD	Mean	SD	Mean	SD	*F*	*P*	ω^2	1 vs. 2	1 vs. 3	2 vs. 3
IRI[a]												
Cognitive Empathy - *perspective taking*	21.73	4.13	21.21	4.86	23.86	3.63	4.095	0.020	0.058	0.820	0.041	0.017
Emotional Empathy - *empathic concern*	25.15	3.70	24.38	6.99	25.98	3.18	2.058	0.133	0.021	0.181	0.746	0.046
MET[b]												
Cognitive Empathy - *emotion recognition*	22.40	4.90	20.50	4.55	21.82	1.69	2.895	0.060	0.037	0.022	0.368	0.055
Emotional Empathy - *empathic concern*	4.81	1.39	5.14	2.13	5.80	1.40	8.123	0.001	0.125	0.303	0.014	< 0.001
Emotional Empathy - *mirroring emotions*	4.55	1.26	4.70	1.80	5.42	1.39	10.71	< 0.001	0.163	0.080	0.019	< 0.001
MASC[a]												
Cognitive Empathy (Total Score)	31.09	5.10	29.78	8.19	33.34	5.26	3.531	0.033	0.048	0.294	0.224	0.011
Recognize Emotions	10.43	2.57	10.63	2.96	11.10	2.15	0.969	0.383	-0.001	0.626	0.485	0.184
Recognize Thoughts	3.25	0.58	3.11	0.89	3.36	0.72	0.616	0.542	-0.008	0.933	0.423	0.350
Recognize Intentions	9.56	2.37	8.85	2.55	10.10	2.28	2.520	0.086	0.029	0.258	0.437	0.028

Note. NPD = narcissistic personality disorder, BPD = borderline personality disorder, IRI = Interpersonal Reaction Index, MET = Multifaceted Empathy Test, MASC = Movie for the Assessment of Social Cognitions, [a] covariate = gender, [b] covariates = gender, background arousal. The *F* tests the group effects. These tests (ANCOVAs) are based on the linearly independent pair wise comparisons among the estimated marginal means (covariates = gender or gender and background arousal). Degrees of Freedom: IRI and MASC: $d.f._{numerator} = 2$, $d.f._{denominator} = 98$; MET: $d.f._{numerator} = 2$, $d.f._{denominator} = 97$

Chapter 4 – Stable or Flux

Study 3: Stability of Narcissistic Personality Disorder:

Tracking the Categorical and Dimensional Rating Systems across Two Years

Article Reference:

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Abstract

Personality disorders are defined as stable patterns over time (APA, 2000). However, evidence on the stability of Narcissistic Personality Disorder (NPD) is widely lacking. This study tracked the prevalence and remission rates of individual criteria for Narcissistic Personality Disorder (NPD) over the course of two years. In addition, the stability of dimensional personality pathology in patients with NPD (assessed with Dimensional Assessment of Personality Pathology, DAPP-BQ) was assessed over time. A sample of ninety-six patients with a primary diagnosis of NPD was recruited at baseline. Forty patients participated in the follow-up study after two years. We identified rank-order hierarchies for categorial diagnostic criteria by their variance in prevalence and remission rates over time. Additionally, we calculated the reliable change index (RCI) for dimensional personality pathology according to DAPP-BQ. Our results indicate a moderate remission rate for NPD as categorical diagnosis. Scores on dimensional subscales of the DAPP-BQ remained stable over time. Theoretical and practical implications are discussed.

Keywords: narcissistic personality disorder; stability; categorical diagnosis; dimensional rating

Introduction

Narcissistic personality disorder (NPD) is characterized as a “pervasive pattern of grandiosity, need for admiration, and lack of empathy” (APA, 2000). Several authors stated that patients with NPD are resistant to change over time due to the defensive abilities to deny their problems (Kernberg, 1975; Millon, 1981). However, empirical data supporting this assumption is widely lacking. The aim of the following study was to provide data on stability of NPD over two years.

Until now, only one study has addressed the three-year stability of NPD with patients meeting the threshold of the diagnostic category (Ronningstam, Gunderson, & Lyons, 1995). Ronningstam et al. (1995) used the LEAD diagnostic standard (longitudinal, expert, all data) that integrates information from multiple sources such as psychological and neurological testing, psychotherapists, psychiatrists, and senior consultants. Diagnostic criteria according to DSM-III and DSM-IV were applied using the Diagnostic Interview for Narcissism (Gunderson, Ronningstam, & Bodkin, 1990). Results of this study showed that six (50%) of the twelve subjects who met the DSM-III-R criteria for NPD at baseline still qualified for this diagnosis at three years follow-up. Moreover, from thirteen subjects who met the DSM-IV criteria for NPD at baseline, six (46%) kept the diagnosis. Even though Ronningstam et al. (1995) did not provide remission rates for each diagnostic criterion, they reported significant reductions on all scales of the Diagnostic Interview for Narcissism, namely the subscales grandiosity, interpersonal relations, reactiveness, mood states, and social/moral adaption.

Four other studies explored the stability of NPD criteria including patients with mixed clinical or non-clinical samples. First, Ball and colleagues investigated the stability of narcissistic features in patients with substance abuse (Ball, Rounsaville, Tennen, & Kranzler, 2001). Results of this study suggest a moderately high stability of r =.42 for DSM-III NPD features. Second, Lenzenweger, Johnson, and Willett (2004) calculated an individual growth curve analysis in order to provide information on remission of personality disorder traits within a sample of 258 non-clinical individuals. This study by Lenzenweger et al. (2004) revealed a low temporal stability for personality disorder features over time. Moreover,

remission rates for narcissistic features were comparably high as those of other personality disorders. Third, study by Samuel et al. (2011) used a large sample of 668 patients with various Axis I and Axis II disorders and provided evidence for a moderate temporal stability of NPD as diagnostic category across two years (Samuel et al., 2011). Moreover, dimensional pathological personality traits (Schedule for Nonadaptive and Adaptive Personality—2; SNAP-2, Clark, Simms, Wu, & Casillas, in press) appeared to be more stable than the categorial diagnosis of NPD (Diagnostic Interview for *DSM–IV* Personality Disorders, DIPD-V, Zanarini et al., 1996). Fourth, recent study investigated the stability of NPD features in a mixed clinical sample (N = 266) across ten years (Hopwood et al., 2012). Hopwood et al. provided rather low stability rates of r = .24 for DSM-IV-TR NPD features. In sum, results of these studies challenge the theoretical assumption of NPD being resistant to change.

Aims of this study

Concluding from what is written above, empirical data on prevalence and stability of NPD with clinical patients meeting the diagnostic category is widely lacking. Only one study used patients diagnosed with NPD. Although there are some studies with mixed clinical and non-clinical samples, results may not be transferrable to severe expressions of NPD with patients meeting the diagnostic category. Moreover, no study analyzed the stability of single criteria of NPD, yet. In our view, data on remission rates of individual criteria may be fruitful for future descriptions of NPD. Notably, individual criteria representing central features of NPD should be prevalent at baseline and stable over the course of two years. Criteria of NPD that fail to suffice these requirements of being prevalent and stable over time may need to be revised or deleted in upcoming descriptions of the disorder.

Notably, we followed three subordinated aims:

First, we focused on examining prevalence and remission rates of NPD as diagnostic category over a 2-year period. In concordance with studies provided above (Ball et al., 2004; Hopwood et al., 2012; Lenzenweger et al., 2004; Ronningstam et al., 1995; Samuel et al.,

2011), we hypothesized that NPD as diagnostic category would be moderately temporal stable. In comparison to most existing studies, we included patients fulfilling a diagnosis of NPD.

Second, we aimed at providing evidence for the stability of each NPD criterion. We followed an analytical strategy by McGlashan et al. (2005) who performed rank-order hierarchies of each criterion in terms of prevalence and remission rates for borderline, schizotypical, avoidant and obsessive-compulsive personality disorder. McGlashan et al. (2005) showed that individual criteria for personality disorders vary in their stability. By applying this statistical procedure, our study aimed at providing data on the centrality of each single criterion. As already mentioned above, this is the first study that analyzed the stability of single NPD criteria, thus, we had no empirical rationale for formulating directed hypothesis.

Third, we aimed at providing evidence for the stability of a dimensional rating system. By doing so we aimed to contribute to the discussion whether dimensional rating systems are valid complementary approaches to the categorical diagnostic approach. We chose the Dimensional Assessment of Personality Pathology (DAPP-BQ). Up to now, no study assessed the stability of the DAPP-BQ in patients with NPD over time. As mentioned above, a recent study with patients with various psychiatric disorders suggests that dimensional pathological personality traits are more stable than the categorical diagnosis over the course of two years (Samuel et al., 2011). We thus hypothesized that the DAPP-BQ subscales remain stable from baseline to follow-up.

Method

Participants and procedure

Baseline. A total of 96 patients with NPD were recruited from the department of psychiatry, Charité – Universitätsmedizin Berlin and cooperating German hospitals at baseline. All patients participated in a two-week diagnostic program in order to verify the diagnosis of a personality disorder. During their hospitalization, NPD patients were enrolled

in a broad multicenter clinical study on NPD. All NPD patients agreed to be contacted for a follow-up study. Procedures were approved by the Human Subjects and Ethics Committee of Charité - Universitätsmedizin Berlin. Written informed consent was obtained from each participant.

Axis I diagnoses were assessed with the Structured Clinical Interview for DSM-IV for Axis I Disorders (First et al., 1996; German version: Wittchen; Zaudig, & Fydrich, 2007). Axis II diagnoses of patients were assessed with the Structured Clinical Interview for DSM-IV for Personality Disorders (SCID-II, First et al., 1997; German version: Fydrich, Renneberg, Schmitz, & Wittchen, 2007) by trained psychiatrists or psychologists. Exclusion criteria at baseline for all patients were history of psychotic disorder and a current bipolar I disorder and mental retardation (IQ < 80; German intelligence test “Leistungsprüfsystem”, LPS by Horn, 1983). During their inpatient treatment, patients filled in self-report questionnaires (see measures).

Follow-Up. After 24 months, we initially contacted participants via phone. Patients that were unreachable via phone, were contacted via e-mail or post. A total of 40 out of 96 patients participated in the study (41,7% of all patients contacted). From the remaining 56 (58,3% of all patients contacted), 33 did not answer a letter (58.9% of unreachable participants), 5 did not answer the phone (8.9% of unreachable participants), 9 rejected participation (16.1% of unreachable participants), 8 had moved away (14.3% of unreachable participants) and 1 participant had committed suicide (1,8% of unreachable participants).

At follow-up, SCID-I and SCID-II were applied again. Two independent interviewers familiar with personality disorder diagnosis were blind to prior diagnostic criteria at baseline. Patients were randomly assigned to interviewers, thus, both interviewers diagnosed an equal amount of patients. For a significant amount of patients it was only possible to participate in one interview session at follow-up (e.g., for approximately one third of the patients state of residence was outside of Berlin). Moreover, the emphasis of the follow-up was placed on the stability of the categorial diagnosis and the stability of dimensional pathological personality traits. Thus, only the most prevalent SCID-I diagnosis (with more than 5 patients fulfilling the

SCID-I diagnosis at baseline) were implemented in a screening at follow-up (c.f. results section). Another reason for this procedure was to keep the length and structure of the interview constant across all participants. Patients complemented self-report questionnaires ahead of the diagnostic interviews.

Measures

Categorial diagnosis. Interrater reliability of SCID-II diagnoses was assessed with a pairwise interview design with three raters and eight patients (Kappa κ = 0.797) for NPD diagnosis. Raters at follow-up were blind to prior diagnostic criteria at baseline. Internal consistencies for NPD items at first assessment (Cronbach´s α = .90 at baseline and Cronbach´s α = .66 at follow-up) were good.

Dimensional pathological personality. The Dimensional Assessment of Personality Pathology (DAPP-BQ; Livesley & Jackson, 2002; German version: Pukrop et al., 2001) is a reliable and valid dimensional measure of personality pathology (e.g., Bagge & Trull, 2003; Gutiérrez-Zotes et al., 2008; Kushner, Quilty, Tacket, & Bagby, 2011; Pukrop, Gentil, Steinbring, & Steinmeyer, 2001; Pukrop, Steinbring, Gentil, Schulte, Larstone, & Livesley, 2009). Moreover, patients with NPD, compared to non-clinical controls, scored higher on the DAPP-BQ narcissism subscale (but not on another frequently used questionnaire for assessing narcissism, the Narcissistic Personality Inventory, Raskin & Terry, 1988) (Vater et al., 2012). Another study shows that patients with NPD score higher on the DAPP-BQ narcissism subscale than patients with Borderline Personality Disorder (Ritter et al., 2012). Concluding from these studies, the DAPP-BQ is a relevant predictor of pathological personality traits in patients with NPD. The 5-point response scale ranges from 1 (very unlike me) to 5 (very like me). In this study, the internal consistency (Cronbach's alpha) of the narcissism scale was α = .92 (baseline) and α = .88 (follow-up).

Beck Depression Inventory (BDI). The BDI-I (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961; German version: Hautzinger, Bailer, Worall, & Keller, 1995) was employed to assess severity of depression. Participants responded to 21 items on 4-point scales which were represented by four different statements. The BDI is a widely used and well-validated self-report measure for depression and reflects the individual's experience of specific symptoms over the past week. The internal consistency (Cronbach's alpha) of the scale was α = .94 at baseline and α = .88 at follow-up.

Symptom Checklist-90-Revised (SCL-90-R). The Symptom Checklist-90-Revised (Derogatis, 1997; German version: Franke, 2002) was employed at baseline to assess general psychopathological and physical impairments during the last week. Responses were made on 5-point scales with endpoints labeled not at all (0) and very much (4). The GSI (Global Severity Index) sum score of the SCL-90-R indicates psychopathological impairment in general. The internal consistency (Cronbach's alpha) of the scale was α = 0.94 at baseline. As already mentioned above, we only included the SCL-90-R at baseline.

Results

Descriptive statistics and group comparisons

Group comparisons: baseline and follow-up. First of all, we analyzed whether patients with NPD experienced a reduction on depression from baseline to follow-up. In our statistical analysis, we included patients that participated in both interview sessions and calculated paired t-Test for dependent samples (N = 40). According to our data, patients at follow-up had lower scores on depression compared to baseline [BDI, $t(94) = 4.084$, $p < .001$].

We also assessed descriptive statistics of relationship status, work status and psychotherapy sessions at baseline and follow-up. Regarding relationship status at baseline (N=40), 8 patients were in a relationship, 28 patients were single and 1 patient was divorced (missing data of 3 patients of 40). Moreover, 9 patients were employed, 10 patients were in

an educational program and 20 patients were unemployed at baseline (missing data from 1 of 40 patients). At follow-up, 11 patients were in a relationship, 23 patients were single and 3 patients were divorced (missing data of 3 patients of 40). Regarding the work status at follow-up, 11 patients were employed, 8 patients were in an educational program and 10 patients were unemployed (missing data of 11 patients of 40). Moreover, 34 patients reported to have psychotherapy sessions over the course of two years at follow-up (6 patients did not enter psychotherapy). As the sample size is the small, we cannot draw conclusions whether individuals deviate in relationship status, work status and psychotherapy sessions at baseline and follow-up

Group comparisons: reachable and unreachable participants

We further aimed at investigating whether we only reached a subgroup of NPD patients that are characterized by deviant psychological impairment. In order to do so, we compared patients that participated at follow-up and baseline (N = 40) with patients that could not be reached for the follow-up session (N = 56). Regarding the severity of narcissism, no significant baseline differences in the prevalence of NPD criteria [$t(93) = .530$, $p = .597$] or scores on the narcissism subscale of the DAPP-BQ [$t(93) = 4.320$, $p = .667$] were observed between the two groups. Moreover, groups did not differ in general psychological impairment [GSI, $t(94) = -.595$, $p = .552$] and depression [BDI, $t(94) = -1.282$, $p = .203$].

Second, we further compared whether patients that participated at baseline only (N = 56) differed from patients at follow-up (N = 40) on descriptive statistics, namely age and gender. Participants at follow up ($M = 34.8$; $SD = 10.1$) were significantly younger than patients at baseline ($M = 30.2$; $SD = 7.0$) [$t(93.90) = 2.647$, $p = .010$]. The gender ratio remained the same from baseline to follow-up (Baseline: N-male = 31, N-female = 17; Follow-Up: N-male = 25; N-female = 23; $\chi^2 = 1.543$, df = 1, p = .214).

Comorbidities at baseline and follow-up

Table 1 presents data on comorbid disorders at baseline and follow-up. The percentages of comorbid disorders of subjects retained and those not assessed after 2-years were comparably high (see Tab. 1).

Direction of Change

Table 2 provides information on descriptive statistics on direction of change, i.e. information on the number of NPD patients that either lost, neither lost or gained, or gained a criterion. Criteria varied in stability over time (lowest = 44.7%; highest = 68.4%): need for admiration, arrogance and a lack of empathy remained most stable, while fantasies, exploitativeness and grandiosity appeared to be least stable. Moreover, criteria with the highest gain rates were grandiosity and belief of uniqueness (i.e., 8 patients that did not meet both criteria at baseline fulfilled these criteria at follow-up). Criteria with the highest loosing rates were fantasies of unlimited success and exploitativeness (i.e., 16 patients fulfilled the criteria fantasies of unlimited success at baseline, but did not at follow-up; 17 patients fulfilled the criteria fantasies of unlimited success at baseline, but did not at follow-up).

Stability of the diagnosis

After two years, 19 of the initial 40 NPD patients still met five or more criteria for NPD according to DSM-VI-TR. Thus, two-year remission rate for NPD was 52.5%. We further examined each single criterion at baseline and follow-up. We used an analytical strategy introduced by McGlashan et al. (2005) who provided information not only on prevalence rates of each criterion (at baseline and follow-up), but also remission rates in a rank-order. The frequency (percent) of personality disorder criteria (present and significant) at baseline (colomn 1) according to the SCID-II interview rating are displayed in Table 3. Prevalence rates for criteria prevalence at baseline varied between 81.6% and 42.1%. Table 3 also presents the rank order of criteria from most to least prevalent. According to the data, need for admiration, fantasies of unlimited success and envy were the most prevalent criteria at

baseline. Arrogance, lack of empathy and believe of uniqueness were the least prevalent criteria at baseline.

Column 2 of Table 3 presents the rank ordering of prevalence for all criteria after 2-year follow-up. Criteria prevalence at 2-year follow up varied between 60.5% and 39.5%. By 2 years, the prevalence of all criteria decreased, with one exception for the criterion belief of uniqueness that was more prevalent after two years (gain of 2.6%). envy, need for admiration, and grandiosity were the most prevalent criteria at 2-year follow-up. Entitlement, exploitativeness and lack of empathy were the least prevalent criteria after two years.

Criterion remission

Frequencies (percent) of criteria that remitted (i.e. that were present at baseline, but are not present at follow-up, score of 0) are presented in column 3 of Table 3. It is important to note that values in column 3 do not represent the difference between values in column 1 and column 2 (for further information see McGlashan et al., 2005). While column 2 shows the mere presence of criteria (i.e. including criteria that were not present at baseline, but were present at follow-up), column 3 provides information on remission of criteria that were present at baseline and are not present 2-years later . Therefore, a criterion a patient gained through the course of two years is not represented in Column 3 of Table 3. Remission rates vary between 36.7 percent and 60.7 percent. The rank ordering in column 3 shows that envy, arrogance and need for admiration were the least changeable criteria. Grandiosity, fantasies of unlimited success and exploitativeness were the most changeable criteria.

Stability of dimensional personality traits

Table 4 provides descriptive statistics of all DAPP-BQ subscales. The t-test results reveal that patients with NPD reported lower scores on several DAPP-BQ subscales (see Tab. 4). However, effect sizes were small to medium (*Cohens d* < .50) with the exception of insecure attachment (*Cohens d* = 1.34).

In order to provide data whether the changes on DAPP-BQ subscales were clinically meaningful, we calculated reliable change indices (RCI), a standardized score representing

the change in a client's score on a test. If the RCI is 1.96 or greater than the difference is statistically significant (1.96 equates to the 95% confidence interval). If the RCI is less than 1.96 then the difference is not significant. According to our data, none of the DAPP-BQ subscales (including the subscale narcissism) reached RCI scores beyond 1.96, thus, pathological personality did not differ between baseline and follow-up (see Tab. 4). Moreover, in comparison to all DAPP-BQ subscales, the subscale narcissism reached moderate stability rates.

Discussion

This study examined the stability of individual diagnostic criteria of NPD and a dimensional rating system for pathological personality over a 2-year period. Our results suggest a relatively moderate remission rate for the categorical diagnosis of NPD over the course of two years. No clinically meaningful change in narcissistic traits emerged on a dimensional rating system for personality pathology (the DAPP-BQ). Moreover, NPD criteria differed in their prevalence and stability.

Stability of NPD as diagnostic category

According to our results, the two-year remission rate for NPD was 52.5%. This finding is in line with an early study by Ronningstam et al. (1995) who provided first evidence for moderate stability of DSM-III and DSM-IV NPD diagnosis. The remission rate we found here is comparably high to remission rates of other personality disorders (Grilo et al., 2004; Shea et al., 2002; Zimmerman, 1994). For instance, Grilo et al. (2004) reported remission rates of 61% for schizotypal PD, 56% for borderline, 50% for avoidant PD, and 60% for obsessive-compulsive PD within 2 years. Thus, the diagnosis of NPD seems to be as stable as other personality disorders. Most interestingly, our data contradict the common assumption of NPD being stable over time (Kernberg, 1975; Millon, 1981).

Prevalence and change of each diagnostic criterion

Single NPD criteria differed in their prevalence and temporal stability similar to findings for

other personality disorders (McGlashan et al., 2006). In the following section, we discuss the utility of each single criterion ranging from low to high remission rates with reference to the proposed changes of NPD in the upcoming DSM-5 (see dsm5.org; latest update august 2012). According to the recent information on the DSM-5 proceedings, NPD will be characterized by impairments in self-functioning (i.e. identity and self-direction), interpersonal dysfunctions (i.e. empathy and intimacy) and pathological personality traits (grandiosity and attention seeking). In the following, we relate our findings to future descriptions of NPD.

According to our results, need for admiration (criterion 5) and envy (criterion 8) are among the most prevalent diagnostic criteria at baseline and additionally seem to be the least changeable. As the concept of stability remains central in the upcoming DSM-5, those criteria may be considered for retention. In the current DSM-5 proposal, need for admiration is reflected in the criteria ‘attention seeking’ (i.e. excessive attempts to attract and be the focus of the attention of others; see dsm5.org).

However, to this date, envy (criterion 8) will not be represented as single criterion in the DSM-5. Even though envy seems to be a prominent and central criterion, several arguments militate in favor of its’ deletion. First, latent class analysis by Fossati et al. (2005) provided evidence that preoccupation with envy was one of the worst predictors of NPD. Second, envy may be a result of other prominent criteria. For instance, due to excessive self-referencing, patients with NPD may misattribute verbal or nonverbal reactions of others as evidence of them being envious. Moreover, NPD patients seek the admiration of others. However, when others gain greater achievements, patients with NPD may experience envy. Thus, envy may be deleted from the DSM-5 in favor of other more prominent criteria.

Lack of empathy (criterion 7) appears to be stable, but less prominent at baseline. Up to now, it is a defining feature in the upcoming DSM-5. Recent research suggests that lack of empathy indeed is central to NPD (Ritter et al, 2011). We assume that the low prevalence rate of a lack of empathy might be due to its conceptualization in DSM-IV-TR. The interview asks if a patient is willing to empathize with others. The study of Ritter et al. (2011), however, draws a fine-grained picture of empathy: NPD patients carry equally high cognitive empathy

(they are able to identify others states of mind), but lower emotional empathy (i.e. they show lower affective responses to others states) in comparison to Borderline patients and non-clinical individuals. These fine-grained differences between these two facets of empathy are not captured in the current DSM-IV-TR description of NPD. Thus, patients who express an empathic understanding during the interview may not reach the criterion according to DSM-IV-TR. When differentiating between cognitive and emotional facets of empathy in DSM-5, the criterion may reach higher prevalence and higher stability. Moreover, a recent study provides evidence that NPD patients estimate their empathic abilities considerably high as non-clinical controls in a self-report inventory (Marissen et al., 2012). However, in comparison to non-clinical controls, they perform worse on an emotion detection test. Concluding from this study, NPD patients may overestimate their empathic abilities in an interview. According to this, additional information from close relationship partners and therapists should be taken into consideration during the diagnostic process.

Moreover, arrogance (criterion 9) seems to be a stable criterion. Although arrogance is not included as independent criterion in the DSM-5, it merges into the category grandiosity (i.e. 'feelings of entitlement, either overt or covert; self-centeredness; firmly holding to the belief that one is better than others; condescending toward others', see dsm5.org). Moreover, we assume that arrogance may strongly depend on the raters' subjective interpretation of verbal and nonverbal information during therapeutic interactions. Thus, grandiosity may be a more reliable descriptor of NPD.

Belief of uniqueness (criterion 3) is the least prevalent criterion at baseline, but becomes more prevalent after two years (i.e. eight patients gain this criteria at 2-year follow up). One may speculate that patients in our study suffered from a crisis that may temporarily suppress beliefs of uniqueness. After recovering from a temporary crisis, scores on belief of uniqueness may rise. To this date, beliefs of uniqueness merge into the category grandiosity in DSM-5.

Other criteria were less stable, such as fantasies of unlimited success (criterion 2). Fantasies of unlimited success were highly prevalent and baseline, but had high remission

rates over the course of two years. Thus, this criterion does not suffice the requirement of being a reliable and stable feature of NPD. We agree with McGlashan et al. (2005) that the most changeable criteria may rather represent situational responses to stress than stable characteristics of pathological personality. The criterion fantasies of unlimited success serves as an example: Individuals may have fantasies to avoid facing the unwanted reality. This might function as a coping mechanism against temporary or recurrent stressful life events (e.g., conflicts in close relationships, negative achievement feedback). If a person is unsatisfied with the current reality, fantasies may be a strategy to gain positive affects in a short term. Research indeed provides evidence that illusions and fantasies are correlated with subjective well-being and buffer against stress (Raskin & Novacek, 1991; Taylor & Brown, 1994). We assume that temporary fantasies of success may even be adaptive to a certain extent, if the person manages to overcome threats or a temporary crisis.

According to our data, exploitativeness (criterion 6) was the criterion with the highest remission rates. In the current proposal of DSM-5, exploitativeness is subsumed under the category intimacy (i.e. mutuality constrained by little genuine interest in others' experiences and predominance of a need for personal gain). As exploitativeness does not seem to be a stable feature of NPD over time, our data supports the decision to merge this criterion into a broader category.

Stability of dimensional rating systems

Whereas previous studies on the longitudinal assessment of NPD have mainly relied on scores from semi-structured interviews, the current study additionally investigated the temporal stability of scores from a self-report questionnaire, the DAPP-BQ. The reliable change index showed that pathological personality did not significantly diverge between baseline and follow-up. This finding is in line with a recent study by Samuel et al. (2011) that provided evidence for high stability of dimensional rating systems; lower stability rates appeared for categorical rating systems. Samuel et al. (2011) gave valuable explanations for high stability of dimensional and rather restricted stability of categorical rating systems.

First, Samuel et al. (2011) drew to another methodological difference: self-report inventories contain more items than diagnostic interviews. Thus, multiple items assessing the nuances of a given construct may yield greater measurement precision and may perhaps be to a certain extent superior to diagnostic interviews (also see Sanislow et al., 2009).

Second, Samuel et al. (2011) argue that methodological differences account for differences in stability: self-report questionnaires may be less influenced by systematic measurement error at baseline and thus are less prone to regression to the mean. The greater decrease on SCID-II scores may be indicative for inflated baseline scores. Samuel et al. (2011) propose that future studies may use dimensional ratings as basis for study inclusion in order to prevent regression to the mean.

Third, Samuel et al. (2011) argue that diagnostic interviews and self-report inventories may differ in content. While diagnostic interviews assess behaviorally specific content, the DAPP-BQ may assess broader and more general pathological personality traits. Moreover, items of the DAPP-BQ narcissism scale rather draw to vulnerable aspects (i.e. insecurity in social interaction) of pathological narcissism (e.g., sample items “I get very anxious if I think someone does not like me“; „I need people to reassure me that they think well of me“). According to several authors, the current DSM-IV-TR criteria capture grandiose content, but it fails to cover vulnerable facets of NPD (see Pincus, 2011; Miller & Campbell, 2010). Cain et al. (2008) hypothetically assume that vulnerable facets may be more stable than grandiose aspects of NPD. Thus, the categorical diagnosis may be more instable as it mainly addresses grandiosity (see Cain et al. 2008). The dimensional scores may be more stable as they predominantly assess vulnerable facets. However, it is not clear to what extent the DAPP-BQ and SCID-II scores overlap with either grandiose or vulnerable narcissism. Future research applying content analysis of different measurements in relation to the stability of vulnerable and grandiose facets of narcissism is warranted.

Fourth, Samuel et al. (2011) propose that self-report questionnaires provide greater validity for the assessment of internal, subjective experiences, whereas an interviewer might provide more valid scores for directly observable characteristics that are ego-syntonic. In line

with this assumption, research from social and personality psychology suggests that individuals are motivated to establish and maintain a coherent sense of self (self-verification theory, Swann, 1990). Thus, an interviewer might be more objective to estimate changes in personality traits as he or she exercised interpreting an individual's response that increases validity and accuracy. In line with this assumption, self-reports might be biased by self-presentation (Lanyon, 2004), self-deception (Paulhus, 1984), or a lack of self-insight (Robins & John, 1997). Similarly, self-reports usually show low to moderate correlations with external ratings of personality pathology (e.g., Oltmanns & Turkheimer, 2006).

Future research is clearly needed to better understand the temporal consistency of dimensional and categorial systems. As Samuel et al. (2011) suggested, one valuable method personality ratings provided by a close relationship partners (spouses, family members, friends) may be used in addition to expert ratings. Moreover, more than one follow-up assessment within a shorter time frame might be an additional reasonable approach.

Limitations

The strength of this study is the acquisition of a respectable sample size with all patients fulfilling a diagnosis of NPD at baseline. However, this study has several limitations. First, from our data, we cannot draw any conclusions on predictors of change. Although we documented whether patients entered or proceeded psychotherapeutic treatment and whether there is a change in relationship and employment status, our sample size is to small to indicate whether these factors had an effect on symptom reduction over the course of two years. Studies on predictors of change in NPD are clearly needed.

A second issue pertains to the selection of patients with NPD, who exhibited high comorbidity rates in our study. 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.

Several studies provided evidence that NPD criteria overlap with Antisocial and Borderline Personality Disorder (Gunderson et al., 1994; Morey, 1988). We assume that considering specificity is important for criterion selection in the upcoming DSM-5 and we thus advice future studies to include additional clinical control groups to assess this issue.

Moreover, we focused on long-term changes in NPD. However, narcissistic patients may also fluctuate in short-term. This is in line with several theoretical models from clinical psychology (Kernberg, 1975; Kohut, 1988) and social psychology (Morf & Rhodewalt, 1995). According to these models, the self in persons scoring high on narcissism is characterized by short-term fluctuations in self-esteem and self-concept. Consequently, certain criteria may appear or be hidden as response to situations. We assume that NPD can only be better understood by examining underlying processes of self-functioning. For instance, once the need for attention is stimulated, grandiosity may temporarily increase. Thus, future studies should analyze not only long-term, but also short-term fluctuations of affective, cognitive and behavioral patterns.

Summary

NPD appears to be one of the least studied personality disorders (Boschen and Warner, 2009; Miller, Widiger & Campbell, 2010). This lack of research contributed to the controversial debates on the deletion of NPD as categorical diagnosis from the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM–5). To this date, NPD will be retained as an autonomous disorder in the upcoming DSM-5 (see dsm-5.org, last updated in june the 21st, 2011; Miller et al., 2010, Ronningstam, 2011, Alarcon and Sarabia, 2012). Our study shows that NPD is not as stable as proposed by theoretical models (Kernberg, 1975; Millon, 1981). NPD seems to be as stable as other personality disorders (Grilo et al., 2004; Shea et al., 2002; Zimmerman, 1994). For future research, identifying predictors of change for different criteria and in patients with different personality profiles may assist to develop empirically validated treatment programs.

Table 1.

Comorbidities and Medication of all NPD Patients

	At baseline				At follow-up	
	(1) NPD that participated baseline only (N=56)		(2) NPD that participated at baseline and follow-up (N=40)		(3) NPD that participated at baseline and follow-up (N=40)	
	N	%	N	%	N	%
Any Affective Disorder						
Major Depression current	20	35.71	13	32.5	11	27.5
Major Depression lifetime	24	42.9	16	40	16	40
Dysthymia	14	25.0	15	37.5	3	7.5
Alcohol Dependency	11	19.64	4	10.0	2	5.0
Alcohol Abuse	12	21.43	8	20.0	3	7.5
Any Anxiety Disorder						
Panic Disorder with Agoraphobia	5	8.9	2	5.0	3	7.5
Social Phobia	3	5.4	2	5.0	n.a.	n.a.
Generalized Anxiety Disorder	2	3.6	3	7.5	n.a.	n.a.
Posttraumatic Stress Disorder	5	8.9	6	15.0	n.a.	n.a.
Somatization Disorder	3	5.4	1	2.5	n.a.	n.a.
Any Eating Disorder	11	19.64	9	22.5		
Anorexia Nervosa	4	7.1	3	7.5	n.a.	n.a.
Bulimia Nervosa	4	7.1	5	12.5	n.a.	n.a.
Any Cluster A PD	20	35.71	11	27.5	12	30.0
Any Cluster B PD	25	44.64	30	75.0	30	75.0
Any Cluster C PD	20	35.71	12	30.0	8	20.0
Without Psychotropic Medication	32	57.14	29	72.5	11	27.5
Antipsychotic	10	17.86	11	27.5	5	12.5
Antidepressant	25	44.64	24	60.0	19	47.5
Mood Stabilizer	3	5.36	3	7.5	3	7.5

Note. Any Cluster B PD only includes Histrionic and Antisocial Personality Disorder. Group 1 includes patients that participated at baseline, but were unreachable for follow-up; it shows comorbities at baseline. Group 2 includes patients that participated at baseline and follow-up; it shows comorbidties

at baseline. Group 3 includes patients that participated at baseline and follow-up; it shows comorbidities at follow-up.

Table 2.

Descriptive Statistics of Direction of Change of Diagnostic Criteria of NPD according to DSM-IV-TR (N = 40)

Criteria	Direction of Change	N	%
envy	+ 1	4	10.5
	0	23	60.5
	- 1	11	28.9
arrogance	+ 1	5	13.2
	0	26	68.4
	- 1	7	18.4
need for admiration	+ 1	2	5.3
	0	24	63.2
	- 1	12	31.6
lack of empathy	+ 1	5	13.2
	0	26	68.4
	- 1	7	18.4
believe of uniqueness	+ 1	8	21.1
	0	23	50.5
	- 1	7	18.4
entitlement	+ 1	5	13.2
	0	23	60.5
	- 1	10	26.3
grandiosity	+ 1	8	21.1
	0	19	50.0
	- 1	11	28.9
fantasies of unlimited success	+ 1	5	13.2
	0	17	44.7
	- 1	16	42.1
exploitativeness	+ 1	4	10.5
	0	17	44.7
	- 1	17	44.7

Note. Direction of Change: +1 = gain of criterion (patients who did not fulfill the criterion at baseline, but gained it at follow-up); 0 = nor loss or gain of criterion (absence or presence of criterion remained stable), -1 = loss of criteria (patients who fulfilled the criterion at baseline, but lost it at follow-up); N = number of individuals who gained, neither gained nor lost; or lost a criterion.

Table 3.

2-year Follow-Up of Diagnostic Criteria of NPD according to DSM-IV-TR (Rank Order of Frequency of Prevalence, Change, Remission and Direction of Change) (N = 40)

Criteria Present at Baseline (most to least frequent)		Criteria Present at 2 Years (most to least frequent)		Criteria Remitted at 2 Years (least to most frequent)	
Criteria	%	Criteria	%	Criteria	%
need for admiration	81.58	envy	60.53	envy	36.67
fantasies of unlimited success	78.95	need for admiration	55.26	arrogance	36.84
envy	78.95	grandiosity	52.63	need for admiration	38.70
exploitative-ness	73.68	fantasies of unlimited success	50.00	lack of empathy	41.18
grandiosity	60.53	believe of uniqueness	44.74	believe of uniqueness	43.75
entitlement	57.89	arrogance	44.74	entitlement	45.45
arrogance	50.00	entitlement	42.11	grandiosity	47.83
lack of empathy	44.74	exploitative-ness	39.47	fantasies of unlimited success	53.33
believe of uniqueness	42.11	lack of empathy	39.47	exploitative-ness	60.71

Table 4.

2-year Follow-Up of Dimensional Personality Pathology according to DSM-IV-TR (N = 40)

	NPD baseline		NPD 2-year follow-up		Correlation baseline and 2-year follow-up	T-Test			RCI
	M	SD	M	SD	r	t (37)	p	d	
Emotional Dysregulation	403.87	69.91	380.65	77.56	.82	4.27	.000	.549	-0.70
Affective Lability	63.44	8.28	60.30	10.03	.52	2.34	.025	.394	-0.94
Anxiousness	61.91	11.54	58.20	12.95	.76	2.53	.016	.328	-0.78
Cognitive Dysregulation	53.35	9.06	51.38	11.65	.82	1.71	.095	.220	-0.50
Identity Problems	61.40	9.41	57.50	12.57	.74	3.00	.005	.410	-1.27
Insecure Attachment	59.27	11.49	52.43	10.81	.71	4.56	.000	1.342	-1.20
Oppositionality	53.50	9.88	52.27	10.41	.69	.93	.358	.131	-0.32
Submissivness	51.00	10.25	48.57	9.14	.75	1.74	.091	.212	-0.43
Dissocial Behavior	237.02	48.62	228.7	51.36	.86	2.24	.032	.259	-0.36
Callousness	40.71	9.31	41.87	9.46	.77	-.78	.441	-.100	0.21
Conduct Problems	43.53	10.37	40.41	9.98	.65	2.12	.041	.309	-0.76
Narcissism	53.03	11.53	50.97	10.97	.76	1.58	.123	.205	-0.44
Rejection	47.74	7.54	46.41	10.48	.91	1.34	.189	.161	-0.34
Stimulus Seeking	52.01	9.87	49.04	10.47	.91	2.89	.006	.305	-0.61
Social Avoidance	156.01	32.97	153.97	34.28	.82	.88	.386	.105	-0.15
Intimacy Problems	42.13	12.33	42.80	12.81	.78	-.44	.662	-.055	0.13
Low Affiliation	57.32	11.17	56.14	11.42	.83	1.00	.322	.162	-0.30
Restricted Expression	56.56	9.47	55.03	10.05	.83	1.62	.115	.187	-0.43
Compulsivity	52.09	11.11	50.73	11.21	.29	.64	.523	.116	-0.27
Suspiciousness	46.19	8.66	46.59	10.86	.63	-.02	.982	.004	0.01
Self-Harm	45.17	11.62	41.22	12.10	.81	3.13	.003	.380	-0.83

Note. *M* = mean score; *SD* = standard deviation; grey indicates scales that comprise the subscales below.

Chapter 5 – Normal or Pathological Narcissism

Study 4: The Narcissistic Personality Inventory - a useful tool for assessing pathological narcissism? Evidence from patients with Narcissistic Personality Disorder

This chapter has been published as Vater, A., Schröder-Abé, M., Ritter, K., Schulze, L., Renneberg, B, Bosson, J., Röpke, S. (2012). The Narcissistic Personality Inventory - a useful tool for assessing pathological narcissism? Evidence from patients with Narcissistic Personality Disorder. Journal for Personality Assessment. *Journal of Personality Assessment, 93(3)*, 301-308. doi: 10.1080/00223891.2012.732636

The reader is referred to the appendix for the published article.

Chapter 6 – General Discussion

Integration of Findings

To date, NPD is a comparably cloudy reflection like borderline personality disorder was in the early 70's: Before borderline personality disorder was introduced in DSM-III, there was a tremendous lack of research, accompanied by the view of borderline patients being resistant to change. Advancements in research led to a more fine-grained description of borderline personality disorder and to the establishment of empirically based treatment strategies. In my view, not only imprecise and uncoordinated descriptions, but also heterogeneous assessments of narcissism as construct contributed to inhibition of research and led NPD to remain a reflection in a cloudy pond. The final part of this thesis will provide a discussion of findings and study limitations as well as an outlook for future research directions.

Study 1: Grandiose or Fragile?

Results of Study 1 suggested that patients with NPD report lower explicit self-esteem relative to a group of non-clinical individuals. Regarding the level of implicit self-esteem, no differences emerged between NPD patients and the non-clinical group. Furthermore, the results showed that NPD patients have higher implicit and higher explicit self-esteem in comparison to patients with borderline personality disorder. In sum, this study contradicts the assumption of not necessarily conscious feelings of insecurity in NPD as manifested in the mask model (Kernberg, 1975). In line with recent findings, discrepancies between explicit and implicit self-esteem are associated with higher symptom severity (e.g., Vater et al., 2010).

These findings have several implications for future descriptions of NPD. The most important finding from Study 1 points to the fact that patients with NPD do not carry overall grandiose self-appraisals, instead they carry low explicit self-esteem. Moreover, low explicit

self-esteem represents vulnerable aspects of narcissistic patients that have been widely overlooked in DSM-IV-TR.

One further important result of Study 1 is the presence of unimpaired implicit self-esteem. In conclusion, patients with NPD may carry not necessarily conscious attitudes that are discrepant from explicitly stated attitudes. Discrepancies between explicit and implicit self-evaluations in patients with NPD may contribute to inconsistencies in behavior and attitudes over time. Moreover, damaged self-esteem (i.e., the combination of high implicit and low explicit self-esteem) is connected to higher symptom severity in NPD patients. In line with this assumption, research shows that discrepancies between explicit and implicit self-esteem are connected to lower well-being (Schröder-Abé, Rudolph, & Schütz, 2003) and guide dysfunctional behavior (Rudolph et al., 2010).

A limitation of this study is that we concentrated on analyzing self-esteem as trait variable. Thus, we did not analyze fluctuations of state self-esteem. Unpublished data from our workgroup investigated self-esteem contingencies (using the Self-Esteem Contingencies Scale by Crocker and Wolfe, 2001) in patients with NPD in comparison to non-clinical controls. Results of this study point to highly contingent self-esteem in patients with NPD, mainly based on work achievements and others approval. Thus, patients may either state grandiose thoughts or present themselves in a more vulnerable state, depending on the occurrence of temporary crisis. In order to understand the nature of NPD in a more cohesive way, future research should investigate the prerequisites of fluctuations in state self-esteem.

Study 2: Empathic or Cold?

Results of Study 2 suggest that patients with NPD are not characterized by a general lack of empathy: while they show deficits in emotional empathy, cognitive empathy seems unaffected. This finding may have implications for future descriptions of NPD. Up to now, a lack of empathy seems to remain a core feature of NPD in the upcoming DSM-5. Our study supports the decision to retain lack of empathy as a future diagnostic criterion. However, the

current definition of lack of empathy is not informative and should be revised in the upcoming DSM-5 proposal by differentiating between emotional and cognitive empathy.

It should be noted that our study contradicts a recent study (Marissen, Deen & Franken, 2012) that points to lower emotion detection abilities in comparison to non-clinical controls. The authors assessed emotion recognition with a facial recognition task developed from facial affect series (Ekman & Friesen, 1976; Young et al., 2002). In contrast, we used the MET that consists of pictures displaying facial expressions within a broader context (i.e., not only facial expressions are pictured, but also background information). Furthermore, we implemented the MASC which displays social interactions among multiple characters in a movie (i.e., including social signals such as language, gesture posture facial expression etc.). Task selection may thus account for inconsistencies between our study and the findings by Marissen et al. (2012). The MET and the MASC both provide additional information (above pure emotion detection) that may ease emotion recognition in patients with NPD, leading to unimpaired cognitive empathy. Other factors, such as sample characteristics (e.g., age, gender ratio, comorbidities, medication) may explain inconsistencies between Ritter et al. (2011) and Marissen et al. (2012). However, we cannot draw any conclusions whether these factors account for statistically significant differences in cognitive empathy between these two studies. Future research is needed to investigate conditions of unimpaired cognitive empathy in patients with NPD.

Study 3: Stable or Flux?

Results of Study 3 indicate that the remission rates of NPD do not significantly deviate from remission rates of other personality disorders. However, since diagnostic criteria vary in prevalence and stability over time, some diagnostic criteria may be less central for describing NPD. First, NPD is characterized by prevalent and stable criteria, i.e., ‘envy’ and ‘need for admiration’. Due to high prevalence and high stability, Study 3 underlines that envy and attention seeking may be central for describing NPD.

Second, some criteria are less prominent, but show low remission rates, such as lack of empathy and arrogance. Especially lack of empathy seems to define NPD (see Study 2). Low prevalence rates at baseline underline that the future descriptions of NPD should distinguish between cognitive and emotional empathy: patients may verbally express strong abilities of perceiving others emotions and thus do not meet this criterion in a diagnostic interview. A recent study indeed indicates that NPD patients do not statistically deviate in self-reports of empathy in comparison to non-clinical controls (see Marissen et al., 2012). Concluding from this, ratings by closely related partners should be taken into account in a diagnostic interview.

Third, other criteria are less prevalent and highly instable, such as believe in uniqueness and entitlement. Moreover, the criterion fantasies of unlimited success appeared to be highly prevalent, but also instable. Thus, retaining these criteria in upcoming descriptions of NPD may not be indicated, as these criteria rather seem to represent a situational response than an enduring personality trait. In sum, results of this study contradict the assumption of the current construct of NPD being resistant to change.

Study 4: Normal and Pathological Narcissism?

Study 4 showed that NPD patients do not score higher on the NPI in comparison to non-clinical controls. Analysis of indirect effects revealed that differences in NPI scores are suppressed by NPD patients' low self-esteem. Therefore, it is crucial to control for self-esteem when using the NPI.

This result suggests that researchers should be cautious when using categories like normal or pathological narcissism without providing definitions and referring to caveats of assessment devices. Moreover, conceptualizations of narcissism in social psychology do not match the description of NPD. This finding indicates that results from social psychology using the NPI may not be transferrable to patients with NPD. Thus, caution is warranted when drawing assumptions on either normal or pathological narcissism. With regard to current

discussions on narcissism, concerns regarding obfuscating definitions and assessments of narcissism seem to be broadly ignored. Study 4 thus suggests that future studies should provide a working definition of narcissism and clear rationales for choosing their assessment tools.

Future Directions

Besides the lack of research on the definition and the assessment of NPD, further notable aspects regarding the existence of narcissistic subtypes and the origins of NPD are still under scrutiny. In addition to information provided above, the following paragraphs provide information on these aspects to complete the picture of NPD as a reflection in a cloudy pond.

Are there Multiple Reflections in a Cloudy Pond?

Recent research points to the existence of several subtypes of NPD. There is currently a hot debate regarding the distinction between overt and covert narcissism that has been introduced by Wink (1991). According to Wink's view, overt and covert narcissists share self-absorbed and arrogant attitudes toward others, but they also appear to be distinct from each other: *Overt narcissists* experience a grandiose sense of self, appear to be self-confident and charming when meeting other people. *Covert narcissists* feel inferior to others, are sensitive to others approval and appear to be reserved in social interactions (Wink, 1991)[3]. Ronningstam (2011) argued that the current DSM-IV-TR criteria mainly assess overt narcissism, while they fail to capture covert narcissism. Moreover, several studies provided evidence for the existence of these subtypes (Rose, 2002; Karterud, Oien, & Pederson, 2011). Thus, several authors propose that covert narcissism should be integrated in DSM-5.

[3] The current literature does not sufficiently define and differentiate between grandiose/vulnerable and overt/covert narcissism. Most authors use the constructs 1) overt and grandiose narcissism and 2) covert and vulnerable narcissism interchangeably. In contrast to this, Pincus (2010) proposes that overt/covert and grandiose/fragile narcissism are independent constructs. Thus, narcissistic patients may exhibit both covert and overt grandiosity *and* covert and overt vulnerability.

However, it is not yet clear whether overt and covert narcissism are distinct subtypes of narcissism or whether they represent two sides of one coin, i.e. it may be possible that patients with NPD flip from covert to overt expressions of narcissism, depending on outer circumstances. Future research is warranted to disentangle overt and covert expressions of narcissism.

What are the Origins of Narcissistic Personality Disorder?

According to the narcissus myth of the poet Ovid, a curse led the beautiful, but proud Narcissus to fall in love with his own reflection. This myth raises the question of the origins of narcissism. Up to this date, not a single study analyzed developmental factors of NPD in clinical patients. Several authors have theoretically argued that parenting styles lead to narcissistic features that have compensatory functions for unmet narcissistic needs. According to Kohut (1977) and Kernberg (1975), narcissistic grandiosity rises as dysfunctional attempt to cope with painful feelings of insecurity. Although Kohut (1977) and Kernberg (1975) disagree on developmental aspects of narcissism, both of their models claim that insufficiently empathic, devaluing parents build the basis for NPD. 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 overvaluation of their child leading to the development of a grandiose self-image that conflicts with information from the environment.

To date, there is only preliminary evidence for the roles of parental devaluation and overvaluation in the development of narcissism. This evidence is based on non-clinical individuals who are high in (normal) narcissism (assessed with the NPI). Some self-report studies emphasize the role of parental devaluation (parents as being cold and indifferent, Otway & Vignoles, 2006; insufficiently empathic, Trumpeter, Watson, O'Leary, & Weathington, 2008), others point to the presence of overvaluation (parents being praising and uncritical, Otway & Vignoles, 2006; rarely setting restrictions, Horton et al., 2006).

Although the specific origins of narcissism are not yet clear, both overvaluation and devaluation represent forms of invalidation, as parental responses to the child's behavior do not reflect objective reality. Analyzing its origins may provide more detailed descriptions of NPD. Hypothetically, overvaluation may result in grandiose and overt narcissism, while devaluation may rather provoke vulnerable and covert narcissism.

Moreover, it may be possible that NPD is based on (neuro-)biological and/or genetic factors. A study by Kendler and colleagues with twins revealed that NPD had substantial disorder-specific genetic effects (Kendler et al., 2008). However, the sample consisted of non-clinical individuals. Another recent study from our workgroup provided first empirical evidence for structural abnormalities in fronto-paralimbic brain regions in patients with NPD, i.e. smaller grey matter volume in fronto-paralimbic brain regions, such as the anterior insula, the rostral part of the anterior cingulate cortex and the median cingulate cortex (Schulze et al., submitted; for similar results with non-clinical individuals high in narcissism see Fan et al., 2011). Moreover, lower grey matter volume of the left anterior insula was related to lower emotional empathy. Thus, NPD might be associated with brain alterations in regions responsible for deviations in emotion processing. However, the study by Schulze et al. (submitted) is the first study that analyzed differences in brain regions of patients with NPD in comparison to non-clinical controls. Moreover, due to the correlational design of this study, we cannot draw any conclusions on developmental factors from this study. Future research needs to further analyze biological factors leading to symptoms in NPD patients.

Strengths and Limitations

The strengths of this thesis are the collection of respectable sample sizes of patients with NPD and (clinical and non-clinical) control groups. Moreover, this dissertation used a top-down approach by using the current historically established description of NPD and additionally integrated perspectives from different fields of psychology within a broader multidisciplinary approach.

Naturally this thesis has delimiting factors that should be briefly mentioned here: First, this dissertation exclusively relied on patients that report personal suffering – a defining characteristic of the diagnosis NPD. It is thus not clear whether symptoms change over time after recovering from a crisis. Longitudinal studies on NPD are needed. Second, the inclusion of a qualitative research approach would be essentially fruitful (i.e. videotaping of behavior in social interactions). For instance, processing self-relevant attitudes and emotions might be better observable during interactions. Third, this thesis picked specific, but central symptoms of NPD. However, the full range of apparent shades of the disorder had to be excluded (e.g., empirical analysis of dysfunctional emotions, such as shame or anger). Thus, NPD still remains to be a reflection in a cloudy pond. However, this thesis contributed towards a more elaborated description of specific features of NPD (i.e., self-esteem, empathy, stability) and may guide the choice of assessment strategies in future studies.

Summary

The way narcissism is understood today is highly historically contingent. Regarding the current proposed changes in DSM-5, empirical evidence for most alterations of diagnostic criteria is still missing. Considering the current arguments with respect to the future diagnosis of NPD, it is fairly evident that the architecture of the disorder is based on rather pragmatic, theoretically driven than empirically based decisions. Unless future models of narcissism are based on research findings and additionally capture the dynamics (i.e. fluctuations in state self-esteem) and the variety (i.e. subtypes, such as overt and covert facets) of the disorder, narcissism will remain a highly controversially discussed syndrome. In sum, future research on defining features of NPD is strongly needed.

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Hiermit versichere ich, dass ich die vorgelegte Arbeit selbstständig verfasst habe und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt wurden, sowie Zitate kenntlich gemacht habe.

Die Arbeit ist in keinem früheren Promotionsverfahren angenommen oder abgelehnt worden.

Ort, Datum Aline Vater

Appendix Chapter 5 – Normal or Pathological Narcissism

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