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**Understanding Narcissistic Personality Disorder: Clinical  
Features and Neurobiological Underpinnings**

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# INTRODUCTION

Narcissism is a complex trait that ranges from healthy self-esteem to pathological patterns characterized by grandiosity, lack of empathy, and intense need for admiration. It has long fascinated clinicians, researchers, and theorists across various fields due to its mythological origins and its development within psychological theory. Despite its known impact on mental health, narcissistic personality disorder remains one of the least studied and poorly understood personality disorders, especially when it comes to its biological underpinnings and effective treatment strategies.

By bringing together insights from history, clinical practice, and neuroscience, this thesis aims to provide a more comprehensive picture of this multifaceted disorder. To achieve this, the evolution of narcissism is traced from its roots in ancient mythology to its conceptualization in modern psychology, examining the contributions of early thinkers such as Sigmund Freud and Otto Kernberg, leading to its formal inclusion in the Diagnostic and Statistical Manual of Mental Disorders (DSM). The clinical aspects are then outlined, including its grandiose and vulnerable subtypes as well as its overt and covert manifestations. Several assessment tools are described, alongside different therapeutic approaches. From a biological perspective, the most relevant neuroimaging studies are reviewed, illustrating the correlations between narcissistic traits and activity in specific brain regions.

In writing this thesis, I employed advanced AI language tools to refine the clarity, grammar, and overall quality of the English writing. These tools were used solely to enhance the expression of ideas while preserving the originality and academic integrity of my work.

# CHAPTER 1 – Foundations of Narcissistic Personality Disorder

## *1.1 History of NPD*

The Greek mythological character of Narcissus, who died after falling in love with his own image in still water, is central to the idea of narcissism (Akhtar & Thomson, 1982). The Roman poet Ovid later developed this tale in *Metamorphoses* (8 C.E.), in which Narcissus was condemned by the goddess Nemesis for rejecting all of his admirers, including the nymph Echo (Levy et al., 2011). Several years later, in 1889, the sexologist Havelock Ellis was inspired by this legendary story to delineate a psychological state that was marked by autoeroticism. This was one of the first mentions of narcissism in the history of contemporary psychology (Akhtar & Thomson, 1982). Ellis's work had a profound influence on Paul Näcke, who in 1899 coined the term "narcissmus" (Akhtar & Thomson, 1982) to refer to cases where the individual is regarded as a sexual object (Levy et al., 2011). The term "narcissistic" first appeared in 1910 when Sigmund Freud mentioned it in a footnote to *Three Essays on the Theory of Sexuality*, extending his considerations in the field of psychoanalytic theory (Akhtar & Thomson, 1982). By 1911, Otto Rank published the first psychoanalytic paper entirely devoted to narcissism, emphasizing its role in every individual's development and linking it to defensive mechanisms such as vanity and self-admiration rather than a sexual aspect (Yakeley, 2018). Afterward, Freud, in his seminal work *On Narcissism: An Introduction* (1914), defined narcissism both as a universal phase of psychosexual development and a potential marker of psychopathology (Levy et al., 2011). These early contributions opened the way to further theoretical reflections, such as the one of Waelder, who in 1925 drew the first detailed description of what a "narcissistic personality" is, defining it by traits such as superiority, lack of empathy, and reliance on external validation (Akhtar & Thomson, 1982). In the second half of the 20th century, the psychoanalysts Otto Kernberg and Heinz Kohut proposed two theories that had a profound impact on the contemporary definition of the disorder (Yakeley, 2018). According to Kernberg's object relations theory (1984), narcissism develops as a consequence of early experiences of parental rejection, devaluation, and emotional neglect, which cause the child to defensively withdraw and develop a grandiose and pathological self-image (Levy et al., 2011). In this process, all of the positive and idealized aspects of the self and others are fused together

into a pathological grandiose self, which results in an inflated self-image (Cain et al., 2008). Central to Kernberg's approach are the themes of aggression and conflict, particularly the role of the individual's aggressive impulses and envy toward others, which contribute to shaping his narcissistic traits (Yakeley, 2018). Kohut, in contrast, coined the term "narcissistic personality disorder" in 1968 (Akhtar & Thomson, 1982), referring to a defect in the child's normal psychological development that results in self-esteem dysregulation and difficulty sustaining self-cohesion (Cain et al., 2008). In particular, what contributes to the child's inability to regulate himself properly is a lack of mirroring or adequate idealization by the caregivers (Levy et al., 2011). Although Kernberg and Kohut's visions diverged in their etiological and therapeutic approaches, they both agreed on the phenomenological manifestations of narcissism, especially when considering the less severe cases (Levy et al., 2011).

Narcissism officially took shape as a clinically defined disorder in 1980, when it was first included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; South et al., 2011). In the DSM-III (APA, 1980) narcissistic personality disorder (NPD) was placed in among Personality Disorders, which were defined as inflexible and maladaptive personality traits that either result in subjective distress or a major impairment in social or professional functioning (APA, 1980). Narcissism has been characterized by a grandiose sense of self-importance, preoccupation with fantasies of unlimited success, power, or ideal love, a need for constant admiration, and detached indifference or feelings of rage in response to criticism, along with interpersonal disturbances such as entitlement, exploitative behavior, alternating idealization and devaluation of others, and a lack of empathy (APA, 1980). The manual also acknowledged a fragile self-esteem that frequently shows up as an excessive concern with one's own performance and opinions of others, even though it was not specifically mentioned in the diagnostic criteria (Cain et al., 2008; South et al., 2011).

Starting in 1983, the third edition of the Statistical Manual of Mental Disorders was revised, and its updated version was officially published in 1987 by the APA (Reynolds & Lejuez, 2011). In the DSM-III-TR (APA, 1987) the diagnostic criteria for narcissistic personality disorder underwent major changes including the separation of interpersonal relationship difficulties into three distinct criteria (exploitativeness, entitlement, and lack of empathy) and the elimination of "alternating idealization and devaluation of relationships" due to its overlap with borderline personality disorder (BPD); additionally, the broader criterion of "disturbances in interpersonal relationships" of the DSM-III was restructured, with grandiosity and uniqueness being divided into separate criteria (Criteria 3 and 4 respectively). Lastly, a

new Criterion 9 was introduced to address preoccupation with feelings of envy (Gunderson et al., 1995, cited by Reynolds & Lejuez, 2011).

The clinical practice guidelines for narcissism were also improved in later DSM editions to reflect a development in the clinical knowledge and empirical research. In particular, the DSM-IV Personality Disorders Work Group was commissioned to refine the diagnostic criteria that appeared in the DSM-IV (APA, 1994; Reynolds & Lejuez, 2011). Regarding NPD, they removed some criteria such as "negative reactions to criticism" (Criterion 1), because it overlaps with paranoid and borderline personality disorders, and they also modified others such as "lack of empathy" (Criterion 8) and "preoccupation with envy" (Criterion 9) to improve their diagnostic utility (Gunderson et al., 1995, cited by Reynolds & Lejuez, 2011). A new "arrogant, haughty behaviors or attitudes" criterion was added to distinguish NPD from other personality disorders, and some words were changed as well. For instance, they replaced "expects to be noticed as special" with "expects to be recognized as superior," to capture the grandiosity aspect of narcissism more effectively (Gunderson et al., 1995, cited by Reynolds & Lejuez, 2011). Vulnerable themes such as shameful reactivity to criticism, alternating states of idealization and devaluation, and chronic awareness of vulnerable self-states, were largely relegated to the Associated Features and Disorders section, limiting their representations (Cain et al., 2008). Since the revision of the DSM-IV (DSM-IV-TR; APA, 2000) did not include any changes for narcissistic personality disorder, in response to ongoing debates, the DSM-V (APA, 2013) introduced the Alternative Model of Personality Disorders (AMPD) in its third section (see Figure 1). AMPD contributed to a significant change in both the conceptualization and diagnosis of narcissistic personality disorder. As mentioned above, NPD has always been defined through a categorical framework, with nine diagnostic criteria required for a diagnosis (Weinberg & Ronningstam, 2022). This approach was criticized for two main reasons: the first is that it lacks a dimensional aspect (Weinberg & Ronningstam, 2022), while the second is that the vulnerable and covert manifestations of the disorder are not accurately captured (Cain et al., 2008; Pincus et al., 2010). Furthermore, several diagnostic inconsistencies emerged regarding its low prevalence rates found in epidemiological studies, despite the consistent number of cases observed in clinical settings (Yakeley, 2018). While the traditional ones were maintained in section II, the AMPD introduced two new criteria (Zimmermann et al., 2019). Criterion A assesses self-related (identity and self-direction) and interpersonal (empathy and intimacy) dysfunction, while Criterion B categorizes personality traits within five higher-order domains: Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism. In the case of NPD, two primary antagonistic traits (Grandiosity and Attention-Seeking) are

central to the diagnosis (See Figure 1) (Wright et al., 2013). Using this hybrid model, it is now possible to obtain a PD-Trait Specified (PD-TS) diagnosis for patients whose pathological traits do not entirely fit into the existing categories (Wright et al., 2013).

**TABLE 1. DSM-5 Criteria for Narcissistic Personality Disorder<sup>a</sup>**

A pervasive pattern of grandiosity (in fantasy or behavior), need for admiration, and lack of empathy, beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

1. Has a grandiose sense of self-importance (e.g., exaggerates achievements and talents, expects to be recognized as superior without commensurate achievements).
2. Is preoccupied with fantasies of unlimited success, power, brilliance, beauty, or ideal love.
3. Believes that he or she is "special" and unique and can only be understood by or should associate with, other special or high-status people (or institutions).
4. Requires excessive admiration.
5. Has a sense of entitlement (i.e., unreasonable expectation of especially favorable treatment or automatic compliance with his or her expectations).
6. Is interpersonally exploitative (i.e., takes advantage of others to achieve his or her own ends).
7. Lacks empathy: is unwilling to recognize or identify with the feelings and needs of others.
8. Is often envious of others or believes that others are envious of him or her.
9. Shows arrogant, haughty behaviors and attitudes.

*Figure 1: DSM-5 Criteria for Narcissistic Personality Disorder (Caligor et al., 2015).*

Although the AMPD was initially supposed to replace the categorical system in DSM-V, it was ultimately relegated to Section III of the manual as an "emerging model" due to disagreements within the psychiatric research community and the American Psychiatric Association (Skodol, 2014, cited by Yakeley, 2018; Wright et al., 2013). Nevertheless, the AMPD has recently received a lot of empirical support and is consistent with other modern approaches like the ICD-11 (Weinberg & Ronningstam, 2022).

The diagnostic criteria for narcissistic personality disorder were not altered after its last revision (DSM-V-TR; APA, 2022).

### *1.1.1 The Dark Triad*

The concept of the dark triad was introduced after McHoskey, Worzel, and Szyarto (1998) claimed that narcissism, Machiavellianism, and psychopathy were largely indistinguishable traits in normal populations. This statement sparked controversy, leading various psychologists to challenge this view. Paulhus and Williams (2002) were the first to provide sufficient evidence to support their classification as related yet distinct constructs. They defined the dark triad as a cluster of three distinct but interrelated personality traits: sub-clinical narcissism, Machiavellianism, and sub-clinical psychopathy. These traits are characterized by a shared core of manipulateness, callousness, and a lack of empathy, making individuals more prone to become socially aversive and potentially harmful in interpersonal contexts (Paulhus et al., 2002). While narcissism involves grandiosity, entitlement, and a need for admiration, Machiavellianism is marked by strategic manipulation and cynicism, and psychopathy includes impulsivity, superficial charm, and emotional detachment (LeBreton et al., 2018). Although each trait differs along other dimensions such as neuroticism, conscientiousness, and extraversion, they share low agreeableness as a Big Five correlate, indicating a common aspect of antagonism (Paulhus et al., 2002).

Over time, researchers have expanded this framework to account for variations within these traits. One such development is the vulnerable dark triad (VDT), which integrates emotionally unstable or vulnerable forms of these traits, specifically vulnerable narcissism, Factor 2 psychopathy, and borderline personality disorder (Miller et al., 2010). Contrary to the exploitative and confident profiles seen in the original dark triad, VDT traits are associated with emotional dysregulation, neuroticism, and a heightened sensitivity to rejection or criticism. This suggests that while both triads share antagonistic interpersonal tendencies, they diverge on dimensions like emotional stability and conscientiousness (Miller et al., 2010). Empathy-related research further distinguishes these traits, showing that individuals high in the dark triad traits exhibit significant deficits in affective empathy (the ability to emotionally resonate with others), while cognitive empathy or the capacity to understand another's perspective, remains relatively intact (Wai & Tiliopoulos, 2012). This supports the idea that such individuals can cognitively grasp others' emotions but lack the emotional engagement necessary for prosocial behavior, which may facilitate manipulation and exploitation of others without feeling guilty (Wai & Tiliopoulos, 2012).

In organizational settings, dark triad traits have been linked to counterproductive workplace behaviors. Those high in these traits often employ hard influence tactics, such as

intimidation or coercion, particularly in hierarchical environments where power dynamics are at play (Jonason et al., 2011). While all three traits correlate with manipulative strategies, psychopathy is most strongly tied to aggressive tactics, whereas Machiavellianism aligns with calculated persuasion and narcissism with charm or physical appearance-based influence (Jonason et al., 2011).

## *1.2 Epidemiology of NPD*

Among all personality disorders, narcissism is the one that has received the least attention. Most of the epidemiological studies were conducted using clinical samples instead of investigating the general population (Pulay et al., 2011). Additionally, the few existing community studies present various limitations due to their restricted geographic area and relatively small sample, which is prone to bias (Pulay et al., 2011).

A systematic review by Dhawan et al. (2010) identified seven prevalence studies that used structured or semi structured interviews to assess NPD in adult nonclinical samples. They found an overall low prevalence, which ranges from 0% to 6.2%, with a mean prevalence of 1.06% (Dhawan et al., 2010). Among those, five were the most qualified. Two of them (Torgersen et al. 2001 and Lenzenweger et al. 1997) recruited the sample locally, and found a prevalence rate of 0.8% and 0.18%, respectively; of the remaining three, which were nationally representative, two found no individuals with narcissistic personality disorder (Dhawan et al., 2010). The one with the highest prevalence rate for NPD was the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) conducted by Stinson et al. (2008) which found a lifetime prevalence of 6.2% for NPD, with higher rates among men (7.7%) than women (4.4%) (Dhawan et al., 2010). This finding aligns with population-based data that shows that narcissism is more frequent in men (i.e., 1.2 %) than women (i.e., 0.7 %) (Roepke & Vater, 2014).

One significant factor contributing to the variability in reported prevalence rates is the high degree of comorbidity associated with narcissistic personality disorder. According to the NESARC study (Stinson et al., 2008), individuals with NPD are significantly more likely to experience co-occurring psychiatric disorders, particularly mood disorders, anxiety disorders, and substance use disorders (Stinson et al., 2008). These comorbid conditions often bring individuals with NPD to clinical attention, complicating the diagnosis and affecting variability in reported rates (Stinson et al., 2008). Sociodemographic factors were also found to play a

crucial role. The NESARC study identified several characteristics associated with increased odds of NPD that had not been reported in previous research due to limitations in sample size (Stinson et al., 2008). For instance, NPD was more prevalent among individuals who were separated, divorced, or widowed, regardless of their gender (Stinson et al., 2008). Furthermore, age was inversely related to NPD prevalence, with younger adults (ages 20–29) showing the highest rates (9.4%) and older adults (ages 65+) showing the lowest (3.2%) (Stinson et al., 2008). Nevertheless, younger samples have shown a greater improvement in symptoms, possibly due to positive life events they experienced, such as professional achievements and romantic relationships, which suggests that age is probably a mediator of outcome (Weinberg & Ronningstam, 2022). Racial and ethnic differences were also observed: NPD was more common among Black individuals (12.5%) and Hispanic women (7.9%) compared to White individuals (5.0%) (Stinson et al., 2008).

Depending on the context and the sample used in the study, prevalence rates for narcissistic personality disorder can range from 1.3% to 20%, even in the clinical population (Weinberg & Ronningstam, 2022). In one study, Karterud et al. (2011) used the Structured Clinical Interview for DSM-IV Axis II Personality Disorders to evaluate 2277 individuals, 80% of whom had a personality disorder. They found that although only 18 of them (0.8%) met all the diagnostic criteria for NPD, 443 patients (20%) still met at least one. Criterion 4 (demanding excessive admiration) was the most prevalent (Karterud et al., 2011). Additionally, sex differences were found both in terms of criteria and diagnostic levels, with male patients showing a more grandiose form of NPD (Karterud et al., 2011).

Lastly, compared to inpatient or day clinic settings, outpatient settings have greater prevalence rates (Roepke & Vater, 2014). For instance, in a study of psychiatric outpatients who were assessed using the Structured Interview for DSM-IV Personality Disorders, 2.3% of them were diagnosed with narcissistic personality disorder (Zimmerman et al., 2005).

### *1.2.1 Gender Bias in NPD*

According to the DSM-V, up to 75% of individuals with a diagnosis of narcissistic personality disorder are men. This suggests that narcissism is a clinical phenomenon that affects men and women differently (Green et al., 2023). Traditional diagnostic systems like the DSM-V and widely used assessment tools such as the NPI tend to emphasize grandiose narcissism by using traits such as entitlement and superiority, which align more closely with masculine

norms. Consequently, vulnerable narcissism, which is more commonly associated with femininity, remains underrepresented (Green et al., 2023). This diagnostic bias reflects a broader cultural tendency to marginalize feminine expressions of narcissism, such as emotional vulnerability and low self-esteem (Green et al., 2022). As a result, women with narcissistic traits are frequently misdiagnosed with other “feminized” disorders, such as borderline, dependent, and histrionic personality disorders, while men are more likely to be diagnosed with NPD or antisocial personality disorder (Anderson et al., 2001; Green et al., 2022). Clinicians’ perceptions further exacerbate these disparities, as evidenced by vignette-based studies where female patients exhibiting vulnerable narcissism were more often diagnosed with BPD compared to their male counterparts (Green et al., 2023). These findings underscore how gender stereotypes shape diagnostic practices, with male clinicians particularly prone to attributing different diagnoses based on patient gender rather than symptomatology. Additionally, theoretical orientations influence diagnostic outcomes: while psychodynamic clinicians are more likely to recognize vulnerable narcissism as NPD, cognitive-behavioral therapists focus narrowly on observable symptoms (Green et al., 2023). Addressing these biases requires revisiting diagnostic frameworks to incorporate both grandiose and vulnerable dimensions of narcissism, ensuring equitable recognition and treatment across genders (Green et al., 2022).

### *1.3 Assessment of NPD*

Narcissistic personality disorder can be challenging to assess due to its variable clinical presentations and the limitations of the current employed diagnostic models. As Caligor et al. (2015) noted, assessing narcissistic pathology using only structured tools can be subtle and difficult, especially in high-functioning individuals. Although self-report measures and structured interviews do offer reliability, they are often limited in respect to what a skilled clinician can obtain through a systematic clinical interview (Caligor et al., 2015). This is particularly evident when interpersonal representations need to be assessed, since they tend to be vague, idealized, or dismissive in individuals with NPD (Caligor et al., 2015). Furthermore, many assessment tools often exhibit conceptual inconsistencies due to a lack of consensus on the structure and expression of narcissism itself (Pincus et al., 2010).

When assessing narcissistic traits in non-clinical populations, the most widely used self-report measure is the Narcissistic Personality Inventory (NPI; Tamborski & Brown, 2011). The

most popular version of it is the NPI-40, which was developed by Raskin and Terry (1988), while a shorter 16-item form also exists. Although the NPI has been adopted in many research studies investigating narcissism, it has been largely criticized for its various limitations. For instance, they argued that its focus is mostly on the grandiose aspects of narcissism, such as authority, self-sufficiency, and exhibitionism, instead of the vulnerable ones that are often present in the clinical population (Cain et al., 2008). Similarly, others noted that NPI is not able to capture the full spectrum of pathological narcissism, since some important traits like emotional dysregulation, contingent self-esteem, and hypersensitivity to criticism have been omitted (Pincus et al., 2010). According to Wright et al. (2013), this instrument is misaligned with the contemporary dimensional models of personality pathology, which embrace both grandiosity and vulnerability when assessing narcissistic traits.

To overcome these criticisms, Pincus and colleagues developed the Pathological Narcissism Inventory (PNI), which was specifically designed to reflect the full phenotypic spectrum of pathological narcissism. The PNI is also a self-report measure, but unlike the NPI, it places a strong emphasis on both features reflecting narcissistic vulnerability (e.g., contingent self-esteem, hiding the self, devaluing others, and entitlement rage), alongside dimensions of grandiosity (e.g., exploitativeness, grandiose fantasy, and self-sacrificing self-enhancement) (Watson & Bagby, 2011; Wright et al, 2013). A confirmatory factor analyses support the PNI as the only multidimensional measure capable of assessing both of these grandiose and vulnerable components (Cain et al. 2008). Another distinct feature of the PNI is represented by its distinct patterns of association with other psychological constructs. For instance, while the PNI is positively correlated with shame, borderline personality organization, and negatively correlated with self-esteem, the NPI tends to correlate positively with self-esteem, negatively with shame, and has no relationship with pathological object relations. Nonetheless, both measures are similarly linked to lower empathy and higher aggression (Cain et al., 2008).

Another way of inferring narcissism is through the use of clinician-rated tools, which provide a standardized method for diagnosing NPD in clinical populations. An example of this approach is given by the Structured Clinical Interview for DSM-V Personality Disorders (SCID-5-PD), which is a semi-structured diagnostic interview designed to assess personality disorders according to DSM-V diagnostic criteria (First et al., 2016). Like its predecessor (SCID-II), the SCID-5-PD includes both a clinical interview and a self-report screening questionnaire, and it also offers standardized scoring criteria (First et al., 2016). While the SCID-5-PD is the most recent version, much of the empirical literature still draws on the SCID-II. This was developed starting from DSM-IV criteria, whose most informative diagnostic

criteria include impaired empathy and arrogant behavior, and can be used both categorically and dimensionally (Watson & Bagby, 2011). Despite the advantages of these tools with respect to the self-report measures discussed above, the great attention on threshold criteria and symptom counts may limit the dimensional aspect of narcissism (Watson & Bagby, 2011). For these reasons, a dimensional alternative to the traditional categorical diagnosis was proposed. Using a Q-sort methodology, the Shedler-Westen Assessment Procedure (SWAP) rates an individual through descriptive personality statements, ranging from “not descriptive (0) to “highly descriptive” (7), with a predetermined number of items that are assigned to each category (Watson & Bagby, 2011). Thanks to this tool, clinicians can have nuanced personality profiles based on their judgment, but some limitations, such as the need to be familiar with the patient before the assessment and the potential inflation of validity due to the forced distribution of scores, need to be considered (Watson & Bagby, 2011). When the SWAP was employed in diagnosing narcissistic personality disorder, it identified three empirically derived narcissistic subtypes: the Grandiose/Malignant, the Fragile, and the High-Functioning/Exhibitionistic. The Grandiose/Malignant subtype is characterized by traits that reflect externalizing behaviors and poor insight into one’s actions, such as interpersonal hostility, manipulateness, exaggerated self-importance, entitlement, and a lack of remorse (Pincus et al., 2010). In contrast, the Fragile subtype includes individuals who use grandiosity as a defense against feelings of inadequacy, shame, and loneliness. When these defenses fail, these individuals often experience anxiety and depression (Pincus et al., 2010). The third subtype, the High-Functioning/Exhibitionistic one, represents individuals who are outgoing and energetic, despite having an inflated self-image. They tend to demonstrate better adaptive functioning and use their narcissistic traits as motivational resources for success, particularly in the context of work (Pincus et al., 2010). This dimensional model aligns with other psychodynamic ones, such as the Psychodynamic Diagnostic Manual (PDM), which similarly distinguishes between narcissistic subtypes like Arrogant/Entitled and Depressed/Depleted (Pincus et al., 2010).

Taken together, all of these strengths and limitations of the different assessment methods, the best way to ensure diagnostic accuracy when assessing narcissistic personality disorder is to rely on a multimodal approach that combines self-report measures with in-depth clinical interviews. Studies have consistently shown that self and other-report ratings offer independent and complementary perspectives (Pincus et al., 2010). Individuals with NPD are particularly prone to distortions in self-perception and may not acknowledge some of their socially undesirable traits, leading them to underreport their narcissistic pathology. For this

reason, incorporating peer-report or observer-based assessments can compensate for such biases and contribute to the creation of more reliable personality profiles (Watson & Bagby, 2011).

## *1.4 Aetiology of NPD*

### *1.4.1 Developmental Factors*

Most of the literature concerning the aetiology of narcissism focuses on psychoanalytic/psychodynamic principles or, more recently, comes from the social learning theory and attachment research (Yakeley, 2018). Within the psychodynamic tradition, the causes of narcissism have been attributed to a dysfunctional relationship between the parents and the child. For instance, according to Kohut, narcissistic personality disorder can arise whether parents are too involved (overparenting), as the child's grandiosity is not challenged, or too distant (under parenting), leaving no idealized image for the child to internalize (Horton, 2011). In contrast, Kernberg highlights how multiple factors, including parental coldness, strictness, hostility, and extremely high expectations, interact in shaping the child's narcissistic self (Horton, 2011). Moving beyond the psychodynamic perspectives, Millon's social learning theory states that narcissism arises when parents are indulgent with their child, who starts to feel entitled to admiration and special treatment (Horton, 2011).

These theories have been empirically tested, and specific parental styles are in fact associated with narcissism. For instance, the most likely parents to raise narcissistic children were either permissive (exhibiting excessive warmth but little control, as Millon's social learning theory suggests) or authoritarian (displaying low warmth but being extremely controlling, as postulated by Kernberg). Kohut's viewpoint overlaps with these conceptualizations, as he states that both a neglectful parental style, characterized by coldness and distance, and a permissive one can lead to narcissism (Horton, 2011).

Since narcissism has been generally accepted as a multidimensional construct, research supports the hypothesis that different manifestations of the disorder are related to distinct causes. Specifically, indulgent/permissive parenting is linked to both grandiose and vulnerable narcissism, while a more controlling/cold parenting is primarily linked to vulnerable narcissism (Horton, 2011). This is consistent with the findings of Weinberg and Ronningstam (2022), who identified some specific developmental factors for narcissism: while physical abuse, emotional neglect, and maltreatment predisposed an individual to vulnerable narcissism, parental

overvaluation, a weak discipline, and permissiveness, contributed to grandiose narcissism (Weinberg & Ronningstam, 2022).

According to attachment research, a child's early interactions with their caregivers can influence the development of Personality Disorders. In particular, if these experiences are positive, the child will develop healthy internal working models that help him relate to themselves and others empathically; in contrast, more problematic internal working models will arise if the child is raised in an abusive and neglectful environment (Meyer & Pilkonis, 2011). In this perspective, narcissistic personality disorder is often reflected in a dismissing attachment where the individual feels superior but emotionally disconnected from others, who are unable to provide the unconditional love or admiration he deserves (Meyer & Pilkonis, 2011). Research shows that each narcissistic subtype can be linked to a different attachment experience: while overall insecure attachment can be expected for both subtypes, grandiose narcissism tends to be linked to avoidant/dismissive attachment more, and vulnerable narcissism with the anxious/preoccupied one (Meyer & Pilkonis, 2011). Weinberg and Ronningstam (2022) reinforced these links by showing that dismissive and avoidant attachment styles are associated with grandiose narcissism, whereas preoccupied or fearful attachment styles are tied to vulnerable narcissism.

#### *1.4.2 Genetic and Environmental Factors*

There is growing evidence from twin studies suggesting that genetic factors play an important role in the etiology of Personality Disorders (PDs), including narcissistic one (Kendler et al., 2008; Roepke & Vater, 2014). However, the findings from these studies show different heritability estimates due to the bias of the assessment method used (Torgersen et al., 2012). Torgersen et al. (2000) conducted the first clinical study to investigate all Personality Disorders (PDs) using structured clinical interviews in a twin sample. The sample consisted of 92 monozygotic (MZ) and 129 dizygotic (DZ) twin pairs whose prevalence rates were combined with a large population study to estimate heritability and environmental influences on PDs. According to Torgersen et al. (2000), the heritability of Cluster B PDs as a whole was 60%, with narcissistic personality disorder exhibiting one of the highest estimates at 79%. For the majority of PDs, including NPD, shared-in-families environmental effects were not significant in the best-fitting model. However, these effects could not be excluded for dependent personality disorder (NPD) and possibly borderline personality disorder (BPD)

(Torgersen et al., 2000). In contrast, in a later study by Torgersen et al. (2008) where the Structured Interview for DSM-IV Personality Disorders (SIDP-IV) was employed in a sample of 1386 Norwegian twin pairs aged between 19 and 35 years, the heritability estimates were lower, with NPD showing a heritability of 24%. They concluded that both genetic and unique environmental factors contribute to the high comorbidity of Cluster B PDs, even if no significant evidence of shared environmental effects was found (Torgersen et al., 2008). Instead, they confirmed a shared substantial common variance between all these disorders, with additional disorder-specific genetic variance observed for ASPD and NPD (Torgersen et al., 2008). These differences were examined in detail by Torgersen et al. (2012), who looked into the genetic and environmental transmission of DSM-IV Cluster B Personality Disorders among families. Both the Structured Interview for DSM-IV Personality (SIDP-IV) and a self-report questionnaire were used to evaluate 2794 Norwegian twins. The heritability of Cluster B PDs was approximately 30% when looking at interviews alone, while it ranged from 40% to 50% when looking at self-report questionnaires (Torgersen et al., 2012). When interviews and self-report data were integrated into a convergent latent factor, then the heritability of Cluster B PDs was considerably greater, with NPD having the highest heritability at 71% (Torgersen et al., 2012). Additionally, shared environment factors did not have a significant impact on the transmission of Personality Disorders (Torgersen et al., 2012). These findings may explain why the heritability assessed in other studies using only structured interviews (e.g., Torgersen et al., 2008; Kendler et al., 2008) seems to be lower, as the correlations obtained can be distorted by a method-specific measurement error (Torgersen et al., 2012). Consistent with this, the non-clinical study of Kendler et al. (2008), which used personal interviews in a sample of 2794 young adult Norwegian twins, revealed that the heritability of Personality Disorders ranged between 20% and 41%, with narcissistic personality disorder showing a heritability estimate of 25.1%. Also, in line with previous studies, shared environmental factors were minor for most Personality Disorders (Kendler et al., 2008).

Interestingly, the study of Coolidge et al. (2001) assessed the heritability of personality disorders in childhood. Specifically, the parents of 112 twin pairs aged between 4 and 15 years completed the Coolidge Personality and Neuropsychological Inventory for Children (CPNI), which assesses 12 personality disorders based on DSM-IV criteria. It was found that the 12 personality disorder measures had a median heritability of 75%, with narcissistic personality disorder showing a heritability of 66% (Coolidge et al., 2001). These results support the evidence that personality disorders have a strong genetic component that can be measured in

adolescence or earlier and is similar to, or even greater than, heritability estimates in adulthood (Coolidge et al., 2001).

Additional evidence for a genetic basis of narcissism comes from Miles and Francis (2014) whose study investigated both parenting and genetic factors contributing to sub-clinical narcissism. Specifically, 144 community members belonging to 36 biological family groups completed the Parental Authority Questionnaire (PAQ) and the Narcissistic Personality Inventory (NPI). The results revealed a significant father-daughter correlation for narcissistic traits, but nearly no correlations for the other parent-offspring dyads (Miles & Francis, 2014). This finding was explained by the direct passage of the father's single X-chromosome to daughters but not to sons, suggesting a possible genetic basis for narcissism (Miles & Francis, 2014). The authors concluded that these findings provide preliminary evidence for a genetic component to NPI measured narcissism, with parenting style contributing relatively little (Miles & Francis, 2014).

# CHAPTER 2 – Clinical Aspects of Narcissistic Personality Disorder

## *2.1 Description of NPD*

The ability to sustain a positive self-image through various regulatory processes is what defines narcissism. To pursue validation and affirmation, narcissistic individuals engage in self-enhancing experiences in the social environment (Pincus et al., 2009). According to most theorists, narcissism can manifest in both normal and pathological forms, reflecting adaptive and maladaptive patterns of personality organization, psychological needs, and self-regulatory mechanisms (Pincus et al., 2010). For instance, Caligor et al. (2015) describe a category of high-functioning individuals with narcissistic traits who display grandiosity, are competitive, and seek attention, while also maintaining adaptive functioning. Since these individuals are usually able to leverage their pathological traits to succeed, they appear socially and professionally competent, making diagnosis more challenging (Caligor et al., 2015). While some researchers believe that normal and pathological narcissism exist on a continuum, ranging from a healthy to a disordered condition, others argue that they represent distinct personality dimensions with different underlying mechanisms (Pincus et al., 2010). In healthy personalities, this need for validation and self-enhancement is a normal psychological mechanism that serves to support self-esteem and motivation (Pincus et al., 2010; Pincus & Roche, 2011). Indeed, individuals typically pursue their achievements and recognition in socially acceptable ways and can regulate themselves when facing setbacks (Pincus et al., 2010). This is not the case of pathological narcissism, where individuals lack these regulatory capacities and depend on others to feel validated. As a result, self-enhancement becomes their main goal, which they pursue in maladaptive ways and inappropriate contexts (Pincus & Roche, 2011; Wright et al., 2013). This disorder makes individuals highly reactive to perceived threats and more prone to experience emotional dysregulation, as a self-protective mechanism (Yakeley, 2018).

The clinical literature on narcissism has over 50 distinct labels to describe the different variations of the phenotypic expression of narcissism; however, the ones that were consistently found in the research are mainly two: grandiosity and vulnerability (Cain et al., 2008).

Grandiose narcissism is evident in individuals who display arrogant attitudes and intimidating behaviors, and is characterized by an inflated self-image, entitlement, lack of empathy, envy, and exhibitionism (Pincus et al., 2010). These individuals tend to exploit others and be emotionally detached as they often engage in fantasies of unlimited power and superiority (Pincus et al., 2010). In more severe cases, grandiose traits are associated with psychopathy, impulsivity, aggression, and tendencies toward violence or sexual aggression (Wright et al., 2013). On the contrary, vulnerable narcissism is characterized by feelings of inferiority, shame, emptiness, and hypersensitivity to criticism. (Cain et al., 2008; Yakeley, 2018). Social withdrawal is very common in individuals with vulnerable traits since their needs and ambitions makes them ashamed and susceptible to rejection (Ronningstam, 2005 cited by Cain et al., 2008). This subtype is also linked to a deeper emotional dysregulation, which is often reflected in anxiety and depressive episodes, causing them interpersonal distress that can translate into suicidal behavior (Wright et al., 2013).

Although grandiosity and vulnerability may seem opposing constructs, research demonstrates that they share distinct yet overlapping personality correlates. For instance, both are consistently associated with low agreeableness (Pincus & Roche, 2011). However, they diverge with respect to extraversion and neuroticism: while grandiose narcissism correlates with high extraversion and lower neuroticism, vulnerable narcissism is linked to heightened neuroticism (Gore & Widiger, 2016). Importantly, these subtypes are not mutually exclusive, meaning that they can coexist within the same individual despite their apparently contradictory modes of functioning (Weinberg & Ronningstam, 2022). Entitlement is another feature shared by both subtypes. It consists of believing to be special and deserving, and it can be used as a trait to distinguish narcissism from other conditions, such as mood or anxiety disorders (Yakeley, 2018). Pathological narcissism is thus best understood as a spectrum where grandiosity and vulnerability interact, shaping self-regulation and interpersonal behaviors (Pincus & Roche, 2011).

Despite extensive research, the DSM struggles to account for the presence of patients who exhibit both grandiose and vulnerable traits in clinical settings (Pincus & Roche, 2011; Weinberg & Ronningstam, 2022). More specifically, the critics argue that its exclusive focus on the grandiose dimension of narcissism neglects the representation of the vulnerable one (Cain et al., 2008; Pincus & Roche, 2011; Wright et al., 2013). The diagnostic utility of the DSM-IV and DSM-V is limited to the point that narcissistic personality disorder has the lowest prevalence rate among all DSM Axis II personality disorders, despite being frequently diagnosed in clinical practice (Yakeley, 2018). Although in the recent DSM-V some vulnerable

features are included (e.g., fluctuations in self-esteem and emotional regulation), the primary diagnostic focus is still on grandiosity and attention seeking (Miller et al., 2013).

In addition to the grandiose and vulnerable dimensions discussed above, another distinction has been proposed regarding the disorder's overt and covert manifestations (Pincus et al., 2010). In this context, with "overt" we are referring to traits that are easily observable and explicitly expressed, while "covert" indicates features that are less apparent or even hidden. Notably, both covert and overt features are consciously experienced (Akhtar & Thomson, 1982). This distinction was promoted by Paul Wink (1992), who in his work linked the "Willful" narcissistic prototype to overt narcissism and the "Hypersensitive" narcissistic one to covert narcissism. Some years later, Hendin & Cheek (1997) also equated the Hypersensitive Narcissism Scale with covert narcissism (Cain et al., 2008). Despite these important contributions, Pincus et al. (2010) argue that it is clinically inaccurate to distinguish overt and covert narcissism as distinct phenotypes. Indeed, they propose that this covert and overt distinction merely consists in different modes of expressing narcissistic grandiosity and vulnerability (Pincus et al., 2010).

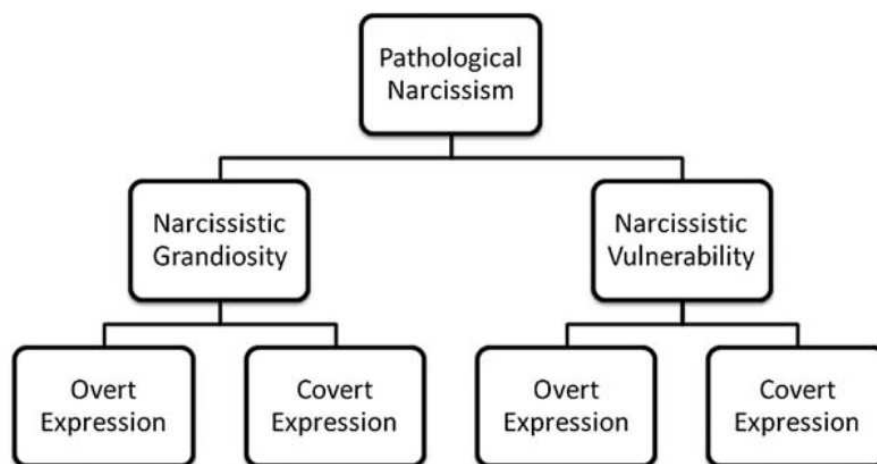


Figure 2: The hierarchical organization of pathological narcissism (Pincus et al., 2010).

This assumption was confirmed by narcissistic patients who took part in clinical observations and exhibited both overt and covert forms of grandiosity and vulnerability (Pincus et al., 2010). Indeed, individuals who display overt narcissistic behaviors such as arrogance, dominance, or exhibitionism may simultaneously experience covert feelings of inadequacy, shame, or hypersensitivity (Weinberg & Ronningstam, 2022; Yakeley, 2018). In some cases, these overt expressions are no longer expressed by these individuals due to traumatic past

experiences that left them feeling humiliated or criticized for openly sharing them in front of others (Weinberg & Ronningstam, 2022).

## *2.2 Treatments for NPD*

### *2.2.1 Pharmacotherapy*

To date, there is no psychopharmacological medication that has been proven effective for the treatment of narcissistic personality disorder (Yakeley, 2018). This is not entirely negative, as patients' adherence to treatment can be compromised by a medication's side effects and the psychological barrier of accepting the need for pharmaceutical intervention in the first place (Yakeley, 2018). While psycho-pharmacological treatment may help address comorbid conditions such as bipolar disorder, major depression, or substance use disorder, narcissistic patients' hypersensitivity to side effects (particularly those impacting sexual or intellectual functioning) needs heightened caution (Ronningstam & Weinberg, 2013).

The limited evidence for the use of medications applies broadly to all Personality Disorders (PDs), and it is supported by the U.S. Food and Drug Administration (FDA), which has not currently approved any medication specific to any PD (Marin et al., 2022). Although the off-label use of certain psychotropic drugs (e.g., SSRIs for emotional dysregulation, mood stabilizers for impulsivity and aggression, and low-dose antipsychotics for perceptual disturbances) does exist, these practices often involve polypharmacy, and their efficacy remains unclear (Mazza et al., 2016). Furthermore, narcissistic personality disorder has been largely overlooked in pharmacological research, probably because an individual's interpersonal dysfunctions can be better addressed through psychotherapy (Stoffers-Winterling et al., 2021). For these reasons, pharmacotherapy cannot be considered a cure for NPD and is best employed for managing its severe comorbid conditions (Stoffers-Winterling et al., 2021).

### *2.2.2 Psychotherapy*

Psychotherapy is the primary treatment option for narcissistic personality disorder, although there is no specific approach that has yet been validated through randomized controlled trials (Yakeley, 2018). Treating individuals with this disorder is often challenging, due to their difficulties in admitting personal shortcomings, resistance to external inputs, and a

pervasive sense of entitlement (Reed-Knight & Fischer, 2011). These obstacles are reflected in the high drop-out rate (63%-64%) of patients with a categorical diagnosis of NPD, with even higher numbers for those with elevated levels of pathological narcissism (Weinberg & Ronningstam, 2022). In one study in particular, they found that individuals displaying narcissistic grandiosity were less likely to engage in clinical services and more prone to ending psychotherapy prematurely (Ellison et al., 2013). In trying to protect themselves, narcissistic individuals often decide to end treatment as soon as they start feeling vulnerable or criticized by their therapist (Diamond et al., 2011). Additionally, a dismissive attachment style, perfectionism, shame, and devaluation are other aspects that have been associated with poor treatment outcomes (Weinberg & Ronningstam, 2022).

Another problem arises when considering patients' limited intrinsic motivation to seek help. It is rare to encounter individuals with NPD who decide to start treatment independently, since they often do so in response to external pressures. This pattern emerges frequently during therapy sessions, during which patients tend to attribute their distress uniquely to external causes as a defensive mechanism (Ellison et al., 2013). For instance, they mostly found themselves seeking assistance when feeling threatened by a partner who wants to leave them, when having legal problems, when their job position is at risk, or in general when their reputation is compromised (Behary et al., 2011). In more severe cases, when the defensive structure of the grandiose-self collapses, these individuals may experience intense feelings of shame and negative self-perceptions, which may even cause them to contemplate suicide or engage in self-destructive behaviors (Diamond et al., 2011). Even then, their motivation to attend therapy is typically driven by situational crises rather than personal reflection or desire for personal change (Weinberg & Ronningstam, 2022). Moreover, many of them seek therapy for comorbid conditions like substance use, depression, or anxiety, rather than for narcissism itself, which further complicates treatment management (Stinson et al., 2008; Cukrowicz et al., 2011).

Despite these challenges, therapeutic progress is still possible. As some pre-post studies have demonstrated, some patients can improve symptomatically and in their general functioning by therapy (Weinberg & Ronningstam, 2022). The most important elements ensuring a successful outcome include establishing clear, realistic, and meaningful goals, discussing the use of a diagnostic label, and building a strong therapeutic alliance (Weinberg & Ronningstam, 2022). Cultivating this alliance, however, can be particularly complex with NPD patients due to their fragile self-esteem and sensitivity to perceived criticism. (Cukrowicz et al., 2011). Indeed, alliance building is a gradual process that often requires dealing with

perfectionism, comorbid disorders, substance use, and even suicidality, as mentioned before (Ronningstam, 2012). During early sessions, patients may exhibit resistance behaviors, mostly superficial engagement, and also attempt to control and provoke the therapist. As a matter of fact, despite their apparent social and intellectual competence during the session, these patients tend to avoid emotional disclosure due to shame, fear of exposure, and a need to protect their grandiose self-image. For these reasons, they often perceive the therapeutic feedback as intrusive or too demanding (Ronningstam, 2012). In this context, it is common for countertransference to happen (Behary et al., 2011). This becomes particularly critical when working with Cluster B personality disorders, as the intense emotions and provocative behaviors of these individuals can lead to the therapist's burnout. Being aware of this countertransference is also very important for the therapist to have a better insight into the patient's internal experiences and tailor correct interventions (Weinberg & Ronningstam, 2022). For instance, the therapist's countertransference can be useful to interpret the patient's projections, which often consist of unacceptable self-aspects (Yakeley, 2018). However, if this phenomenon is not addressed properly, the therapist might unconsciously mirror the patient's defensiveness or grandiosity, reinforcing their already existing maladaptive patterns (Weinberg & Ronningstam, 2022). To prevent this, a consultation team for the therapist is available to provide them both structured peer supervision and emotional support (Reed-Knight & Fischer, 2011).

The treatment of narcissistic personality disorder has traditionally been rooted in psychoanalytic and psychodynamic theories, with a focus on the therapeutic relationship (Reed-Knight & Fischer, 2011). Transference-Focused Psychotherapy (TFP) was developed by Kernberg in the USA and is the most prominent psychodynamic psychotherapy used to treat NPD (Yakeley, 2018). It is delivered twice weekly and it is specifically advised for those individuals who are organized at the borderline level (Diamond et al., 2011). Indeed, it is common for narcissistic personality disorder and borderline personality disorder (BPD) to co-occur due to their overlapping diagnostic criteria. For this reason, a lot of psychotherapeutic approaches which were originally developed for BPD have now been revised and adapted also for NPD (Reed-Knight & Fischer, 2011). Transference-Focused Psychotherapy, in particular, is designed to address the defensive mechanisms that contribute to the fragmented sense of self and others, which is common in both disorders (Stern et al., 2017). It also promotes an active exploration of pathological mechanisms such as aggression, envy, grandiosity, and defensiveness, with a particular focus on the negative transference and sensitivity to shame/humiliation (Yakeley, 2018). Through an in-depth analysis of these dysfunctional

processes, patients become capable of creating a more integrated and adaptive view of themselves and others as well (Stern et al., 2017). Although several studies on TFP have shown positive results for individuals with borderline personality disorder, randomized controlled trials with NPD patients are still needed to fully support this approach (Reed-Knight & Fischer, 2011).

Another psychotherapeutic intervention within the psychodynamic tradition is mentalization-based treatment (MBT). It was created by Bateman and Fonagy (2004) for the treatment of borderline personality disorder, but later it was adapted for narcissistic personality disorder as well. It draws from attachment theory and its focus is on the core features of narcissism, such as fragile self-esteem, shame dysregulation, and a defensive grandiosity (Cherrier, 2013). MBT aims to enhance patients' capacity to mentalize by teaching them how to reflect on one's own and others' mental states, and their consequences on behavior (Yakeley, 2018). Patients learn mentalization through interaction: during group therapy, they are given the chance to practice emotional empathy by validating other peers' experiences and reducing their exploitative behaviors (Cherrier, 2013). Therapists often employ a "curious neutrality" with their patients to avoid confrontation, through the validation of their subjective experience but also by helping them regulate shame (Cherrier, 2013). When this form of therapy is applied to NPD patients, it often exceeds the 12–18 months standard for BPD, because building trust and addressing their defensive mechanisms often requires more time (Cherrier, 2013). Furthermore, as with other therapeutic approaches, systematic research on the efficacy of MBT for NPD remains limited (Yakeley, 2018).

Different from the psychoanalytic/psychodynamic tradition is the cognitive-behavioral approach (CBT; Yakeley, 2018). Drawing from Beck's cognitive therapy model, CBT aims to change maladaptive thoughts and behavior, foster empathy, and reduce some of the most common clinical challenges that arise during therapy (Cukrowicz et al., 2011). Recent evidence suggests that in order to enhance a patient's adherence to treatment, therapy should combine cognitive techniques (such as cognitive reframing) with behavioral interventions (such as impulse control training) (Yakeley, 2018). One form of therapy that integrates CBT techniques with some psychodynamic principles is schema therapy. It was developed by Young and colleagues (1999) to change early maladaptive schemas, which consist of pervasive and dysfunctional mental representations that are rooted in childhood but still influence one's self-perception and relationships (Yakeley, 2018). When treating NPD specifically, schema therapy focuses on weakening narcissistic defenses to access the most vulnerable part of the individual (Behary et al., 2011). This is achieved through a process of re-parenting, during which the

therapist takes on the role of a parent to correctly address the patient's unmet emotional needs that he had as a child. In doing so, the patient learns new adaptive coping strategies to enhance empathy and reduce his grandiosity (Behary et al., 2011). Despite the absence of randomized controlled trials to evaluate schema therapy in narcissistic patients, the clinical observations that have been conducted support its potential utility in addressing this disorder (Yakeley, 2018).

A similar approach is adopted in dialectical behavior therapy (DBT), which was designed by Linehan (1993) for treating borderline personality disorder. Afterwards, this type of therapy was adapted to address narcissistic pathology as well, through techniques promoting mindfulness, emotion regulation, and distress tolerance (Yakeley, 2018). DBT helps patients manage their emotional dysregulation, which is present in both BPD and NPD, by pursuing a balance between acceptance and change in everyday life. In doing so, the therapist validates the patient's strong emotions, but also encourages him to replace his maladaptive attitudes (Reed-Knight & Fischer, 2011). Despite the lack of controlled outcome studies for narcissistic patients, DBT's efficacy in BPD offers a promising framework for NPD (Reed-Knight & Fischer, 2011).

Through the use of structured and manualized procedures, Metacognitive interpersonal therapy (MIT) further extends cognitive behavior therapy. MIT was developed by Dimaggio and colleagues (2012) and it focuses on deconstructing narcissistic processes through a step-by-step approach that prioritizes building a solid relationship with the therapist (Yakeley, 2018). The sessions begin with a stage-setting procedure that includes a deep understanding of the patient's autobiographical context, his maladaptive schemas, and interpersonal patterns (Dimaggio, 2012). During this phase in particular, the therapist adopts two techniques, which are validation and self-disclosure, to gain the patient's trust and reduce his dropout risk. Once this stage is completed, it is followed by a change-promoting phase that targets grandiosity and challenges dysfunctional behaviors. The outcome of this last passage is to cultivate adaptive schemas through exercises based on perspective-taking and reality-based reflection (Dimaggio, 2012). Although primarily supported by case-study evidence, this structured approach offers a promising adaptation of CBT for NPD patients.

This growing array of therapies, from psychodynamic methods like TFP and MBT to cognitive-behavioral approaches like DBT and Schema Therapy, highlights the need to be flexible in clinical practice. As Livesley (2012) argues, rather than prioritizing a specific therapy, clinicians should design a treatment plan that integrates the most effective evidence-

based techniques together. This is supported by the fact that similar therapeutic outcomes were obtained using different approaches (Livesley, 2012).

### *2.3 Comorbidity of NPD With Other Disorders*

It is very common for narcissistic personality disorder to co-occur with other psychiatric disorders, particularly mood disorders, anxiety disorders, and substance use disorders (SUDs). Large-scale epidemiological data from Stinson et al. (2008) revealed high comorbidity rates between NPD and disorders such as bipolar I, post-traumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and substance-related conditions, with patterns that differ across genders. For instance, bipolar II disorder, GAD, and specific phobia were more strongly associated with NPD among women, while alcohol and drug dependence, as well as histrionic and obsessive-compulsive personality disorders, were more common among men (Stinson et al., 2008). Interestingly, dysthymic disorder was negatively correlated with NPD. When other psychiatric diseases were taken into account, most of the time these relationships diminished but still remained statistically significant, indicating that there are some underlying vulnerabilities among these disorders (Stinson et al., 2008). The frequent co-occurrence of major depressive disorder (MDD) in people with NPD was further highlighted by Ronningstam et al. (2013), particularly in cases where features like rage, emptiness, or externalized defensive behaviors were present. SUDs were among the most prevalent comorbidities in NPD, with prevalence estimates ranging from 24% to over 60% (Ronningstam et al., 2013). The reason why narcissistic individuals may turn to substances so often is either to buffer their feelings of self-disappointment or to reinforce their grandiose self-perceptions (Ronningstam et al., 2013). Caligor et al. (2015) also pointed out that comorbid conditions often prompt individuals with NPD to seek treatment, also influencing the disorder's severity. In particular, when narcissism overlaps with antisocial personality disorder, the prognosis significantly worsens (Caligor et al., 2015). Moreover, comorbidity patterns differ across narcissistic subtypes: while vulnerable narcissism is more commonly associated with depression, anxiety, and suicidal behavior, grandiose narcissism is mostly linked to substance abuse and antisocial traits (Caligor et al., 2015).

Despite their influences on the clinical presentation and course of the disorder, comorbid conditions can also significantly impact the functional outcomes and suicide risk of some patients. Ronningstam et al. (2013) stress that suicidality often emerges in the absence of

major depressive episodes, when individuals with NPD experience self-esteem dysregulation due to life events that threaten their fragile ego. In some cases, suicidal ideation helps them maintain a sense of control and psychological integrity. However, when comorbid disorders such as MDD, SUDs, borderline personality disorder (BPD), or antisocial personality disorder (ASPD) are also present, suicide risk increases dramatically (Ronningstam et al., 2013). For example, depressive episodes can evoke feelings of shame that are incompatible with the individual's grandiose self-concept. Eventually, this led to professional and/or relational deteriorations that further exacerbated the individual's vulnerability. Similarly, BPD co-occurrence may enhance impulsivity and emotional instability, while ASPD can contribute to an increased suicide risk due to feelings of shame related to failure, legal consequences, or regret (Ronningstam et al., 2013).

# CHAPTER 3 – Psychobiology of Narcissistic Personality Disorder

## *3.1 Neuroimaging Studies*

Neuroscientific research on emotion regulation and empathy helps us gain some important insights into the neurological and cognitive functions of narcissistic personality functioning (Ronningstam, 2016). In one of the first exploratory studies, they recruited a sample of 34 non-clinical subjects and compared high and low narcissistic individuals using psychological assessments, behavioral measures, and functional magnetic imaging (fMRI) (Fan et al., 2011). Participants were divided into high and low narcissism groups with 11 individuals each, based on whether their scores on the Narcissism Inventory (NI) fell above the 66th percentile or below the 33rd. During the experimental task, participants were presented with emotional pictures of faces and instructed to empathize with the respective person. However, a non-empathic control condition involving smoothed faces was also included to isolate empathic responses (Fan et al., 2011). Following each presentation, participants were asked to provide subjective judgments on their degree of empathy using a visual analogue scale. The findings of Fan et al. (2011) revealed that individuals with high narcissistic traits exhibited significantly higher scores on measures of alexithymia and also in general psychopathology, as indicated by elevated scores on the 20-item Toronto Alexithymia Scale (TAS-20) and the Symptom Checklist-90-Revised (SCL-90-R), respectively. Additionally, high narcissistic subjects showed a reduced deactivation in the right anterior insula during empathy tasks, which is a critical region for emotional resonance and affective stimulation (Fan et al., 2011).

Further differences were observed in other brain regions such as the dorsolateral prefrontal cortex (DLPFC), posterior cingulate cortex, and lateral premotor cortex (Fan et al., 2011). This could explain the altered neural representation of the “bodily self” observed in highly self-preoccupied narcissistic individuals (Craig et al., 2009, in Fan et al., 2011). It is important to note that although the changes of activity observed in these regions could also be attributed to broader cognitive functions such as general evaluation, face perception, or reward processing, the altered activity in the right anterior insula appears to reflect a more specific disruption in empathy-related processes (Fan et al., 2011).

(a) Right anterior insula

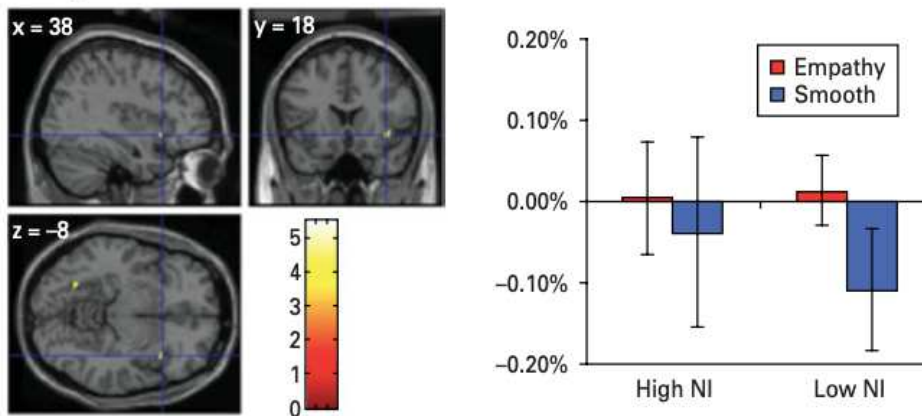


Figure 3: Signal change in the right anterior insula during empathy vs non-empathy conditions for high and low narcissistic subjects (Fan et al., 2011).

Cascio et al. (2015) investigated the role of the anterior insula using a task which is specifically designed to simulate feelings of social exclusion, called the Cyberball paradigm. In particular, 43 adolescent boys aged between 16 and 17 were recruited and asked to complete a series of self-report measures, including the Narcissistic Personality Inventory (NPI), then underwent fMRI scanning during the Cyberball task, and finally completed the Need threat Scale (NTS). When their neural responses were examined, they found that those with higher NPI scores showed a heightened activation in brain regions associated with social pain, including the anterior insula (AI), dorsal anterior cingulate cortex (dACC), and subgenual anterior cingulate cortex (subACC) (Cascio et al., 2015). All of these regions belong to the “social pain network,” which is implicated in the processing of both physical and social distress (Cascio et al., 2015). These results suggest that narcissists may have strong physiological reactions in response to negative social experiences, despite their apparent indifference (Cascio et al., 2015). This is reflected in the aggressive behaviors or withdrawal that are often displayed by these individuals after being socially rejected. This is further supported by the fact that this hypersensitivity to exclusion was evident at the neural level, but it was not reflected in self-reported measures of distress, since the feelings of distress following exclusion were uncorrelated with NPI scores (Cascio et al., 2015).

These mechanisms regarding emotional reactivity and social pain were further extended by Zhang et al. (2016), who investigated emotional processing using event-related potentials (ERPs) in individuals with narcissistic personality disorder. The study involved 25 healthy controls and 12 narcissistic participants (4 women), all diagnosed by an experienced psychiatrist according to the DSM-V criteria. Most of the participants had comorbid diagnoses

of depression, anxiety, or both, which were assessed using the self-report Zung Self-Rating Anxiety Scale and the Zung Self-Rating Depression Scale (Zhang et al., 2016). They managed to do this by exposing participants to facial expressions of neutral, anger, happiness, and sadness while their brain activity was recorded. People with NPD showed longer reaction times to happiness than healthy controls, which may indicate that they have trouble processing happy feelings (Zhang et al., 2016). Additionally, the study found that P2 amplitudes to neutral and happy expressions were negatively correlated with depression levels in the NPD group. These findings suggest that emotional reactivity in narcissistic personality disorder is not only affected by an excessive self-indulgence and envy but might also be modulated by underlying depressive states (Zhang et al., 2016).

Complementing these findings, Jauk et al. (2017) investigated the neural responses of highly narcissistic men during self-face recognition tasks. The sample consisted of 21 stable high and 22 stable low narcissistic individuals who completed the Narcissistic Personality Inventory (NPI) twice, with at least one month between the two assessments. To reduce the possible response bias, the second assessment used a Likert-type NPI format (Jauk et al., 2017). Participants also completed the Multidimensional Self-Esteem scale to ensure that the low narcissism group did not have unusually low self-esteem. Using fMRI, they discovered that when male narcissists looked at pictures of themselves, they had an increased activation in the dorsal and ventral anterior cingulate cortex (ACC), which are linked to emotional conflict and negative affect (Jauk et al., 2017). More specifically, the dorsal ACC is a region implicated in conflict monitoring, expectancy violation, and negative affect, while the ventral ACC is involved in processing negative self-referential material (Jauk et al., 2017). These results challenge the stereotype by which narcissistic individuals derive benefit and pleasure from self-focused attention, indicating that, on the contrary, this may evoke discomfort or negative emotions. Notably, since this effect was specific to men, this indicates that potential gender differences in the neurobiological correlates of narcissism exist (Jauk et al., 2017).

The first empirical evidence for structural abnormalities in patients with narcissistic personality disorder was provided by Schulze et al. (2013) using the voxel-based morphometric analysis. The study enrolled 17 patients (12 male, 5 female) diagnosed primarily with NPD and 17 healthy controls matched for age, gender, handedness, and intelligence. Diagnostic screening included the German versions of the Mini-International Neuropsychiatric Interview (M.I.N.I.) for Axis-I disorders and the Structured Clinical Interview for Axis-II Personality Disorders (SCID-II). Compared to healthy controls, NPD patients exhibited smaller gray matter volume in the left anterior insula, a brain region linked to emotional empathy, which is

defined as the ability to understand and empathize with another person's emotional state (Schulze et al., 2013). Complementary whole-brain analyses were conducted, revealing other structural abnormalities in the fronto-paralimbic brain regions, including the rostral and medial cingulate cortex and the dorsolateral and medial parts of the prefrontal cortex (Schulze et al., 2013).

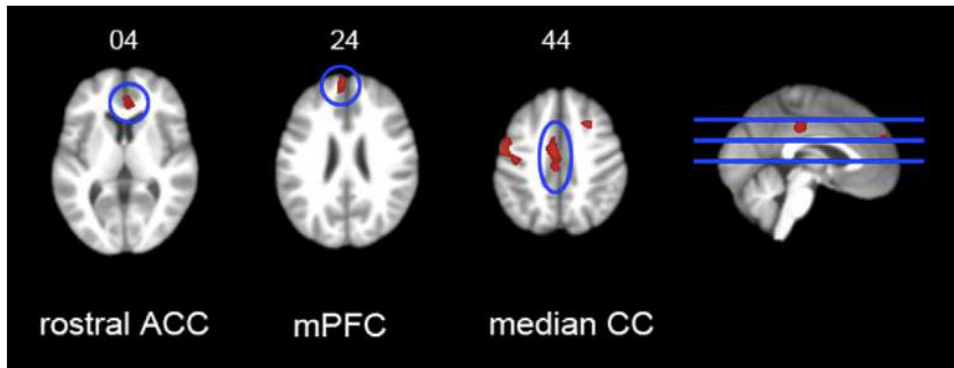


Figure 4: Significantly smaller GM volume in patients with narcissistic personality disorder compared to healthy controls (Schulze et al., 2013).

Complementing these findings, individual differences in cognitive and emotional empathy were measured using the German version of the Interpersonal Reactivity Index (IRI) (Schulze et al., 2013). Specifically, the subscales “perspective taking” and “empathic concern” assess cognitive and emotional empathy, respectively. Results indicated that NPD patients showed deficits in cognitive empathy and motivation, while impairments in emotional empathy did not reach statistical significance. Interestingly, GM volume in the left anterior insula positively correlated with self-report emotional empathy (Schulze et al., 2013). However, group differences in self-reported emotional empathy failed to reach significance. This phenomenon was consistent with previous observations, which noted that traditional self-report instruments may not fully capture empathy impairments in narcissistic patients due to their reduced self-insight (Schulze et al., 2013).

Subsequently, Mao et al. (2016) used the surface-based morphometry in a large sample of healthy college students to investigate the relationship between cortical thickness (CT), cortical volume (CV), and individual differences in pathological narcissism. The study analyzed data from 176 participants, including 85 males and 91 females. The study revealed that higher scores on the Pathological Narcissism Inventory (PNI) were significantly associated with reduced CV in the medial prefrontal cortex (mPFC) and right postcentral gyrus, as well as reduced CT in the right inferior frontal gyrus (IFG) (Mao et al., 2016). Since these regions are critical for social cognition, their structural deficits may contribute to the impaired ability

of these individuals to engage in effective social interactions (Mao et al., 2016). Furthermore, Mao et al. (2016) also identified reduced CT and CV in the right dorsolateral prefrontal cortex (DLPFC), which is a key region of the central executive network (CEN) that is involved in emotion regulation (Mao et al., 2016). This finding aligns with earlier ones suggesting that impaired emotion regulation is a hallmark of narcissistic personality functioning (Casco et al., 2015).

Recent work by Leota et al. (2024) further enriches this understanding by demonstrating that narcissism is a multidimensional construct, with distinct neural correlates underlying its various facets. The study involved 58 participants (34 female, 24 male) who completed various personality questionnaires, including the 16-item Narcissistic Personality Inventory (NPI-16), and whose resting-state EEG data were recorded. The researchers followed a three-factor model of narcissism as proposed by Ackerman et al. (2011), dividing narcissism into Grandiose Exhibitionism (GE), Entitlement/Exploitativeness (EE), and Leadership/Authority (LA). They found that Grandiose Exhibitionism (GE) was associated with reduced activation in the medial prefrontal cortex (mPFC), which is critical for social cognition, self-referential processing, and theory of mind.

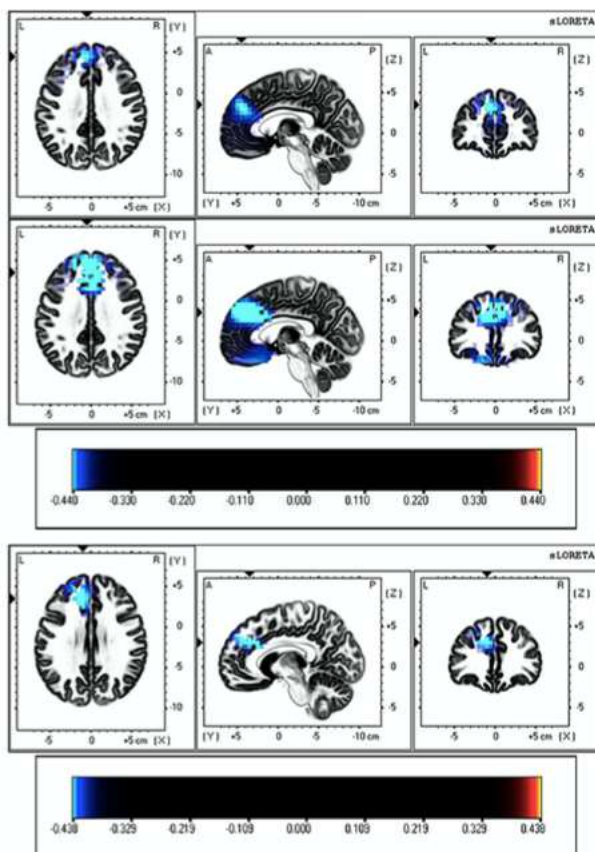


Figure 5: Neural sources of the Grandiose Exhibitionism (GE) facet of trait narcissism (Leota et al., 2024).

Entitlement/Exploitativeness (EE) was linked to reduced activation in the medial PFC, right lateral prefrontal cortex (IPFC), and postcentral gyrus, reflecting impaired self-control, response inhibition, and sensorimotor processing (Leota et al., 2024).

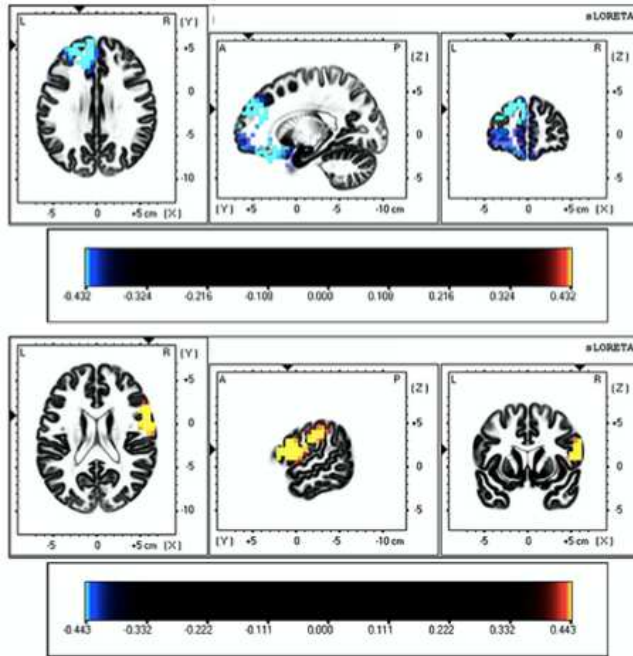


Figure 6: Neural sources of the Entitlement/Exploitativeness (EE) facet of trait narcissism (Leota et al., 2024).

Leadership/Authority (LA), on the other hand, was associated with increased activation in the left anterior temporal cortex, which is a region linked to autobiographical memory, the default mode network, and self-referential processing (Leota et al., 2024).

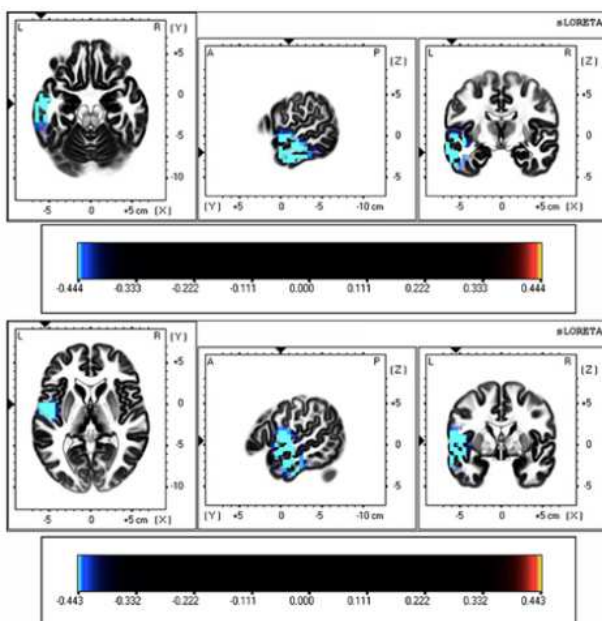


Figure 7: Neural sources of Leadership/Authority (LA) facet of trait narcissism (Leota et al., 2024).

## CONCLUSION

Narcissistic personality disorder remains a deeply complex and often misunderstood condition. Throughout this thesis, it has become clear that it is not possible to reduce this disorder to a single cause, symptom, or treatment approach. Its manifestations vary widely, ranging from an outward arrogance to a hidden fragility, making both diagnosis and treatment especially challenging.

Clinically, NPD rarely appears in isolation. It frequently co-occurs with other mental health conditions like depression, anxiety, and substance use disorders, which can mask its presence or complicate clinical care. While several therapeutic approaches originally developed for borderline personality disorder (e.g., Transference-Focused Therapy, Schema Therapy, and Mentalization-Based Treatment) show promise, there is still a lack of robust, evidence-based guidelines tailored specifically for narcissism. Although medication can help manage these comorbid conditions, patients' sensitivity to side effects requires careful attention.

From a neuroscientific perspective, recent studies suggest that narcissistic traits are linked to differences in brain regions involved in empathy, self-awareness, and emotional regulation. These findings challenge the idea that narcissism is purely a behavioral or personality construct, pointing instead to underlying neurobiological dimensions.

In conclusion, this thesis highlights the need for a broader and more flexible understanding of NPD. Moving beyond the rigid diagnostic categories toward a dimensional model would be made it possible to develop improved tools for assessment, more effective treatments, and tailored support for individuals affected by narcissistic personality pathology.



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