

Pathological Narcissism and Narcissistic Personality Disorder: Recent Research and Clinical Implications

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Published online: 19 January 2016
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Abstract This review is focused on integrating recent research on emotion regulation and empathic functioning with specific relevance for agency, control, and decision-making in narcissistic personality disorder (NPD, conceptualized as self-direction in DSM 5 Section III). The neuroscientific studies of emotion regulation and empathic capability can provide some significant information regarding the neurological/neuropsychological underpinnings to narcissistic personality functioning. Deficiencies in emotion processing, compromised empathic functioning, and motivation can influence narcissistic self-regulation and agential direction and competence in social interactions and interpersonal intimate relationships. The aim is to expand our understanding of pathological narcissism and NPD and suggest relevant implications for building a collaborative treatment alliance.

Keywords Narcissistic personality disorder · Pathological narcissism · Empathy · Suicide · Emotion regulation · Agency

Introduction

Narcissistic personality disorder (NPD) remains a puzzling and contradictory condition, despite a long history of foremost

clinical and recently also empirical studies [1•, 2, 3]. Functional fluctuations and impulsive reactivity co-occur with stoic controlled distancing or charming inviting engagement. Similarly, self-enhancing patterns can be the obvious signs of underlying more or less noticeable indications of hypersensitivity and fragility [4]. In addition, co-morbid conditions such as substance abuse, mood disorder, or suicidality can obscure the regular signs of NPD by either enhancing or diminishing the accompanying narcissistic personality traits and patterns [5, 6]. Together, all this form a complex and often perplexing personality functioning that can cause intense reactions and confusion in those interacting with individuals suffering from this condition.

Studies indicate multifactorial etiology in NPD with possible contributing causes from inheritance [7], temperament [8], psychological trauma [9, 10], and age-inappropriate role assignments [11]. This contribute to a personality functioning that is characterized by hypersensitivity, shame, aggressivity, self-esteem fluctuations, and identity diffusion. In addition, certain early attachment patterns are especially formative. Those include primarily *dismissing*, i.e., contemptuous derogation and/or brittle idealization of attachment figures, *anxious and avoidant*, especially related to narcissistic vulnerability, or *cannot classify* with multiple, unintegrated attachment alternating between dismissing, devaluating, and angry or overwhelmed preoccupation [12–14].

Efforts to conceptualize and understand NPD in terms of traits and psychodynamic formulation of self and interpersonal functioning encouraged treatment strategies that focused specifically on pathological narcissism. Several different documented and applied treatment approaches now attend to disordered narcissism in alliance building and treatment [13, 15–20]. Studies of diagnostic stability have shown that although narcissistic traits and the categorical NPD diagnosis [21] can be changeable over time with moderate remission

This article is part of the Topical Collection on *Personality and Impulse Control Disorders*

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(about 50 %), measures of dimensional personality pathology, which attend to motivational and self-regulatory functioning of pathological narcissistic traits, have shown more temporal stability [22, 23].

Empirical studies on pathological narcissism and NPD [24••], especially in the field of neuroscience and neuropsychology, have begun to add possible references for explaining the clinical perception of persistent functional patterns and treatment resistance in patients with these conditions. Advances in integrative conceptualizations especially of theory of mind [25], empathic functioning [26], affect regulation [27], and agency [28] have added significant understandings of the complex interactions between the mind, brain, and attachment, relevant for conceptualizing narcissistic self-regulatory and interpersonal patterns. Nevertheless, NPD remains a condition difficult to treat, and patients with pathological narcissism or NPD tend to drop out [29••, 30], or create stalemates or negative therapeutic reactions, and the treatment-related prognosis remains guarded [31].

The alternative hybrid model for personality disorders in DSM 5 Section III [21] with an integrated dimensional and trait approach for conceptualizing and diagnosing personality functioning is a major step forward towards a more clinically relevant and useful basic description of narcissistic personality functioning and NPD. It opens additional avenues for integration of different conceptualizations of regulatory functions and patterns that also can be guided by neuropsychological and biological evidence, especially those related to emotional recognition, processing, and regulation. The intersect between emotion regulation and interpersonal relations, with attention to the influence of empathic capability, agency/self-direction, and fluctuations in self-esteem, is crucial for identifying and understanding unfolding pathological narcissistic patterns. As most studies have been descriptive and trait focused, the question as to how all these factors are interpersonally played out in reactivity and relational patterns vis-à-vis others and in society still remain relatively unexplored (Fig. 1).

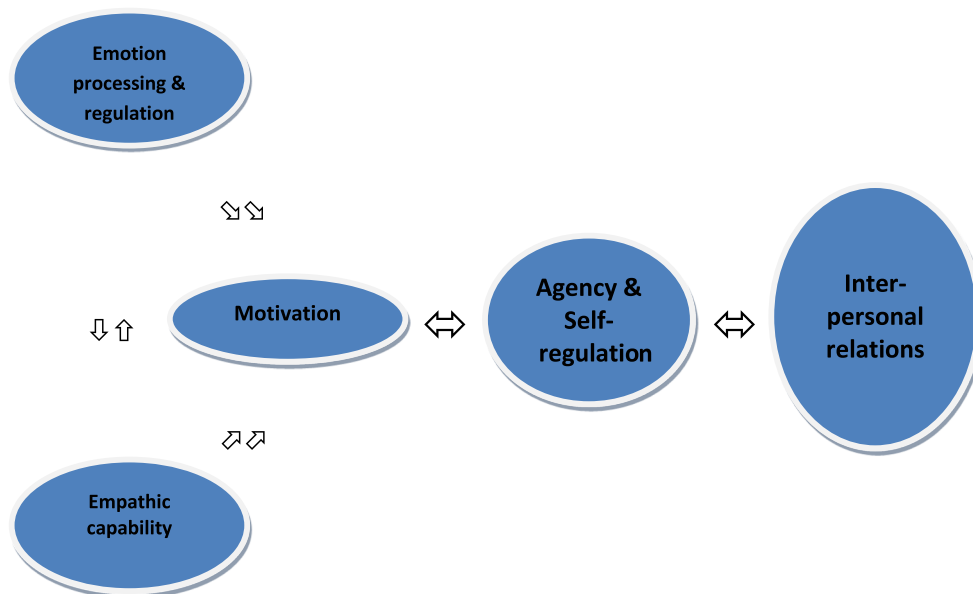
This review is focused on integrating recent research on emotion regulation and empathic functioning with specific relevance for agency, control, and decisiveness in NPD (conceptualized as self direction in DSM 5 Section III). The neuroscientific studies of emotion regulation and empathic capability can provide some significant information regarding the neurological/neuropsychological underpinnings to narcissistic personality functioning. It is increasingly important to understand how fluctuation and irregularities in emotion regulation, compromised empathic functioning, and specific patterns of impulsivity can be displayed and influence narcissistic self-regulation and agential competence. The aim is to expand our understanding of pathological narcissism and suggest relevant implications for building a collaborative treatment alliance.

Disconnect Between Feeling and Relating —a Clinical Perspective

Patients with NPD are known for being emotionally detached with negative reactivity, interpersonal maneuvering, or critical attitude—a prime reason for the difficulties engaging them in treatment. Their ability for emotional interpersonal strategizing in the service of their own self-enhancement is by now well documented. Clinician emotional reactions and countertransference [32] are indications of the interpersonal transactions that can occur on a level beyond or in the absence of verbalized and interpersonally congruent emotional exchange. In other words, patients with NPD can talk about issues and interact in ways that are engaging or even interpersonally sophisticated on one level, but ultimately more or less disconnected on another level, i.e., detached both from their own feeling and the feelings that they can perceive and/or evoke in others. The patients can be either unable or unmotivated [33, 34] to access the emotional experiences that could enable them to invest and engage in a fully integrated way in the alliance. The interaction between motivation and compromised ability with possible deficits for emotion processing and regulation is very important to attend to in diagnostic evaluations and treatment. The patients' self-regulation, agency, and striving for control can be activated and spurred by motivation to avoid perceived threats or to protect one's own self-esteem and underlying fragility. Similarly, it can also be spurred by self-enhancing motivation to achieve positive attention, recognition, and praise, or to gain control by rivalry, revenge, or further aggressive or violent pursuits (malignant narcissism). Independently of the degree of volition versus deficit, this interactive pattern is affected by both compromised emotion regulation and empathic ability.

In sum, the patients with NPD have difficulties connecting one's own affects and compatible emotions to verbal formulations and interpersonal relationship. Instead, they can talk and relate in ways that control the interaction, by either detaching and/or enhancing themselves. Consequently, the interaction is separate from and not accompanied by matching, attuned, and appropriate emotional expressions (tone of voice, choice of words, interpersonal manner, etc.). The patients speak "at" the clinicians, not "to" the clinicians and vice versa, the clinicians' regular interventions cannot reach the patients' internal world or engage their reflective capability. Sometimes the patient can focus attention and be totally immersed and preoccupied with a specific issue; other times the patient can be distant, dismissive, and demanding [32, 35]. Either pattern can readily cause the treating clinicians to feel criticized, mistreated, or disengage. Still other patients can immerse clinicians in their own self-enhancement, making them into a passive idealized listener faced with unrealistic expectations, or causing them to feel devalued, incompetent, and discarded. Skillful use of reversible perspectives [36],

Fig. 1 Narcissistic personality functioning—influence of emotion regulation, empathy, and motivation on agency and interpersonal relations



where clinician and patient perceive the same thing but based on different non-explicit premises, can preserve narcissistic self-enhancement and undermine or annul the clinicians' efforts. These experiences tend to evoke strong reactions in the treating clinicians, who readily can act from a position of feeling either angry, apologetic, or dismissed, or idealized but disarmed and confused. Such reactive interventions tend to redirect focus away from the patients' problems and reasons for being in treatment, towards hasty interpretations, judgmental and/or accusatory statements and speculations about the patients' underlying motives, intentions, or prognosis.

Disconnect Between Feeling and Relating —an Empirical Perspective

This clinical scenario outlined above raises several empirically relevant questions regarding emotion processing and regulation in narcissistic personality functioning. Are the problems primarily related to ability to (a) feel a feeling, (b) tolerate the nature and/or intensity of a feeling, (c) identify and verbalize a feeling, (d) identify the physiological/visceral indications of an affect (such as breathing, heartbeat, dizziness, tension, cramps, and pain) and translate that into emotional experiences that can be verbalized and related to others, or (e) integrate one's own feeling and intentions into an interpersonal context that is congruent with personal goals, moral/ethical values, and social/cultural conventions? In addition, when is the patient with pathological narcissism or NPD primarily demonstrating fluctuations in motivation to engage interpersonally, and if so, why and what can contribute to such fluctuations?

Recent research is directing our attentions to some tentative answers and explanations. Two neurobiological studies focusing on structural brain functioning in NPD, more specifically the prefrontal gray matter (GM) volume, have provided preliminary evidence of neurological deficits. As this region is related to empathic functioning, the deficits in GM volume found in NPD patients affect their emotion regulation and emotional empathic processing. This can potentially also contribute to self-referential processing bias [37, 38]. These studies suggest a neurological core for noticeable fluctuations in NPD patients' internal control and control of emotions, which are specifically related to instability in self-esteem and underlying vulnerability in NPD [4]. Another study measuring psychophysiological reactivity in non-clinical subjects meeting DSM IV NPD criteria [39] identified sympathetic activation and negative reactions to happy stimuli, and indifference to fearful and sad stimuli. These preliminary results suggest a psychophysiological base for narcissistic emotion regulation, potentially related to a compromised empathic ability.

Alexithymia

Often associated to pathological narcissism and NPD [40], alexithymia is the ability to identify and describe feelings in words and to differentiate feelings from bodily sensations caused by emotional arousal. In addition, alexithymia relates to external other-orientation and attention to events rather than to one's own subjective internal experiences. In one study of individuals with narcissistic traits and co-morbid eating disorder [41], core narcissism (grandiosity, entitlement) was associated with compromised ability to describe one's own feelings to other people. Self-focused attention was suggested to undermine the understanding of differences between one's

own and others' emotions, and of the ordinary limitations in others' ability to sense or recognize one's own emotions. In addition, narcissistic defensiveness was associated with compromised ability to identify one's own feelings and differentiate them from somatic experiences. Another study [42] found a higher degree of alexithymia and lower deactivation in the right anterior insula (an area associated with empathic simulation) in people scoring high on narcissism as defined in the Narcissism Inventory [43].

Alexithymia is also associated with rarity or lack of imagination. In a theoretical and empirical review, Mizen [44] highlighted the failure of symbolization in narcissistic disorders and proposed a "...neurological pathway for the representation of subcortical affect and visceral sensations as emotional feelings which in the relational context become available to be symbolized in forms of words" (p 260). This suggested that the interface between biological and relational functioning shapes the generation of language as the vehicle for verbalizing and communicating feelings. The author suggests that in disordered narcissism, this pathway can potentially be disrupted by biological and relational as well as psychogenic factors contributing to egocentric self-focus and failure to accept and incorporate others' views. This hypothesis, further outlining a possible interaction between neurological underpinnings and psychodynamic functioning, has implications for treatment and can potentially guide future studies. The search for symbols in processing of trauma, i.e., events that extend beyond the individual's ability to comprehend and adapt, can be crucial for bridging the past and present, and regaining hope and reality [45].

Emotion Recognition and Processing

Additional research indicates problems with emotion recognition in NPD. A study of facial emotional expressions found that patients with NPD, although considering themselves sensitive to others' feelings, were less accurate in recognizing emotional expressions in others, especially those related to feelings of fear and disgust [46]. Both clinical and empirical reports have highlighted specific challenges in emotion processing in patients with NPD, especially related to shame, fear, and anger [47]. Shame in NPD can be rooted in complex or even traumatizing developmental experiences including disruptions in attachment. Usually painful and paralyzing, often accompanied by intense visceral reactions, shame can also be hidden and easily bypassed [48]. One study found that NPD related to both explicit conscious but even more to implicit subconscious and unconscious shame, especially shame associated to the self [49]. Feelings that relate to explicit external/other-directed attributions tend to evoke shame-based aggressive, critical, or blaming reactions, while implicit shame can drive more consistent self-enhancing regulatory strategies including perfectionism and competitiveness. Another study

confirmed the association of shame to fear of failure and negative exposure, especially in perfectionist and success-oriented people [50]. Feelings of shame can also contribute to difficulties in emotion processing and to underlying fragility and hypersensitivity in narcissistic personality functioning.

The feelings of fear, frequently documented in clinical observations of pathological narcissism and NPD [51, 52], relate primarily to subjective internal anticipations of failure, especially in self-regulation and related emotion regulation, i.e., fear of losing control, getting overwhelmed, paralyzed, etc. Other types of fear are evoked by external experiences of exposure, losses, humiliation, etc. Although not considered a diagnostic criterion for NPD, fear is nevertheless central in pathological narcissism and can evoke negative escalating cycles, including "fear of the fear." Some fear-processing strategies related to NPD serve to redirect attention towards agency-oriented goals, ambitions and aspirations, or competitive or even risk-taking actions to secure and enhance self-esteem [53]. In addition, the hypersensitive NPD struggling with underlying vulnerability, fragility, and compromised emotional processing capacity can face overwhelming and all-consuming experiences of fear that can force drastic decisions or escalate accompanying psychiatric conditions, such as depression and substance abuse. This can also happen with relatively high and securely functioning people with NPD who face sudden, unavoidable, or incomprehensible life experiences, such as losses, bankruptcies, demotions, and divorces, i.e., experiences that are not possible to process with regular narcissistic defensive self-enhancing or avoiding strategies. In such situations, there can be a significant risk for eminent suicide [54].

Aggression and aggressive reactivity have long been considered central to NPD [55]. Independently of whether it is regarded as primary and underlying or secondary and reactive, aggressivity in NPD can serve protective and enhancing as well as destructive functions. As such, aggression can be motivationally well incorporated in ambitions, perfectionism, competitiveness, and exceptional competency. Alternatively, it can be more consistently obvious in patients' interpersonal condescending, critical obnoxiousness that can negatively influence the patients' intimate, social, and professional affiliations. In addition, violent destructiveness can be part of malignant forms of narcissism. However, aggression can also be self-directed, expressed in extremely harsh self-criticism, devaluation, or self-hatred that affects narcissistic self-regulation in less obvious, but internally quite significant ways. Sometimes this can be organized and expressed in chronic suicidality, which paradoxically can serve to maintain a patient's internal control and interpersonal functioning [56].

Empathic Functioning

Emotion recognition and processing affect the individuals empathic functioning. Recent neuroscientific research has contributed to a reconceptualization of empathy as the capacity to understand, process, and share the emotional state and experiences of others [57, 58]. Empathy is defined as “...an emotional response that is produced by the emotional state of another individual without losing sight of whose feelings belong to whom” (26 p. 17). As such, empathy depends on the ability to engage both emotional contagion and cognitive theory of mind (ToM) functions, as well as self-regulatory processes (emotions and self-esteem), motivation, and social interpersonal skills and decisions. This reconceptualization of empathy has influenced the proposed hybrid model for personality disorders in DSM 5 Section III [21]. Defined as a capability and a dimension of personality functioning, empathy is related to comprehension and appreciation of others’ experiences and motivations, tolerance of differing perspectives, and understanding of the effects of one’s own behavior on others (p 762). This new definition will have major impact on both diagnostic and clinical approaches to pathological narcissism and NPD, and overrule earlier formulations that ascribed a “lack of empathy” to NPD, primarily capturing a functional and motivational “present or absent” trait [21].

Empathic ability in NPD is now considered compromised, and fluctuating, influenced by the interaction between deficits, capabilities, and motivation. Studies confirming this view [59] used both self-reports and the more objective Multifaceted Empathy Test, MET [60]. The authors found that patients with NPD showed no deficits in cognitive empathic capability, but significant impairment in emotional empathy with failures in emotional mirroring and responsiveness. In sum, these studies suggest that patients with NPD have intact ability to identify others’ thoughts, feelings, and intentions, but a variability in motivational underpinnings of empathic engagement with tendencies to overestimate one’s own capacity for emotional empathy. Further studies, this time of the interaction between empathy traits and empathy-related brain response to observed pain in others, using EEG measurement, found a stronger somatosensory resonance to others’ pain in patients with severe NPD and psychopathic traits, with increased attention to the somatic representations of observed pain in others [61••]. The authors suggest a co-occurring deficit in affective and empathic responses towards individuals in pain, indicating a cerebral reactivity to pain-evoking stimuli and a sensory-cognitive approach to assess others’ pain. In other words, these patients show ability to feel but it does not translate into caring responsiveness.

Taken together, these empirical studies suggest a very complex empathic processing in patients with pathological narcissism or NPD, with functional interaction between specific emotion receptivity and reactivity, and between perception

and embodiment in the context of cognitive empathic processing and mentalization. The results support the conceptualization of empathy as a multidimensional capability involving theory of mind as well as self-and emotion-regulation, motivation, and agency. In sum, empathic functioning in NPD can engage and alternate between self-enhancement and competence, critical or aggressive reactivity, and ignorance and withdrawal. Clinical observations of narcissistic patients describe oscillation between susceptible awareness with sometimes intense negative reactivity (pain, intolerance, irritability), which can co-exist with obliviousness or ignorance. Alternatively, they can present with notable interpersonal fluctuations altering between self-motivated and skillful self-promoting engagement, aggressive rejections, and emotional coldness or dismissive avoidance. Clinicians can also find surprising capability and accuracy in these patients’ reported self-awareness, as well as in their more distant perceptions and descriptions of one’s own and others’ emotional states and reactions. For clinical diagnostic and therapeutic purposes, it is important to keep in mind that motivational fluctuations (engagement/disengagement), as well as interactions and fluctuations between competence and deficits in empathic processing, are actively influencing the patients’ interactions. This requires the clinicians to make careful and systematic collaborative explorations that attend to the patient’s perspective and understanding of their empathic difficulties, as well as of the personal and interpersonal intentions and consequences [34].

Motivation, Self-regulation, and Agency—Further Empirical Perspectives

An important question that becomes central for guiding the understanding, and for choosing the therapeutic approach and strategies in the interaction with patients with NPD, concerns the role of motivation in the patient’s functioning. Motivation is closely related to narcissistic self-regulation, decisions, and actions leading to proactive or aggressive self-enhancement as well as to self-protective dismissal, rejection, or avoidance [34]. A study of motivational regulation focused on determinants of facial emotion recognition in healthy young adults [33] identified basic patterns of promotion focus which use faster and more suitable information processing and evaluations of gains, combined with attention to positive emotions. Prevention focus on the other hand was suggested to relate to increased interdependence and sensitivity to loss, other-orientation, and serving to avoid errors. This difference between basic motivational approach and avoidance can be applied to shifts and fluctuations in self-enhancing/grandiose and self-devaluing/vulnerable narcissistic states and accompanying strategies, and begin to guide further understanding and exploratory interventions with NPD patients.

The interaction between self-esteem fluctuations, reactivity, and avoidance versus intentions, actions, and/or interactions

can involve multiple layers of agency. Those involve both decision processing and self- and emotion-regulation, with self-enhancing or protecting considerations. External goal focus can co-occur with internal intense emotions such as fear, shame, rage, or self-hatred, with hypersensitivity or insensitivity, with increased self-centeredness, and with variable emotional processing ability, which all affect agential evaluations and decision-making [53]. The balance between reactivity and impulsivity in NPD have yet to be empirically verified, but interestingly, indications of less degree of impulsivity were found in a study of suicidality and suicidal behavior in patients with NPD [62]. The authors concluded that there is a higher degree of expected lethality with a lower degree of impulsivity in patients with NPD. This study suggests that determined suicidal behavior in NPD can be a vehicle in self-esteem regulation combined with agential efforts to gain control and mastery of life [54].

Implications for Therapeutic Alliance and Interventions

In clinical context, enhanced self-defensiveness and interpersonal critical aggressivity often co-occur with areas and moments of real competence and agency. A patient can readily present with, although still not being fully aware of, different ways that enable him/her to maneuver or accomplish, to cover up and compensate for underlying fragility with deficits, dysregulations, and self-focus. One challenge in clinical settings, i.e., consultations, general psychiatric treatment, or psychotherapy, relates to how to collaboratively engage the patients' actual competence, both sense of agency and self-reflective ability, in exploring, describing, and understanding the interaction between their self-enhancement and their deficits, fragilities, and reactivity. The initial clinical questions regarding patients' ability for emotion processing, and the noticeable balance between regulation and motivation (as outlined above), are crucial for diagnostic evaluation and alliance building. The question is how the clinician can avoid "throwing out the baby with the bathwater," by dismissing or questioning the patient's competence and real emotional experiences? This can easily happen when clinicians are primarily focusing on the patients' striking and provocative verbal charade, or emphasizing problematic interpersonal behavior or underlying narcissistic pathology, and perceiving competence and control just as a defense against awareness of one's own conflicts.

For example, Mr. S, a single professional in his early 40s, described to his therapist escalating stress and conflicts at his workplace with uncertainties about his future position in the context of anticipated reorganizations. He was noticeably angry and upset as he described the changes he had noticed in his boss' judgment and leadership in general. More specifically,

Mr. S noticed that his boss had become less collaborative and supportive despite that he himself continues to meet high to outstanding productivity standards and diligently attends to requirements. He had begun to feel increasingly rejected and ignored at work. Especially, he missed his boss' support in interactions with his co-workers, who he perceives as stupid and increasingly critical towards him. He finished his outline by asking "what do I do...? I just want to leave!! I hate my boss and the department.... How can I survive this...?"

The therapist can choose to focus on narcissistic intentions and interpersonal behavior by saying: "you want to be special and impress your boss by submitting outstanding reports. At the same time you criticize your boss behind his back and have these fights with your co-workers. And then you feel enraged and hurt and devastated whenever you sense that your boss does not pay special attention to and appreciate you. Obviously you need to change your attitudes and expectations and start to relate differently and prepare for the upcoming reorganization in your company." With such intervention, the therapist focuses primarily on the patient's more obvious signs of self-esteem fluctuations and interpersonal narcissistic reactivity with critical aggressivity and self-enhancement, while at the same time judging and assigning intentions to the patient's descriptions of his experiences. The therapist is also diminishing the patient's competence by considering it as a vehicle for self-enhancement, not as a valuable capability in and by itself. This approach tends to activate patient's self-enhancing, accusatory, and blaming attitudes, which can escalate emotion dysregulation, interpersonal enactments, or premature negative transference, and contribute to drop-out.

Alternatively, the therapist can say: "you are obviously experienced and capable in your ability to work and get things accomplished (acknowledging competence and agency), and the upcoming corporate reorganization is challenging as it includes unknown changes that in various ways can affect you. But at this point you do not know how, and that can be tough (acknowledging fear of uncertainties and facing loss or lack of control and affiliation). You also notice changes in relationship to your boss who has been very appreciative and supportive of you until recently, and there you obviously miss the ways he used to be (both loss of idealized object, but also loss of an object related to the patient's sense of proactive agency and positive work-related self-esteem). In addition, there are your ongoing conflicts with your co-workers, and the loss of your boss' support vis-à-vis them. That seem to be more acutely aggravating and difficult (acknowledging patient's fury and frustration), especially in the context of changes in your company and your boss' role (patient's basic affiliation, and possible security). So, let's try to understand what is going on from your perspective, first vis-à-vis your boss and in the context of the upcoming reorganization, and then vis-à-vis your colleagues."

With this summary and exploratory invitation, the therapist can begin to engage the patient's self-reflective ability,

encourage his personal accounts of his internal experiences, and create a shared understanding of how his perceptions and reactions tend to direct his decisions and interactions. The therapist is starting with engaging and connecting to the patient's own self-focused perspective. In this process, the therapist can begin to identify the patient's regulatory patterns, the range between healthy and pathological narcissism and self-esteem regulation (fragility, self-directed criticism, and self-enhancement), and between areas of competence and underlying insecurity. Especially, the therapist can in this phase of alliance building consolidate a common ground, a shared agreement and foundation for their continuing work. This can gradually enable the unfolding of more challenging emotional and interpersonal experiences, as well as deeper experiences of conflicts, trauma, and attachment patterns. In the initial alliance building, this is a very important strategy that serves to facilitate further explorations, especially of the patient's gradual unfolding emotional and relational patterns vis-à-vis the therapist, i.e., in the complex interface between emotion dysregulation, agency, and interpersonal reactivity, as well as of the evolving transference.

Questions remain regarding optimal interventions and conditions that can promote and implement change in treatment of patients with NPD. Given the range of deficits and compromised functioning in emotion and empathic processing, with related fluctuations in self-esteem, which also are highly influenced by agential capability in interpersonal and life context, the role of reflective ability and nature of emotional processing is crucial. Further studies are needed to clarify the intersection between neurological and personality functioning. Foremost, the clinical indicators of deficient or compromised emotional and empathic processing have to be further identified to enable an accurate assessment of patients' functioning in terms that relate to their abilities, and to their individual conditions and limitations for change. Second, while we are relatively well informed about evidence-based treatment interventions that can promote change in personality functioning, studies that inform about conditions and interventions that possibly can lead to change in neurological functioning significant for NPD are more sparse. A common mistake in treatment with NPD is to automatically identify self-regulatory personality patterns in terms of defenses, or to assume that competence or avoidance automatically represent self-enhancing (grandiose) strivings. Deficit-based disengagement, although seemingly self-enhancing, can be necessitated by the patient's agential self-protective strivings to manage emotional or empathic deficits. Similarly, intense emotional preoccupation (anger, blame, retaliation) can serve protective functions for underlying compromised emotional processing. The patient may not be capable of attending to their vulnerability until a more coherent interactive and reflective sense of agency has been established. Finally, given the role of interpersonal and life context, the question is whether and what type of change can

occur and be noticeable within the therapeutic alliance, and what changes require real-life settings to enable reflection, realizations, motivation, and conditions for change.

Conclusions

This review has aimed at integrating recent research studies that identify possible neurological and neurophysiological underpinnings to regulatory patterns in patients with pathological narcissism and NPD. The introduction of a dimensional approach to identifying and diagnosing personality disorders in DSM 5 section III has encouraged attention to regulatory processes in self and interpersonal functioning. Results from studies made so far indicate self-centeredness as well as deficits in emotional empathic ability and emotion processing (recognizing, describing, differentiating, and tolerating emotions) in patients with NPD. Consequently, empathic and emotion regulation deficits rooted in neurological functions, as well as attachment patterns and possible psychological trauma, together influence regulation of self and self-esteem, agency, and decision-making. In addition, motivation and need for control also tend to affect self-regulation (self-enhancement, preoccupation, and avoidance) and interpersonal functioning in social, vocational, and intimate relationships. An exploratory collaborative approach is suggested, which focuses on clarifying the patient's unique, and subjective personality functioning. This is a necessary initial step in the process of alliance building, and towards building a relational foundation that can hold up further explorations, therapeutic interventions, transference-countertransference dynamics, and personality change.

Compliance with Ethical Standards

Conflict of Interest Elsa Ronningstam declares no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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