

Narcissism research: a narrative review

Abstract

This narrative review of the current literature on narcissism is a summary of research published in 2022-2025. Studies in the current literature have involved comparisons between grandiose and vulnerable narcissism. Qualities of narcissism that have been addressed in this literature include creativity, masculinity, grandiose fantasizing and being selfish. Comorbidities associated with narcissism include grandiosity, having OCD about a romantic partner, having a narcissistic partner and posttraumatic stress disorder. Positive effects of narcissism include generosity and well-being. Negative effects are more numerous and include mind-wandering, unrealistic goals, guilt, social media addiction, antagonism, stress with acquaintances, reduced friendship quality, bullying, and suicidal risk. Potential underlying biological mechanisms include central serotonergic neurotransmission and different neural rhythms in different regions of the brain. Methodological limitations of this current research include a lack of generalizability due to the frequent sampling of university students and the data typically being cross-sectional rather than longitudinal.

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Tiffany Field

University of Miami/Miller School of Medicine and Fielding Graduate University, USA

Correspondence: Tiffany Field, PhD, University of Miami/Miller School of Medicine and Fielding Graduate University, USA, Tel 305-975-5029

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Introduction

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Narcissism has been defined as excessive interest in or admiration of oneself and one's physical appearance. Several qualities have been attributed to narcissism including selfishness, a sense of entitlement, a lack of empathy and a need for admiration. Narcissistic personality disorder has similarly been described as a grandiose sense of self-importance, an excessive need for admiration, a lack of empathy, a sense of entitlement and manipulative/exploitative behavior. Narcissism is often accompanied by fantasies of unlimited success and arrogance, reputedly stemming from deep-seated insecurity. Other traits include arrogance, envy, difficulty handling criticism, and a tendency to belittle others, frequently leading to difficult relationships. The etiology of narcissism is unknown although some have suggested that it's a combination of genetics, brain structure and early life experiences of excessive praise or neglect from family members leading to an inflated sense of self-entitlement.

While the prevalence of narcissistic personality disorders is relatively low at 6% in the general population, the prevalence is as high as 20% in clinical settings. As many as 50% of the general population have been noted to show narcissistic traits that can have negative effects on relationships. These prevalence data and the severity of conditions that are comorbid with narcissistic traits, e.g. obsessive compulsive disorder, highlight the importance of research on those traits and reviews of that research.

An earlier review appeared in 2025 on different types of narcissism.¹ The current narrative review includes research not only on different types of narcissism but also on different qualities, comorbidities, negative effects and potential underlying biological mechanisms of narcissism. The papers were found on PubMed and PsycINFO by entering the terms narcissism and the years 2022-2025. Twenty-five papers are reviewed here including papers on qualities of narcissism (5 papers), papers on comorbidities of narcissism (4), negative effects of narcissism (14), and potential underlying biological mechanisms (2).

Types and qualities of narcissism

Different types of narcissism have been reported (Table 1).¹ These include **agentic extraversion** which has been described as a bold

face, charming interpersonal style. **Narcissistic antagonism** has been defined as those who show entitlement and lack of empathy. **Narcissistic neuroticism**, called fragile face, is described as having an extreme need for admiration. Typically, however, studies in the current literature have involved comparisons between grandiose and vulnerable narcissism. **Grandiose narcissism** has been characterized as an overt, exaggerated sense of self-importance, dominance and a pervasive need for admiration. **Vulnerable narcissism**, in contrast, is marked by insecurity and hypersensitivity

Table 1 Types and qualities of narcissism (and first authors)

Types and qualities	First authors
Grandiose and vulnerable	Schneider
Creativity	Ji
Gender differences	Green
Grandiose fantasizing	Finch
Selfishness and vanity	Smith

Other qualities of narcissism are included on the scales commonly used to diagnose narcissism.² These include the Five Factor Narcissism Inventory, the Narcissistic Personality Inventory, the Narcissistic Admiration and Rivalry Questionnaire and the Hypersensitive Narcissism Scale.

A few qualities of narcissism have been the focus of current research. They include creativity, masculinity, grandiose fantasizing and being selfish. In a study entitled "Are narcissists more creative?", subordinates (N=596) and leaders (N=6) in three high tech companies were surveyed on narcissism and **creativity**.³ Their responses suggested an inverted U-shaped relationship between narcissism and creativity meaning that a moderate amount of narcissism is associated with greater creativity.

In research on **gender differences** in narcissism, 75% of those with narcissistic personality disorder were notably men.⁴ But the diagnosis of narcissistic personality disorder is based on the Narcissistic Personality Inventory which features several grandiose themes that closely resemble masculine norms. So, it is not surprising that men have higher scores on the Narcissistic Personality Inventory.

In a study entitled "Functional fantasies: the regulatory role of **grandiose fantasizing** in pathological narcissism", one group received a negative mood induction and another group a filler task

condition (N = 189).⁵ The participants wrote about a future event to make themselves feel better. As would be expected, choosing a grandiose event was more frequent in high narcissistic folks and more effective in reducing their negative affect.

Selfishness and vanity have also been associated with narcissism in two studies reviewed in one paper (N = 202 and N = 640).⁶ In these studies, the participants were asked how they conceptualized narcissism. Their responses suggested that they viewed narcissists as more grandiose versus vulnerable and they characterized them as being high in extroversion and low on agreeableness. Narcissists were also said to have greater self-enhancement. These findings are consistent with other data already reviewed.

Comorbidities of narcissism

A few comorbidities have been associated with narcissism (Table 2). These include grandiosity, having OCD about a romantic partner, having a narcissistic partner that leads to dependence, and having posttraumatic stress disorder.

Table 2 Comorbidities of narcissism (and first authors)

Comorbidities	First authors
Grandiosity	Edershile
Relationship OCD	Melli
Emotional dependence	Moral-Jimenez
Posttraumatic stress disorder	Nenninger

Grandiosity has been considered one of the primary traits of narcissism along with negative affect but has also been termed a comorbidity.⁷ **Relationship OCD (ROCD)** (obsessive preoccupation with a romantic partner's perceived flaws) is another trait that has been self-reported by individuals with ROCD symptoms (N=310).⁸ Surprisingly, these symptoms have been especially reported by those with vulnerable narcissism as opposed to grandiose narcissism. This is surprising because those with vulnerable narcissism are typically insecure but perhaps would focus on their partner's perceived flaws to boost their own egos. A comparison of couples whose partners have opposite types of narcissism with those who have similar types would be informative. A comparison of ROCD individuals with non-ROCD individuals would bolster the ROCD phenomenon.

Emotional dependence is another quality that has been noted, especially in those who had more narcissistic partners.⁹ In this sample (N = 271 adults 18–66 years old), emotionally dependent people not only had more narcissistic partners, but also partners who psychologically abused them. It is not surprising that emotionally dependent individuals would have narcissistic partners. But surprisingly, no sex differences were noted in this sample. This was not expected inasmuch as narcissism traits are thought to be more masculine and the prevalence of male narcissism has been greater than female narcissism.

Pathological narcissism has also been linked to **posttraumatic stress disorder** in veterans (N = 179 from Afghanistan and Iraq).¹ In this study, a significant amount of the variance in narcissism was explained by PTSD. As might be expected, the association between narcissism and PTSD was noted for vulnerable but not for grandiose narcissism. The sense of self-importance in grandiose narcissistic individuals would likely protect them from post-traumatic stress disorder.

Positive and negative effects of narcissism

Only three positive effects of narcissism and as many as 14 negative effects have been noted in this current literature on narcissism (Table

3). This is not surprising given that narcissism is typically viewed as a negative behavior.

Table 3 Positive and negative effects of narcissism (and first authors)

Positive effects	First authors
Well-being	Sedikides
Generosity	Czarna
Mental toughness	Papageorgiou
Negative effects	
Unrealistic goal setting	Finch
Guilt	Perdone
Social media addiction and nomophobia	Maffei
Antagonistically oriented emotions	Rogoza
Less sensitivity to close folks' distress	Zhang
Gender differences	Peets
Negative friendship quality	Peets
Liking dissimilar friends	Peets
Impulsivity, bullying and cyberbullying	Bugarharan
Suicide risk	Gabbard

Positive effects

Only a few positive effects of narcissism have been addressed in this literature. They include generosity, well-being and mental toughness.

The relationship between **well-being** and narcissism has been explored in a cross-cultural meta-analysis.¹⁰ Greater well-being was reported especially in individualistic countries. Not surprisingly, only the grandiose narcissists, not the vulnerable narcissists, enjoyed greater well-being in these countries. That grandiose narcissists would experience well-being is not surprising as they receive greater attention and admiration for their behavior.

Generosity has been positively associated with high narcissism and negatively associated with low narcissism (N=151).¹¹ In this sample, narcissism moderated the association between basal testosterone and generosity in men. This surprising association could derive from high narcissists' extroverted involvement with people and wanting to contribute.

Another positive effect is noted in the title of the paper called "Narcissism indirectly associates with less psychopathology across five countries" (N=3649).¹² In this study, grandiose narcissism led to **mental toughness** which led to lower levels of anxiety, stress and depression.

Negative effects

As many as fourteen negative effects of narcissism are addressed in this literature. They include unrealistic goals, guilt, social media addiction and nomophobia, antagonism, stress with acquaintances, reduced friendship quality, bullying, and suicidal risk.

Unrealistic goal setting has also been attributed to those who have bold face narcissism (N=482).¹³ In contrast, those with narcissistic neuroticism are less likely to engage in unrealistic goalsetting.

Guilt is another quality that separates the different types of narcissism. In a comparison of grandiose narcissism with vulnerable narcissism, those with grandiose narcissism were said to have the lowest amount of guilt while the vulnerable had deontological guilt (personal guilt), but no altruistic (interpersonal) guilt (N=752).¹⁴ The vulnerable likely felt more personal guilt related to their insecurity.

The lowest amount of guilt for those with grandiose narcissism is not surprising as they have an exaggerated sense of self-importance.

Narcissism has also been associated with **social media addiction and nomophobia** (fear of losing your phone) (N= 559 adults 18–45 years old).¹⁵ In this study narcissism led to nomophobia and social media addiction, which in turn led to stress.

Antagonistically oriented emotions have also resulted from narcissism.¹⁶ In this sample, narcissism was associated with impaired emotional regulation which led to antagonistically oriented emotions.

In a study entitled “Narcissism, social experiences, and mood in late life”, greater narcissism led to individuals being **less sensitive to close folks’ distress** (N= 303 adults 65 to 92 years old).¹⁷ These older adults were also more susceptible to negative social events, especially with acquaintances.

Gender differences have been noted in the association between narcissism and friendship.¹⁸ In this sample (N= 261 eighth and ninth graders) narcissism in females at time one led to **negative friendship quality** at time two. Surprisingly, no relationships were reported for males. Another unexpected finding was that greater narcissism was related to **liking dissimilar friends**. This may have enabled the boldly narcissistic individuals to dominate their dissimilar friends.

In a study entitled “The importance of narcissism and impulsivity for bullying and cyber- bullying perpetration”, the results are given in the title.¹⁹ In this sample (N= 575 Turkish adolescents), narcissism led to **impulsivity**, which in turn led to **bullying and cyberbullying**.

Narcissism has also been related to **suicide risk**.²⁰ The authors described the three subtypes of narcissism as grandiose/oblivious, vulnerable/hypervigilant and a high functioning subtype. They also suggested that the etiology of narcissism was yet unknown and that it was difficult engaging narcissistic personality disorder patients in psychotherapy, especially Individuals with severe narcissistic injury.

Potential underlying biological mechanisms

Only two potential underlying biological mechanisms have been discussed in this current literature on narcissism (Table 4). They include central serotonergic neurotransmission and different neural rhythms in different regions of the brain.

Table 4 Potential underlying biological mechanisms (and first authors)

Mechanisms	First authors
Less central serotonergic neurotransmission	Mavrogiorgou
Different neural sources in resting-state EEG	Leota

Narcissistic individuals are said to have **less central serotonergic neurotransmission**.²¹ However, the participants in the study were patients with depression (N=74) and depression is also associated with low serotonergic neurotransmission.

In another study entitled “Neural rhythms of narcissism: facets of narcissism are associated with **different neural sources in resting – state EEG**” (N= 58), those with grandiose exhibitionism had lower dorsal medial prefrontal cortex activity.²² Those with entitlement/explosiveness had lower dorsal medial prefrontal cortex activity as well as lower right lateral prefrontal cortex activity. Those with leadership/authority had increased activity in the frontal anterior temporal cortex. These results suggest that the EEG recordings are related to social cognition in the case of the dorsal medial prefrontal cortical activity and self-regulation in terms of the right lateral prefrontal cortex activity.

Methodological limitations of this literature

Several methodological limitations can be cited for this current literature on narcissism. They include limited sampling and cross-sectional rather than longitudinal data.

Many of the samples were university students suggesting that generalizability of the data is limited. Many of the studies were cross-sectional, suggesting that directionality of effects could not be determined. Only a few comorbidities were studied and only one of them would be considered pathological (posttraumatic stress disorder). Depression and anxiety were rarely mentioned, perhaps because narcissistic individuals might not be expected to be depressed or anxious. Several of the studies were focused on narcissism in general rather than comparing the different types of narcissism. Surprisingly, physiological and biochemical data were limited to serotonin in one study and fMRI data in another study which suggested that narcissism activated overlapping regions of the brain.

The literature was primarily focused on negative effects of narcissism, especially of grandiose narcissism. Because those with grandiose narcissism are said to have a sense of self-importance and entitlement, it’s surprising that most of the studies were focused on the negative effects of grandiose narcissism. Most of the behaviors in this literature are negative. That might be expected because psychological publications are typically focused on negative effects of various conditions.

Despite these limitations, the data suggest future directions for narcissism research. For example, sampling could be more representative, and more physiological and biochemical measures could indicate the underlying physical nature of the different types of narcissism.

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Conflicts of interest

The author declares there is no conflict of interest.

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