RESEARCH ARTICLE

Narcissism and self-enhancement: An underestimated relationship[*]

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Abstract

For decades, scholars have argued that self-enhancement and narcissism are closely related. However, more recently it has been argued that this relationship is overestimated. The current paper presents a conceptual analysis which, to the contrary, suggests that it is more probable that the relationship has been underestimated. It is proposed to differentiate between six versions of how self-enhancement can be related to narcissism: increase of classical self-enhancement, modesty refutation, defensive self-enhancement, denying self-enhancement, overshooting compensatory self-enhancement and suppressed compensatory self-enhancement. All six are consistent with the definition that self-enhancement represents a "tendentiously favorable view of oneself". A combination of three parameters should be used to appropriately characterize which version of self-enhancement is related to narcissism in a setting, two correlations (between self-rating of an attribute and narcissism; between an objective measure of the attribute and narcissism) and one discrepancy measure (difference between self-rating and objective measure). Moreover, it is shown why a recently proposed data analytic strategy, the application of conditional regression analysis, leads to an underestimation of the relationship between narcissism and self-enhancement because it only captures two of these six versions. Finally, it is discussed how the distinction of versions of self-enhancement as related to narcissism could contribute to a better understanding of the effects of self-enhancement in narcissists.

Keywords

narcissism, self-enhancement, self-view. Modesty, discrepancy measure

Self-enhancement as a psychological phenomenon has attracted the interest of scholars in various areas of psychology. For example, there is an ongoing debate on the relationship of self-enhancement and mental health (cf. Kwan et al., 2008; Sedikides et al., 2004), on the extent and implications of self-enhancement for self-ratings of job performance (cf. Heidemeier & Moser, 2009) or on the determinants and effects of self-enhancement in job applicants (cf. Paulhus et al., 2013). As another example, some personality variables are often assumed being related with self-enhancement, most notably, with narcissism (Campbell & Campbell, 2009). Finally, if self-enhancement is a phenomenon related to many important outcomes, it might even be evidence for a maybe problematic component of human nature (Sedikides & Gregg, 2008). But of course, if we aim at understanding the extent, the causes, and the effects of self-enhancement, we need clear and convincing definitions and operationalizations.

In the following, I will first recapitulate why a mere correlation between self-view and

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narcissism is no sufficient evidence for a relationship between self-enhancement and narcissism and then introduce six versions of how the two can be related. In order to determine which version exists in a specific situation, three parameters have to be taken into account, two correlations (between self-rating of an attribute and narcissism; between an objective measure of the attribute and narcissism) and one discrepancy measure (difference between self-rating and objective measure). Thus, three usual methods to analyze data (correlating difference scores, residualization, conditional regression analysis) are not sufficient and, more importantly lead to the underestimation of the extent to which self-enhancement is related to personality in general and narcissism in particular. Finally, the distinction of six versions can also contribute to a better understanding of how and why self-enhancement continues to be related to narcissism.

Self-enhancement and Narcissism

At its core, "self-enhancement involves taking a tendentiously favorable view of oneself" (Sedikides & Gregg, 2008, p. 102). In other words, the self-view is favorable *and* it is biased. One criterion for favorableness can be a self-view that is "positive", methodologically speaking beyond the midpoint of a scale ranging from negative to positive. However, additional evidence for a *bias* is necessary. A positive self-view is not evidence for self-enhancement if it is, for example, common that people rate themselves above the midpoint of a scale. This is, for example, usual in ratings of self-esteem, life satisfaction, job satisfaction, or self-ratings of job performance. Another criterion for favorableness of a self-view is, that it is, compared to others' self-views, more positive or "above average". Ratings that use such a social comparison instruction seem to include such an information of biasedness, at least in the aggregate. In fact, the "better-than-average" effect (BTAE) has been discussed as an example of self-enhancement because *most respondents* show this effect (Zell et al., 2020). The usage of social comparison instructions has, however, an important drawback. Though

the BTAE shows that self-enhancement exists, we cannot rule out that a *specific individual* does *not* self-enhance though the self-rating is slightly or even considerably above average. The reason is that the real performance or ability of this individual *is* above average. The complications with the interpretation of the BTAE are well-known (see Zell et al., 2020) and thus scholars interested in the relationship between self-enhancement and individual differences recommended to use another criterion for bias, most commonly another rating source or some objective measure. This means that the extent of self-enhancement is defined by a *difference score*.

One important personality variable related to self-enhancement is narcissism. In its sub-clinical (i.e., non-pathological) version, narcissism has been defined as a "… self-centered, self-aggrandizing, dominant, and manipulative interpersonal orientation" (Sedikides et al., 2004, p. 400). Narcissism has been linked to self-enhancement so strongly that scholars have argued that in order to study self-enhancement one of the most suitable ways is to study narcissism (e.g., Campbell & Campbell, 2009). The narcissist has even been called the "self-enhancer personality" (Morf et al., 2011).

In the here following, I will consider the example of self-ratings of task performance as related to narcissism. However, comparable assumptions can be made for abilities, skills, social status, positive behaviors (for ex. making creative suggestions), and health. In addition, a "self-rating" could also be called a "self-view". In order to show that self-enhancement is related to narcissism, some conditions must hold. At first sight, we might expect a positive correlation between narcissism and a self-rating of performance. However, as previously mentioned, the mere positive correlation between narcissism and self-rated task performance is no sufficient evidence for self-enhancement because we cannot rule out that people high compared to those low in narcissism *really* perform better in a specific task, and thus that the correlation results from accurate self-ratings. An example might be creating favorable first impressions in strangers, a task in which people high in narcissism are more successful than those low

in narcissism which means that a correlation between narcissism and the self-rated performance in making favorable first impressions is no evidence for self-enhancement. This is why a discrepancy score between a measure of self-view (for ex. a self-rating of task performance) and a criterion (for ex. a measure of objective task performance) is needed. These discrepancy scores are usually computed as either algebraic differences between self-rating and criterion or residuals of the regression of the self-ratings on the criterion scores. Self-enhancement is then defined such that the self-rating is *higher* than deserved or true. And this difference is assumed to be correlated with narcissism.

Up to this point, the usual and probably intuitive understanding of how narcissism is related to self-enhancement has been described. However, as we will see in the following paragraphs, the constellation just described is only one of a number of different versions of how narcissism can be related to self-enhancement. For example, the definition of self-enhancement only mentions "a tendentiously favorable view", and does not include a specific criterion for "favorable". In the following, I propose to further differentiate up to six versions of self-enhancement as related to narcissism (see figures 1 - 3).

The figures show various hypothetical constellations in which narcissism is correlated with both a self-rating and an objective measure of task performance. Only the regression lines are depicted. It is also assumed that data for the two performance measures, the self-rating and the objective measure, are collected with comparable scales.

Classical Self-enhancement and Self-effacement

The most straightforward description of a relationship between self-enhancement and narcissism seems to require the fulfillment of three conditions. First, a positive correlation exists between the self-rating of performance and narcissism. Second, a positive correlation must exist between the difference of self-rated performance and objective performance with narcissism. More formally stated, $\alpha_1 > 0$ (see figure 1). In other words, we have to exclude that the increase of self-rated performance is accurate because narcissism is respectively correlated with objective performance. Note that there might exist a certain positive relationship between objective performance and narcissism (see line b in figure 1) though $\alpha_2 > 0$ must still hold. Third, it is usually assumed that the difference between the self-rating of performance and objective performance must be positive. In other words, the line for self-rating must lie above the line of objective performance.
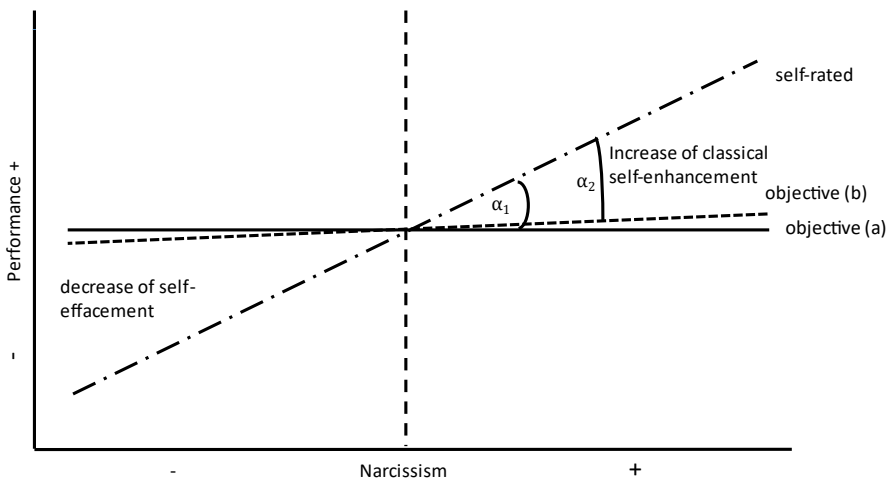

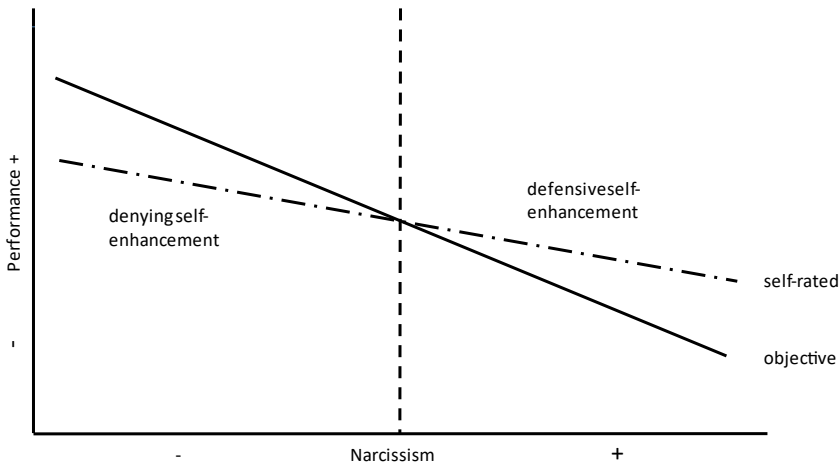*Figure 1.* Classical self-enhancement and self-effacement

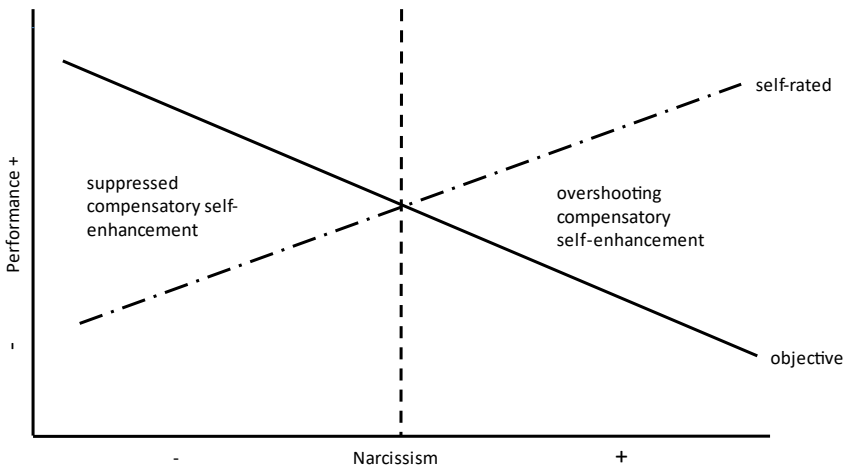*Figure 2.* Defensive and denying self-enhancement

Figure 3. Overshooting and suppressed compensatory self-enhancement

At a first glance, if the difference is negative as on the left side of figure 1, this represents decreasing self-effacement that correlates with narcissism. However, it is still appropriate to call this evidence for a relationship between self-*enhancement* and narcissism for two reasons. First, there might exist a general norm to underrate one's performance. In that case, we could say that the left side of figure 1 also describes the tendency of narcissists to have an increasing "favorable self-view". Note, that the exact meaning of "favorable" depends on the context, it not only says that the self-view is "overtly positive" but it can also only mean that it is more positive *than others'* self-views

and thus might only be less negative (or less modest) than usual. Second, the measurement of "objective performance" can be a problem of a specific context leading to comparably lower mean self-ratings in general. In fact, many criteria are measures on rating scales and therefore we cannot be sure how self-ratings compare with other-ratings in specific settings. In sum, the third condition, i.e., a *positive* difference between the self-rating of performance and objective performance, must not hold for the existence of a relationship between narcissism and self-enhancement. I propose to call the version on the left side of figure 1 as "modesty refutation".

Defensive and Denying Self-enhancement

In this section, it is shown that it is even not necessary to find a *positive* correlation between narcissism and self-rating in order to observe a positive relationship between narcissism and self-enhancement. This is demonstrated in figure 2. A negative slope of the self-rating that is yet less steep than the negative slope for objective performance indicates a special version of self-enhancement as related to narcissism, because the difference between self-rating and objective performance is still correlated with narcissism. This constellation is proposed to be called "defensive self-enhancement". Importantly, it still satisfies the two conditions that the self-rating is favorable and that it is biased. At least, it is more favorable than it should be, given the general negative correlation between narcissism and objective performance. Consider the example of gaining peer acceptance as a performance dimension. It has been found that narcissists become aware that they lose acceptance over time among their peers (Carlson & DesJardins, 2015). We can assume that they might somehow take that into account in their self-ratings of peer acceptance. However, this could still happen to an insufficient degree and the size of this discrepancy can be correlated with narcissism. Defensive self-enhancement could also be rephrased as an inclination to admit a weakness, though to an insufficient degree.

The case of denying self-enhancement on the left side of figure 2 is again comparable to version 2 (see table 1). Again, there might exist a general norm of self-effacement, for example for self-ratings of popularity. Though again even narcissists could acknowledge that the norm exists and that it should be followed, they can still be expected to tend to bias their self-ratings upward.

Compensatory Self-enhancement

The combined positive slope of self-rated performance on narcissism *and* a negative slope of objective performance on narcissism creates two cases of compensatory self-enhancement. If the self-rating is higher than objective performance, that can be alternatively called overshooting self-enhancement (see the right side of figure 3). A hypothetical example is acting fair towards employees as a supervisor which might not only be (more and more) overrated by narcissistic supervisors but that might actually at the same time decrease with an increasing amount of narcissism. Note, that if the regression line for objective performance is above the regression line for self-ratings, it also describes compensatory self-enhancement (see left side of figure 3) though in a more suppressed version because the self-rating remains below the criterion score. One might question the assumption whether this still represents to *have* a "tendentiously favorable view" though we could in any case call it evidence for a tendency in narcissists to *aim* at a more and more favorable view.

In sum, the three figures also include (see the dotted lines) information on the intersection of the two regression lines. This means that the levels of both the self-rating and of the objective performance are of interest. Whether the measures in use allow the computation of this point of intersection depends on their equivalence. If there are ratio scales, it might be an advantage. For example, we could ask chess players to rate their performance (expressed in a score that results from a combination of the number of points achieved and the score of their opponents) in a previous tournament and compare this self-rating to their actual scores in the tournament. However, other scale types might also be usable, for example self-ratings of grades can be compared with objective grades received in college, and even scores on personality scales that are based on either self-ratings or observer ratings might be used if the items are equivalent.

Conditional Regression Analysis

Recently, a methodological approach has been proposed that assumes comparably strict conditions for finding a relation between narcissism and self-enhancement, conditional regression analysis. The authors (Mielke et al., 2021) propose the following linear regression model:

$$(1) \text{ narcissism} = c_0 + c_1 \text{ x self-view} + c_2 \text{ x criterion} + e$$

Equation 1 describes that narcissism is predicted by a constant (c_0), an error term (e), and, in particular, the self-rating (or "self-view") and the criterion, both with respective weights (c_1 and c_2). Moreover, according to Mielke et al. (2021) both $c_1 > 0$ and $c_2 < 0$ must be fulfilled. That is, there must be a positive relation between the self-view and narcissism *and* a negative relation between the objective criterion and narcissism. This is what has been depicted in figure 3. Of note, these authors do not further discuss the sign of the difference between the self-rating and the criterion though these two kinds of constellations can have considerably different effects (see again figure 3).

If discrepancy scores are computed and interpreted, one often discussed problem exists: The discrepancy score receives a specific interpretation and is then related to a third variable though it cannot be ruled out that this relationship can be explained by solely one of the two compounds of the discrepancy scores. For example, a discrepancy between an expectation of an event and the subsequent quality of occurrence has been called "unmet expectation" and related to a subsequent affect, for ex. satisfaction with the event (see Irving & Meyer, 1999). However, if one analyzes the components separately, it often turns out that the respective effect is completely determined by one of the two components, usually the second (Edwards, 1994). This, however, does not mean that the difference score is *not* related to the third variable, but that the relationship results from only one of the two components as far as its effects on the third variable are of concern. In a similar vein, self-enhancement is a difference score that is (or might be) related to a third variable (here: narcissism) and we can ask whether this results from exclusively one component. Again, this might be true *but* still would not mean that the effect of the difference does not exist but rather that it could be *explained* in a specific manner. In fact, we can imagine two special cases. First, subjects are told to work on a task and they might be not able to influence the quality of the result, yet they might still tend to rate their performance as more or less good depending on their narcissism. This self-rating of performance, which we can also call their "self-view", is correlated with narcissism and it is this component of the discrepancy between task performance and self-rating that explains why self-enhancement and narcissism are related (see figure 1, right panel). Second, subjects are told to work on a well-learned task. We can expect that all of them will rate their performance as high. However, if there is some special interference introduced, for ex., it might turn out that those low in narcissism perform worse. This time, self-enhancement and narcissism would be related because of the correlation of narcissism with the criterion (see figure 2, right side).

The logic of conditional regression analysis is different. In particular, Mielke et al. (2021) assume that if $c_1 > 0$ but $c_2 = 0$, this is only an instance of "mere" positivity of self-view, whereas I argue that this is evidence for a self-enhancement effect as related to narcissism. Why this disagreement?

To start with, it is actually true that, for ex., a mere correlation of self-esteem and narcissism is no evidence for a self-enhancement effect. But the reason is that for this example, that is: self-esteem, there simply exists no criterion and thus no estimate for c_2. To our knowledge, there simply exists no criterion to validate the accuracy of a self-esteem rating, it is, so to say, simply there. However, in order to define self-enhancement, "self-view" *must* be related to a criterion because otherwise it would not be possible to compute a difference score, and, more importantly, there exists no indicator of bias.

Another explanation for the assumption that $c_1 > 0$ and $c_2 = 0$ are supposedly no sufficient conditions for evidence that narcissism is related to self-enhancement is presented in Humberg et al. (2018). Herein, a strict distinction between "self-enhancement" and "positive self-view" is made. More importantly, Humberg et al. (2018) emphasize that usually, the effects of self-enhancement and of positive self-view cannot be *differentiated* if self-enhancement is defined

by means of a difference score. In brief, this is true because self-enhancement is a compound of two measures, and we cannot be sure whether any relationship with a third variable can alternatively be explained by only one of the compound variables being related with that third variable. However, they then continue that it is not possible to demonstrate "true self-enhancement" if there is "only an effect of the self-view". It seems that here a *lack of knowledge about an effect* (here: c_2) is equated with a *lack of an effect*. However, we should draw a distinction between the existence of self-enhancement and the contribution of the components to self-enhancement. Instead, Humberg et al. (2018) and Mielke et al. (2021) require that $c1 > 0$ *and* $c2 < 0$. This is, however, a special constellation I presented in figure 3. If we have no knowledge on $c2$ (= the criterion-narcissism-relationship), it is not possible to draw a valid conclusion from $c1 > 0$ (= the self-view-narcissism-relationship). This lack of evidence is however not the same as the evidence of a lack of a relationship between the criterion and narcissism.

To wrap it up, conditional regression analysis requires strict conditions for the existence of a self-enhancement narcissism relationship, in our terms it tests for "compensatory self-enhancement". However, a relationship between self-enhancement and narcissism can also exist if $c2 = 0$ and, moreover, as figure 2 shows, it can even exist when $c1 < 0$. Changes of difference scores represent what self-enhancement as related to a personality trait means and they are, for example, correlated for the data on the right sides of figures 1 to 3. However, these correlations do not indicate which of the self-enhancement tendencies exists in a specific data set. Moreover, I am afraid that scholars usually expect that there must be positive correlations between self-ratings and narcissism, which however is not always necessary (see figure 2).

All in all, up to combinations of three parameters (see table 1) should be taken into account in order to make sure that the extent and type of self-enhancement correlated with a personality variable, for example, narcissism, is appropriately estimated. In particular, conditional regression analysis leads to an underestimation of the extent to which self-enhancement and narcissism are related.

Discussion

The nature and the effects of self-enhancement have attracted the interest of scholars in various areas of psychology. In particular, self-enhancement might be related to mental health, the accuracy of self-ratings of job performance, or applicant ratings of interviewers in the job application process. Most importantly, self-enhancement seems to be related to narcissism (Campbell & Campbell, 2009). The current discussion paper showed that the application of usual methods to test the relationship between narcissism and self-enhancement are not able to capture all six versions how self-enhancement might be related with narcissism. For example, the residualization technique primarily aims at "classical self-enhancement" whereas conditional regression analysis is only interested in compensatory self-enhancement. In sum, I proposed to differentiate six versions of self-enhancement as related to narcissism. In order to determine the version, three parameters must be taken into consideration, two correlations (between self-rating of performance and narcissism; between objective performance and narcissism) and one discrepancy measure (difference between self-rating and objective measure of performance). All six versions are consistent with the definition that self-enhancement is a "tendentiously favorable view of oneself" (Sedikides & Gregg, 2008, p 102).

A clarification of what inclinations to self-enhance can mean and how exactly they might be related to narcissism is important for different reasons. First, the extent to which self-enhancement is related to narcissism has probably been underestimated in previous research. As an example, decreasing self-effacement can be related to narcissism in cases in which there exists a general norm to be modest such that self-ratings should be lower than ratings from supervisors, a norm that seems to exist in certain cultures (see Heidemeier & Moser, 2009). Second, the distinction of six versions of how self-enhancement can be related to narcissism is

also important because they might have different effects, for ex. on reputation or likability of people high in narcissism. In particular, some analysis methods do not distinguish between an overt increase of self-enhancement and a self-enhancement that results from a decrease of self-effacement as related to narcissism. This is an important distinction because on the level of individual encounters, people might experience an overt high self-enhancement in narcissists as more repulsive than a lack of self-effacement. As another example, for observers, a distinction between the two kinds of compensatory self-enhancement might again be important because an overshooting compensatory kind of self-enhancement might be more salient than a suppressed one. In fact, observers might be sometimes misguided in attesting self-enhancement because they could tend to weigh the difference between self-rating and criterion as most important.

As a final note, analyzing and finding a relationship between self-enhancement and personality does *not* mean that I assume that individuals with a respective personality tend to self-enhance *in a negative way*. Rather, self-enhancement is primarily meant as a variable that describes individual differences in the tendency in people to rate themselves as tendentiously favorable. Whether some parts of this tendency are, for example, not only related to personality but also to mental health or whether they are related to the individuals' integrity or honesty is an issue that goes beyond the scope of the current paper.

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