Through rose-coloured glasses

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Through rose-coloured glasses: An empirical test of narcissistic overestimation

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Abstract

Background and Objectives: Grandiosity is designated as a hallmark trait of narcissism. The current study tested whether narcissistic traits are related to overestimation of a range of agentic performances.

Method: N=85 non-patients executed six objective tasks to assess their level of (emotional) intelligence, first impression, attractiveness, social skills and learning performance. They were also asked to estimate their level of functioning in these six areas. This estimation was given on two moments; before and after performing the objective tasks. Our main variable of interest was the degree to which subjective estimation exceeds objective scores.

Results: Narcissistic traits were related to overestimation of (emotional) intelligence, attractiveness, and social skills, particularly at a global level before performing the tasks.

Limitations: The use of a homogenous student sample; mainly agentic performances were studied.

Conclusion: Overall, the findings provide a theoretical validation of unwarranted feelings of grandiosity as a core narcissistic criterion.

Key words: Narcissism; overestimation; self-enhancement; agentic performances

1. Introduction

The primary DSM-5 (American Psychiatric Association, 2013) criterion of narcissistic personality disorder is grandiosity. This is reflected in exaggeration and overestimation of one`s achievements and features. Likewise, clinical accounts designate positive self-illusions at the core of (subclinical) narcissism. Empirical evidence indeed shows narcissism to be related to increased positive self-ratings of e.g. intelligence, openness, and physical attractiveness (e.g. Campbell, Rudich, & Sedikides, 2002; Carlson, Vazire, & Oltmanns, 2011). Yet, in order to assert whether *over*estimation is at stake, indicators of external reality are needed. There are two types of such objective criterion; performance and social consensus scores. Performance scores index concrete indicators of performance, like IQ-test scores for IQ. Social consensus reflects an average estimate of observer-ratings, and is the best proxy of objective ratings of performances and capabilities that cannot be readily assessed with performance, like attractiveness. Observers can be strangers on first encounters, or selected informants knowledgeable to the participant. Assessment by multiple observers is more reliable than single observers and validly predicts behavior (Klonsky, Oltmanns, & Turkheimer, 2002). There are some objective indications of true narcissistic grandiosity from studies where strangers rated participants with higher narcissism scores as more likeable and attractive (Buffardi & Campbell, 2008; Friedman, Oltmanns, Gleason, & Turkheimer, 2006), while others found no such effects (Bleske-Rechek, Remiker, & Baker, 2008). Narcissism was unrelated to IQ test scores (Gerstenberg, Imhoff, Banse, & Schmitt, 2014).

The crucial test of overestimation can only be provided by calculating the degree to which subjective ratings exceed objective ratings is calculated (Holtzman & Strube, 2010). So far, evidence suggests narcissism is related to IQ overestimation compared to IQ-test results (e.g. Gerstenberg et al., 2014), and to overestimating performance, leadership and attractiveness relative to peer-ranking (Bleske-Rechek et al., 2008; Carlson et al., 2011; Robins & Beer, 2001). Several drawbacks hamper the generalizability of these findings, however, like the use of suboptimal objective criteria, sole focus on a specific performance, not controlling for gender, and different ways of calculating the subjective-objective discrepancy score or a lack thereof. Moreover, the relationships between narcissism and emotional intelligence, first impression, and learning performance, have not yet been studied.

Theoretical accounts on narcissism are relatively silent about the specific domains of overestimation. Nonetheless, the distinction between agency-focus on self and motivation to excel- and communion –focus on others and motivation to getting along- modalities provides a helpful theoretical framework. Due to narcissists` tendency to value power, it seems likely overestimation would occur mostly in the agentic performances and capabilities, which is supported by several studies (Campbell et al., 2002; Campbell, Bosson, Goheen, Lakey, & Kernis, 2007).

The goal of the current study is to bring the empirical validation of the grandiose self-view of narcissism a step further by using a multi-method approach (i.e. self-report, performance and social consensus scores) across a wide range of mainly agentic performances like intellectual and emotional intelligence, first impression, attractiveness, social skills and learning performance. On a subjective level, both predictions and postdictions are assessed.

Predictions refer to global assessments of one`s capabilities that were gathered before participants performed a specific task, while postdictions reflect assessments of one`s performance immediately after completing a specific task. We hypothesized that narcissistic traits are positively related to overestimation (i.e. subjective ratings exceeding objective ratings) of all <mark>performances</mark>. As narcissism is a personality constellation, we particularly expect the overestimation at prediction. Note that the current study centers on the subclinical variant of narcissism amongst non-patients. Nonetheless, it is likely that this study`s implications are also relevant to the clinical form of narcissism, due to the rich body of empirical evidence supporting the continuous nature of both variants (e.g. Paulhus & Williams, 2002).

2.   Method

2.1 Participants

The sample consisted of N=85 undergraduates (18.8% bachelor and 81.2% master level), who ranged in age between 18 and 30, with a mean of 21.9 (SD=2.9). Forty (47.1%) were male. The majority was unmarried (88.2%), and of Dutch nationality (95.3%). Subjects were recruited by means of advertisement flyers at the university announcement boards.

2.2 Materials

2.2.1 Narcissism. Narcissism was measured with the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). This version of the NPI exists of 37 items that are rated on a 7 point Likert scale. The NPI approaches narcissism dimensionally, and focusses primarily on the grandiose from as conceptualized in the DSM-5 (APA, 2013). Good construct validity, and internal consistencies between α = .83 and .86 have been reported (e.g. Raskin & Terry, 1988).

2.2.2 Objective assessment:

2.2.2.1 Intelligence (IQ). IQ was measured with a performance score, namely the Wechsler Adult

Intelligence Scale, third version (WAIS-III, Wechsler, 1997). Because of time restraints, only four

subtests were administered: Block design, Arithmetic, Information, and Matrix reasoning.

2.2.2.2 Emotional intelligence (EQ). EQ was assessed with the a performance score namely the

Revised Reading the Mind in the Eye test (RME, Baron-Cohen, Wheelwright, Hill, Raste, &

Plumb, 2001). The RME assesses `how well subjects can put themselves into the mind of

another` (Baron-Cohen et al., 2001). The RME is a facial affect recognition task in which subjects

are presented with a series of 36 black and white photographs of peoples' eye-region, and

asked to choose which of four given emotional states describes best the expressed emotion.

The RME has shown to be of acceptable internal consistency (Cronbach`s Alpha`s between .61

and .71), and test-retest reliability (r`s between .63 and .88, e.g. Vellante et al., 2013).

2.2.2.3 First impression. First impression was based on social consensus scores of four

independent observers (2 male and 2 female undergraduate psychology students, mean

age=20.33, SD=1.15), blind for the study hypotheses who watched video fragments of about 30

seconds in which the participant entered the lab, shook hands with the experimenter, took a

seat, and was read aloud an instruction. The observers rated the first impression the participant

made on them on a 100 mm VAS scale ranging from `very unlikeable` to `very likeable`.

Intraclass correlation coefficient (model mixed, type: absolute agreement, average measures)

across the four observers was excellent, ICC=.78.

2.2.2.4 Attractiveness. Attractiveness was based on social consensus. The experimenter took

two pictures of each participant, one portrait, and one full body picture. The four observers (see

above) rated participants` appearances on a 100 mm Visual Analogue Scale (VAS) scale ranging

from `very unattractive` to `very attractive`. ICC was fair, ICC=.72.

2.2.2.5 Social skills. Social skills ratings were based on social consensus. Participants performed

two tasks; (ii) a conversation of 5 minutes with the experimenter (instruction: *`The goal of the

conversation is to get to know each other. It is up to you to keep the conversation going. You can

determine the topics yourself);* (ii) a speech given before the experimenter and a stand-alone

camera (instruction: *`Give a 5 minute presentation with me as an audience on `holidays`. I will

listen, but will not verbally react.*`The experimenter was trained by the fourth author to display

a `neutral but friendly` attitude (see Voncken & Bögels, 2008). The observers rated the

experimenter and indicated that she successfully followed the instructions and kept a neutral

but friendly attitude (mean=6.91, SD=.19, on a 9-point Likert scale). The observers rated the

participants`social skills with 16 items of the Social Behavior and Anxious Appearance (SBA,

Bögels & Voncken, 2008), with excellent internal reliability (Cronbach`s alpha between .91 and

.92). Scores were averaged over the conversation and presentation. ICC across the observers

was excellent, ICC=.90.

2.2.2.6 Learning performance. Learning performance was assessed with the performance score

from a key-term test (Rawson & Dunlosky, 2007), consisting of four texts that each contained

four key terms participants had to learn by heart and reproduce. The texts were between 274

and 282 words, and were on gestures, marriage, aging, and human metabolism. In each text,

key terms were printed in capitals, and explained with definitions and examples. Participants

retrieved and typed definitions of all key terms. Afterwards, a trained research assistant scored

the quality of the definitions by comparing them with a standard definition containing 2 or 3

idea units. The maximum score was 16.

2.2.3 Subjective assessment: Subjects provided both predictions and postdictions of all tests.

Predictions were assessed before each objective assessment task. Specific questions were e.g.

`How high do you think your IQ is?`. Postdictions were assessed directly after task completion.

Specific questions were e.g. `How well did you perform on the problem solving test you just

did?` (IQ). Subjects scored all questions on 100mm VAS scales, with the exception of IQ

prediction that subjects rated on a 70-130 scale.

2.3 Procedure

Testing took place in a lab, where a hidden camera started recording just before the participant

arrived in order to collect video material for the first impression score. Participants were

explained that the study assessed how people estimate their task performance, and that they

would be later compared to estimates of independent raters. For each test the following order

was used: (i) the participants were explained the upcoming test, (ii) estimated their predictions,

(iii) the objective test took place, and (iv) participants rated their postdictions. The tests were

administered in the following order: first impression, social skills, attractiveness, EQ, learning

performance and IQ. Finally, participants filled out the NPI questionnaire. The experiment took

two hours. Participants were thanked for participation, debriefed, and received university

participant points or a small financial compensation.

2.4 Statistical analysis

To test whether subjective scores differed from objective scores and whether subjective

predictions differed from postdictions, paired sample t-tests were calculated. Separate linear

regression analyses (enter method) were performed with narcissism as predictor, and each of

the subjective or objective scores, and the difference scores as dependent variables. Because

men have been shown to display higher levels of narcissism than women (Foster, Campbell, &

Twenge, 2003), gender was added as an extra predictor in all regression analyses, along with the

narcissism x gender interaction term to test how and whether the strength of the relationship

between narcissism and the DVs differed between men and women. In case this interaction

effect was not significant, we removed it from the regression analyses in a second step where

the predictors were only the main effects of narcissism and gender. To calculate the difference

scores between the subjective and objective scores, residual scores were computed by

regressing the subjective on the objective scores (see John & Robins, 1994). This way, all shared

variance, or subjective-objective agreement, is removed so the residual scores reflect the

degree to which subjective scores are biased relative to the objective scores. Positive residual

scores reflect overestimation (i.e. higher subjective than objective ratings), while negative

residuals reflect underestimation (i.e. lower subjective than objective ratings).

3.   Results

3.1 Interpretation of average scores (Table 1)

Narcissism scores of the current sample were comparable to those of other student populations

and normally distributed (Skewness= .17, Kurtosis= .19). Inspection of mean prediction scores

showed that participants rated themselves above-average on all dependent variables (mean IQ

score 114.75, and other scores between 58.69 and 73.42 on 100mm-VAS scales). The mean

postdiction scores were average or above average (between 49.18 and 70.47 on 100mm-VAS

scales). Paired sample t-tests between predictions and postdictions of the DVs showed that the

predictions of all DVs except IQ, t=-.45, p=.65, and first impression, t=-.45, p=.66, were higher

than postdictions, t`s>-2.27, p`s<.03. The objective scores indicate that participants obtained

(above)average scores on the dependent variables (between 48.01 and 72.83 on 100mm-VAS

scales). Paired sample t-tests between subjective and objective scores showed participants

generally underestimated their IQ, t`s>|4.84|, p`s<.001. EQ and social skills were

underestimated too but only compared to postdiction, t`s>|7.44|, p`s<.001. Participants tended

to overestimate first impressions they make on others and learning performance, t`s>2.44,

p`s<.02. Attractiveness was overestimated too but only compared to the subjective predictions.

3.2 Interpretation of the regression analysis (table 2)

The narcissism x gender interaction did not predict any of the DVs. This indicates that the

strength of the relationship between narcissism and the DVs did not differ between men and

women. All regression analyses were checked for influential cases, based on leverage values,

3(k+1)/n (Stevens, 1992), and Cook`s distances, *>1*. No outliers were detected.

3.2.1 IQ. Narcissism traits positively predicted subjective IQ predictions, subjective change

scores from pre- to postdiction, and the difference score between objective and subjective

prediction scores. This means narcissism is related to a higher estimation and more

overestimation of IQ before performing the IQ-test, and to adjusting ones overestimation of IQ

after having performed the IQ test.

3.2.2 EQ. Narcissism traits were positive predictors of pre- and postdictions of EQ, and of the difference scores between the objective and subjective scores. This suggests that narcissism is related to a higher estimation and overestimation of both pre- and postdictions of EQ.

3.2.3. First impression. Narcissism traits were unrelated to first impression scores.

3.2.4. Attractiveness. Narcissism traits positively predicted a higher estimation and overestimation of one`s attractiveness before the pictures were taken.

3.2.5 Social skills. Narcissism traits positively predicted pre- and postdictions of social skills scores, meaning that the more narcissism traits, the higher the estimations of own social skills, both before and after the conversation and speech. Narcissism also positively predicted the difference score between objective and subjective prediction scores, suggesting that narcissism is related to overestimation of social skills predictions.

3.2.6 Learning performance. Narcissism traits positively predicted the subjective change score in learning performance, meaning that more narcissism traits are related to a stronger drop in subjective estimation of learning performance after performing the learning task compared to before the task.

4. Discussion

4.1 Main findings

The current study empirically tested narcissistic positive illusion by comparing participants` subjective estimations of a large set of performances and capabilities to their objective counterparts, obtained by performance or social consensus scores. Healthy narcissism was

related to overestimation of most performances, namely IQ, EQ, attractiveness and social skills. Healthy narcissism was also related to positive self-ratings on these performances. While partly corroborating previous findings on IQ, attractiveness and social skills (e.g., Carlson et al., 2011), the current study was the first to investigate EQ, first impression and learning performance. The findings imply that narcissists think highly of themselves on a number of agentic performances without reason.

4.2 Global predictions versus local postdictions

Healthy narcissism was particularly related to overestimation at a global level, while the relationships with local, task-specific postdictions were less consistent. This implies that narcissistic self-distortion mostly reflects a structural, trait-like overestimation of one`s capabilities. We also found predictions of EQ, attractiveness, social skills and learning performance to exceed postdictions across all participants. Such higher accuracy levels of postdictions reflect a universal, well-replicated finding (Pierce & Smith, 2001). This implies that healthy narcissism does not overrule the capacity to adjust (i.e. lower) one`s estimation of a certain performance after having performed in a (perhaps difficult) task where this performance was put to the test.

In contrast to other performances, healthy narcissism appeared to be unrelated to estimation of first impression and learning performance. One reason for this might be that overestimation of both these performances turned out to be a general pattern across our participants, cf. earlier studies using keyterm (Rawson & Dunlosky, 2007). This implies that healthy narcissism did not exert additional predictive value for overestimating these performances. Alternatively, the lack of narcissism-specific overestimation of first impression

could be due to the fact that first impression was assessed by ratings of 'likeability' which might

primarily have a communion focus (Collins and Miller, 1994). The borderline significant level of

the relation between healthy narcissism and the (over)estimation of learning performance also

suggest power issues might be at stake.

4.3 Lack of objective indication of narcissistic grandiosity

Our findings did not provide objective indications of narcissistic grandiosity. Although

this seems to contradict with some earlier findings suggesting higher levels of attractiveness and

likeability on first encounters (e.g. Back, Schmukle, & Egloff, 2010; Carlson et al., 2011), it is in

line with others (Bleske-Rechek et al., 2008) and the magnitude of the relation in the current

study is similar to that reported in a meta-analysis on the relationship between narcissism and

attractiveness (Holtzman & Strube, 2010). Alternatively, different attractiveness scores could

have been obtained if participants had been photographed in a more dynamic posture. A recent

study for example showed that unacquainted raters were able to detect high scoring narcissists

merely by looking at self-selected (and therefore more dynamic) pictures on social network

websites (Buffardi & Campbell, 2008). Our finding that healthy narcissism was unrelated to

objective measures of IQ and learning performance is in line with previous findings

(Gerstenberg et al., 2014; Robins & Beer, 2001).

4.4 Interpretation of the lack of convergence between subjective and objective levels of agentic

performances

The lack of convergence between subjective and objective levels likely primarily reflects

a by-product of narcissistic personality. Alternatively, it could mirror differential access to e.g.

internal states (subjective level) versus overt behavior (objective level). Importantly, it highlights

the importance of multi-method assessment in narcissism (Huprich, Bornstein, & Schmitt, 2011; Lukowitsky & Pincus, 2013). Why would narcissists report such high self-views? The simplest explanation is that it reflects true high self-esteem. This is countered however by several theoretical models (Kohut, 1966; Young, Klosko & Weishaar, 2003) and empirical evidence (Campbell et al., 2007; Jordan et al., 2003) denoting an underlying vulnerability in narcissism. Another option is that narcissists put forward grandiose self-views as attempts to regulate self-esteem (Robins & John, 1997) or as a defensive strategy to maintain appearances (Raskin, Novacek, & Hogan, 1991).

The self-enhancement narcissists engage in has shown to come with a cost like social exclusion, and experiencing less enjoyment when successful (see e.g. Anderson, Ames, Gosling, 2008). Thinking highly of themselves, might also lead narcissists to aggress as attempt to derogate sources of negative feedback, or as a form of expressing their low opinion about others. This is in line with empirical evidence linking narcissism to mainly reactive forms of aggression (Lobbestael, Baumeister, Fiebig, & Eckel, 2014).

4.5 Clinical implications

Lack of self-insight has been designated as a main obstacle in successful treatment for narcissism (Emmons, 1984). The fact that we found healthy narcissism to be less consistently related to overestimation at postdiction suggests that confrontation with concrete performance tasks could (partly) normalize self-perceptions. Thus, behavioral experiments where narcissists are presented with objective task outcomes could potentially reduce their inflated self-esteem. Further studies are needed to assess the effectiveness of such experiments as an additional therapeutic component.

4.6 Strengths and limitations of the study

This study assessed a broad range of performances. The obtained inter-rater values suggest excellent reliability of the social consensus scores. To our knowledge, it is also the first to compare pre- and postdictions in healthy narcissism, and to study emotional intelligence, first impression and learning performance. A drawback of the current study is the use of a homogenous student sample, limiting generalizability of findings. Additional and replication studies are warranted. Another drawback is that mainly agentic performances were studied. Furthermore, because we choose to address a broad number of performances in the current study however, we were forced to turn to a narrow assessment of the constructs because of time constraints of the experimental session. Thus, we used only one measure to assess each of the agentic performances central in this manuscript. We carefully selected objective, behavior-based measures that ruled out self-report. Nonetheless, alternative measures, such as the Mayer-Salovey-Caruso Emotional Intelligence Scale (MSCEIT, Mayer et al., 2002) would also have been valid options. Finally, although the objective measures were carefully selected, it cannot be excluded that alternative operationalizations, like Grade Point Average scores for learning performance, might have been superior.

5.   Conclusion

The current findings provide evidence for healthy narcissism being related to positive self-illusions on a broad range of agentic performances like IQ, emotional intelligence, attractiveness and social skills. In contrast, overestimation of one`s first impression and learning performance appeared to be a general instead of a narcissists-specific phenomenon.

Furthermore, the capacity to adjust one`s overestimation after having performed in a specific

tasks seems intact <mark>in this non-clinical population</mark>.

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