



I'm smart, you're dumb! Narcissistic admiration and rivalry correlate with self- and other-assessed intelligence

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ABSTRACT

Grandiose narcissism is considered a multidimensional personality trait that consists of two facets: narcissistic admiration and rivalry. Admiration is associated with a self-enhancement and a self-promotion tendency, while narcissistic rivalry reflects a self-defensive tendency aimed to protect the threatened ego and manifests in the devaluation of others. Prior research has shown that admiration correlates positively with intelligence overestimation. However, little research has examined how grandiose narcissism is associated with the evaluation of other people's intelligence, nor the conditions in which intelligence assessment responses may be moderated. Consequently, we created two experimental situations where participants ($N = 328$) recalled an autobiographical memory: (1) where they felt rejected; and (2) where they felt accepted. Based on their memory of the event, they then evaluated the person's intelligence, as well as other attributes (from communal and agentic domains). Generally, people in the rejected condition evaluated others as having lower communal attributes (e.g., empathy) and lower intelligence (but not other agentic attributes), in comparison to the acceptance condition. Additionally, whereas admiration was associated positively with self-assessed intelligence, rivalry correlated negatively with the evaluation of others' intelligence across both conditions (i.e., acceptance/rejection). Thus, those with high rivalry appear to consistently hold negative views about others.

1. Introduction

Intelligence is a substantial predictor of various outcomes that lead to life success, such as work, school achievement, better health, and longevity (Gottfredson, 2002). However, research indicates that, in addition to objective levels of cognitive ability (i.e., measured with standard tests), the way people perceive their intelligence may influence various real-life outcomes (Howard & Cogswell, 2018). In fact, most people tend to overestimate their cognitive abilities (Zell et al., 2020). These favorable self-views associate positively with well-being, academic performance and self-confidence (Chamorro-Premuzic & Furnham, 2006; Dufner et al., 2019; Howard & Cogswell, 2018). However, subjective beliefs about intelligence might have also a dark side. For instance, questioning one's abilities decreases mood (Maciantowicz & Zajenkowski, 2021), and activating a stereotype about lower intelligence hinders performance (e.g., Steele & Aronson, 1995). Thus, collectively, subjectively assessed intelligence plays an important role in modern society (Howard & Cogswell, 2018).

Because of its social significance, narcissism is associated positively with valuations of intelligence (Zajenkowski, Czarna, et al., 2020; Zajenkowski, Leniarska, & Jonason, 2020). However, thus far, the research has focused mainly on narcissistic self-enhancement tendencies, while less is known about how narcissists perceive the intelligence of other people. In the current study, we examined the association between grandiose narcissism and the evaluation of other's intelligence in different experimental contexts (accepted/rejected), in order to evaluate the consistency with which narcissism is associated with the views of other people's intelligence.

2. Narcissism and subjective intelligence

Narcissism is characterized by an increased sense of entitlement, self-importance, as well as feeling superior and special (Krizan & Herlache, 2018; Sedikides, 2021). Narcissism may manifest itself in a multitude of ways, however, the most prototypical and extensively investigated is grandiose narcissism – a construct considered multidimensional in nature. Specifically, it consists of two facets: agentic narciss-

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sism and antagonistic narcissism (Miller et al., 2021). In one of the conceptualizations, relevant to our study, these two dimensions were labeled as narcissistic admiration and rivalry (Back et al., 2013). Narcissistic admiration is characterized by overly inflated self-views, feelings of grandiosity, an excessive sense of entitlement, and the tendency for self-enhancement and self-promotion to get others' admiration (Back, 2018). Narcissistic rivalry reflects a self-defensive tendency aimed to protect the threatened ego and manifests in the devaluation of others, aggressiveness, and a desire to see others fail (Back et al., 2018).

Research on narcissism and subjectively assessed intelligence (SAI) has focused almost exclusively on self-enhancement tendencies. Prior research indicates that narcissism and objective intelligence are essentially unrelated (e.g., Zajenkowski, Czarna, et al., 2020). However, narcissism is associated positively with SAI (Gabriel et al., 1994; Howard & Cogswell, 2018; Zajenkowski, Czarna, et al., 2020). Among the facets of narcissism, it is admiration that consistently correlates with the overestimation of one's intelligence (Gignac & Zajenkowski, 2021; Zajenkowski, Czarna, et al., 2020; Zajenkowski, Leniarska, & Jonason, 2020). These findings are consistent with the self-enhancement motives underlying narcissistic admiration (Back, 2018). Specifically, the purpose of bragging and overestimating one's intelligence is to directly gain popularity and win others' admiration (Zajenkowski, Leniarska, & Jonason, 2020), as well as to perpetuate a grandiose self (Back, 2018; Zajenkowski, Czarna, et al., 2020). By contrast, narcissistic rivalry has failed to exhibit significant associations with SAI (Gignac & Zajenkowski, 2021; Zajenkowski, Czarna, et al., 2020; Zajenkowski, Leniarska, & Jonason, 2020), consistent with the theory that it is primarily associated with a self-defense motive (Back, 2018). Additionally, rivalry is linked to a negative perception of others. For instance, those with high rivalry perceived other people with whom they were in a conversation as aggressive and untrustworthy (Back et al., Study 6). Further, individuals with high levels of narcissistic rivalry devaluated their own partners which might be dictated by the motivation to maintain their own dominance within the relationship (Wurst et al., 2017; Zeigler-Hill & Trombly, 2018). Thus, with respect to rivalry, subjectively assessed intelligence might be used primarily to devalue others, in order to indirectly elevate one's own self-esteem. In light of these findings, we hypothesized that those higher on rivalry would exhibit relatively negative views about others' intelligence.

It has been suggested that intelligence plays an important role in narcissism, because it is highly agentic attribute (Zajenkowski & Dufner, 2020) and grandiose narcissists are much more fixated on agency than communion (Grijalva & Zhang, 2016). However, subjective intelligence has been rarely contrasted with other attributes in research on narcissism. Therefore, in the current study, we explored the relevance of intelligence, in comparison to other attributes from both agentic and communal domains.

3. The current study

The overarching goal in grandiose narcissism is to maintain a grandiose ego (Back et al., 2013; Morf & Rhodewalt, 2001). Attaining a sense of agency plays an important role in achieving this goal (Campbell & Foster, 2007). Because intelligence is considered an agentic attribute that helps to attain social status, grandiose narcissists are highly concerned with intelligence (Zajenkowski & Dufner, 2020). However, grandiose narcissists may use the concept of intelligence in various ways to maintain a high sense of agency and a grandiose ego. Specifically, they may use intelligence to facilitate self-enhancement or as a self-defense strategy (Back et al., 2013). Thus, in the current study, we comprehensively examined the associations between facets of narcissism related to these strategies and subjective intelligence in the context of self- and others' evaluation.

The aim of the current study was threefold. First, we wanted to replicate previous findings on the differential associations between

facets of grandiose narcissism and self-assessed intelligence. Second, we examined how grandiose narcissism's facets are associated with the evaluation of the others' intelligence. Finally, we wanted to contrast subjective intelligence with ratings of other attributes. It has been suggested that intelligence is perceived as highly agentic and socially desired characteristic (Howard & Cogswell, 2018; Zajenkowski & Dufner, 2020). However, it is not clear how it compares to the perception of other attributes. Thus, we compared the evaluation of others' intelligence with the evaluation of attributes from agentic and communal domains. Consistent with the self-enhancement tendency, we expected that narcissistic admiration would be associated with higher self-assessed intelligence (H1). By contrast, because of aggressive and defensive tendencies, we expected narcissistic rivalry to be negatively associated with the evaluation of others (H2).

Additionally, we were interested to determine whether this evaluation would differ across situations. On the one hand, rivalry has been characterized as a highly reactive strategy triggered by social disapproval (Back, 2018), suggesting that rivalry should show stronger effects in negative social situations, such as social rejection, which is known to evoke aggression in narcissism (see Twenge & Campbell, 2003). On the other hand, it has been suggested that rivalry is chronically activated in those with a strong sense of grandiosity and a history of failures to meet their lofty and unjustified expectations of themselves (Back, 2018). Thus, it was considered important to explore how narcissistic rivalry may be associated with negative views of others in two situations, that is, when they felt rejected or accepted. Specifically, we created two experimental conditions where participants recalled an autobiographical memory in which they felt rejected or accepted by someone. They were then asked to evaluate the person from their memory with respect to their intelligence (the other person's) and other attributes.

4. Methods

4.1. Participants

We tested 328 Polish participants in an online study recruited via snowball sampling or online through social network websites. We excluded 32 participants for failure to complete the manipulation. Of the remaining 286 participants, 196 were women, 87 were men, and three indicated "other" (age in years: $Range = 18-64$, $M = 26.71$, $SD = 10.78$). Most participants (52 %) were undergraduates, with the rest either university (30 %) or secondary school (18 %) graduates. Based on the 'pwr' package in R, our sample size allowed the detection of a typically sized correlation (i.e., $[0.20]$ Gignac & Szodorai, 2016) as significant with power of 0.96 ($\alpha = 0.05$; two-sided).

4.2. Measures and procedure

First, we administered a demographics survey and the Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2013; Polish adaptation by Rogoza et al., 2016). The NARQ measures two facets of grandiose narcissism: admiration (e.g. "I deserve to be seen as a great personality") and rivalry (e.g., "I secretly take pleasure in the failure of my rivals"). The questionnaire consists of 18 items (nine per each scale) with a Likert response type ranging from 1 (*totally disagree*) to 6 (*totally agree*). Internal consistencies of the scales were good ($\alpha = 0.84$ for admiration, $\alpha = 0.82$ for rivalry). Next, we measured self-assessed intelligence (SAI) after Zajenkowski, Czarna, et al. (2020). Participants were asked to self-assess their overall intelligence in comparison to other people on a seven-point scale (1 = *low*, 7 = *high*). As an additional index of subjective intelligence, we used a difference score between self-assessed and other-assessed intelligence (see below).

Next, we randomly assigned participants to one of the experimental conditions: acceptance ($n = 142$) or rejection ($n = 144$). Participants

in the acceptance condition recalled an event in which they felt accepted by someone, and reported how this event made them feel. Participants in the rejection condition recalled an event in which they felt rejected by someone and reported their feelings associated with this event. In both conditions, participants were instructed to write at least 50 characters, but no > 300.

Then, we administered the manipulation check. First, participants were asked to rate on a scale from 1 (*low*) to 7 (*high*) six attributes of the person from the recalled memory. We used three attributes associated with agency (intelligence, leadership, and self-confidence) and three associated with communion (empathy, morality, and kindness).

Finally, participants reported their current emotional state on the Discrete Emotions Questionnaire (DEQ; Harmon-Jones et al., 2016). The original questionnaire measures eight emotions with four items each (e.g., rage, satisfaction) on a scale ranging from 1 (*not at all*) to 7 (*an extreme amount*). However, we used only three emotions relevant to moral judgments (Walsh, 2021): anger ($\alpha = 0.93$), disgust ($\alpha = 0.90$), and happiness ($\alpha = 0.87$).

Table 1
Mean differences of ratings of others' attributes across acceptance and rejection conditions.

	Acceptance <i>M (SD)</i>	Rejection <i>M (SD)</i>	Welch's <i>t</i> -test	Cohen's <i>d</i>
Ratings of others' attributes				
Intelligence	5.65 (1.07)	5.06 (1.42)	3.97, $p < .001$	0.47
Leadership	4.60 (1.58)	4.40 (1.82)	0.96, $p = .193$	0.11
Self-confidence	4.95 (1.41)	4.74 (1.92)	1.04, $p = .207$	0.12
Empathy	5.65 (1.23)	3.70 (1.60)	11.61, $p < .001$	1.37
Morality	5.45 (1.23)	3.98 (1.54)	8.81, $p < .001$	1.05
Kindness	5.92 (1.14)	4.24 (1.66)	9.97, $p < .001$	1.18
Emotions				
Anger	2.03 (1.30)	2.25 (1.38)	-1.37, $p = .171$	0.17
Disgust	1.67 (1.03)	2.02 (1.33)	-2.46, $p = .014$	0.30
Happiness	3.99 (1.26)	3.58 (1.44)	2.49, $p = .013$	0.30

5. Results

Based on the outlier inter-quartile range rule with a 3.0 multiplier (Hoaglin & Iglewicz, 1987), we identified no outliers except for two scores on disgust scale (i.e., > 5.00). Consequently, the value was win-sorized to 5, the next lowest data point in the distribution not suspected to be an outlier. All variables were normally distributed (skew ∓ 1 , except for anger and disgust 1.2 and 1.5, respectively). First, we tested differences in mean ratings of attributes and emotions across the conditions, in order to check the manipulation's effectiveness (see Table 1). On average, participants in the rejection condition evaluated the person from their story as having statistically significantly lower intelligence ($d = 0.47$) and communal characteristics ($d \approx 1.0$; but not leadership and self-confidence), in comparison to acceptance condition. On average, the participants also felt statistically significantly more disgust and less happiness in the rejection than acceptance condition ($d \approx 0.25$). We considered the manipulation successful, generally supporting H1.

Additionally, we compared self-assessed intelligence with other-assessed intelligence across the two conditions with a 2 (within-subjects factor: self- vs. other-assessment) \times 2 (between-subjects factor: acceptance vs. rejection) mixed-design ANOVA (see Fig. 1). First, the assumption of homogeneity of multi-sample sphericity was violated, therefore, we used the Huynh-Feldt adjustment. We found that both the assessment ($F(1, 283) = 6.58, p = .011, \eta^2 = 0.02$) and condition ($F(1, 283) = 8.97, p = .003, \eta^2 = 0.03$) main effects were significant. However, importantly, the interaction between the two factors was also significant, $F(1, 283) = 10.97, p < .001, \eta^2 = 0.04$. Further analyses revealed that self-assessed intelligence did not differ significantly across the conditions ($F(1, 284) = 0.03, p = .865, \eta^2 = 0.00$), whereas in the case of other-assessed intelligence, the effect was significant ($F(1, 283) = 15.72, p < .001, \eta^2 = 0.05$), showing, on average, lower scores in the rejection ($M = 5.06, SD = 1.42$) than in the acceptance ($M = 5.65, SD = 1.07$) condition. The effect size was moderate in size at $d = 0.47$ or the equivalent of 7 IQ points. Finally, there was a significant difference ($F(1, 140) = 19.18, p < .001, \eta^2 = 0.12$) between self- ($M = 5.10, SD = 1.00$) and other-assessed ($M = 5.65, SD = 1.07$) intelligence in the acceptance condition, amounting to a standardized difference of $d = 0.53$, or the equivalent of 7 IQ points. By contrast, in the rejection condition, self- and other-assessed intelli-

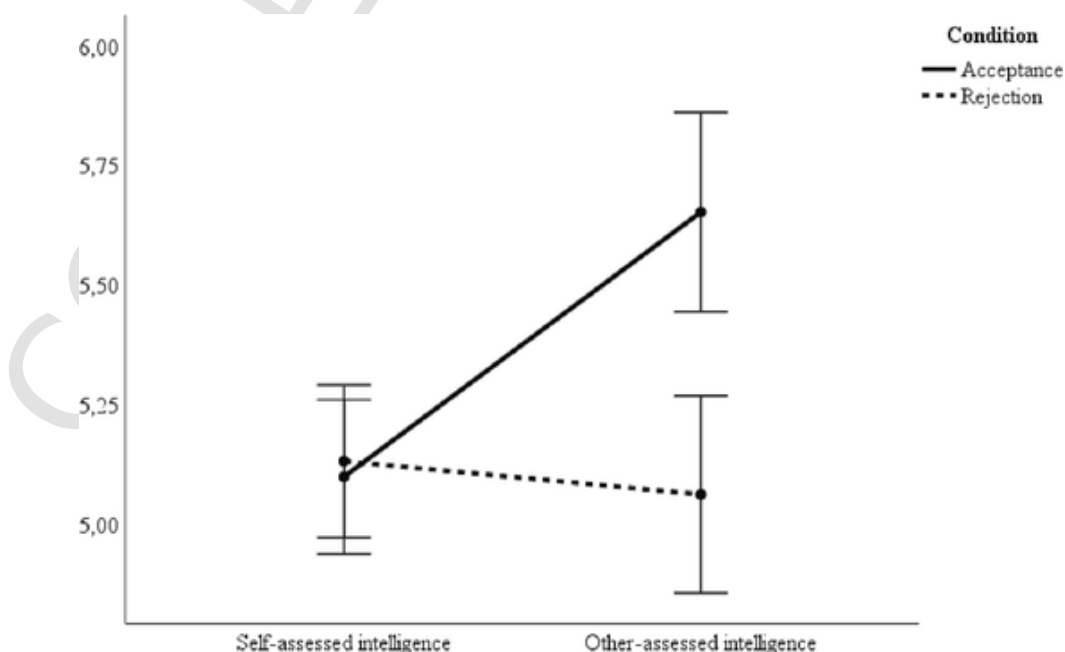


Fig. 1. Comparison of self-assessed and other-assessed intelligence in two experimental conditions.

gence did not differ significantly ($F(1, 143) = 0.26, p = .614, \eta^2 = 0.00$). Collectively, the recalled person was more negatively evaluated in the rejection condition than in the acceptance condition.

Next, we analyzed the correlations between narcissism facets and self-assessed intelligence. In line with H1, narcissistic admiration was significantly and positively associated with self-assessed intelligence ($r = 0.48; p < .001$). Narcissistic rivalry failed to associate significantly with self-assessed intelligence ($r = 0.01; p = .926$). Subsequently, we analyzed the correlations between the two narcissism facets and ratings of others' attributes (see Table 2). Generally, in line with H2, narcissistic rivalry was associated negatively with the evaluation of others. Specifically, we found significant negative correlations with evaluation of others' intelligence, empathy, morality and kindness.

Next, we examined whether the associations between facets of narcissism and ratings of others' attributes differed across conditions. Therefore, we tested regression models where each attribute was a dependent variable, admiration, rivalry and condition were predictors entered in the first step, and the interactions admiration \times condition, and rivalry \times conditions, were entered in the last step (see Table 3). Admiration and rivalry were entered together as previous studies revealed suppression effects of these variables (e.g., Seidman et al., 2020). We failed to find any significant interaction effects. Thus, the associations between narcissism facets and evaluation of others did not depend on the specific experimental condition.

Finally, we explored the correlations between the assessment of others' intelligence and the remaining attributes within each condition (see Table 4). We found that the evaluation of others' intelligence was more strongly associated with the communal attributes (i.e., empathy, morality and kindness) than with agentic attributes (i.e., leadership and self-confidence). The correlations were larger (z test) in almost all cases, excluding the comparisons with leadership and empathy in the rejection condition.

6. Discussion

We examined the association between facets of grandiose narcissism and subjectively assessed intelligence. We measured how people estimate their own intelligence (i.e., self-assessed intelligence) and the intelligence of another person (other-assessed intelligence), across two

Table 2
Correlations of narcissism with ratings of others' attributes.

	Admiration	Rivalry
Intelligence	0.03	-0.21**
Leadership	0.00	-0.07*
Self-confidence	0.03	-0.06
Empathy	0.00	-0.19**
Morality	-0.10	-0.27**
Kindness	-0.01	-0.16**

* $p < .05$.

** $p < .01$.

Table 3
Regression models with ratings of others' attributes predicted by admiration, rivalry, condition (Step 1), and the interactions between admiration/rivalry and condition (Step 2).

	Admiration	Rivalry	Condition	Admiration \times condition	Rivalry \times condition
Intelligence	0.09	-0.19**	-0.19**	-0.05	-0.02
Leadership	0.01	-0.07	-0.04	-0.02	-0.04
Self-confidence	0.03	-0.06	-0.05	-0.07	0.05
Empathy	0.02	-0.10*	0.55**	-0.07	0.13
Morality	-0.08	0.18**	0.43**	-0.11	0.12
Kindness	0.00	-0.08	0.49**	-0.08	0.04

Note. The coefficients are standardized regression coefficients (betas).

* $p < .05$.

** $p < .01$.

conditions (accepted and rejected). Consistent with our hypothesis, a person in the acceptance condition was evaluated more positively than a person in the rejection condition. We also found that people tended to rate another person's intelligence higher, in comparison to their own, when they experienced acceptance from that person. This finding shows that the better-than-average effect (i.e., the belief that, on average, one has higher IQ) might be depend on situational factors. The association of narcissism with subjective intelligence revealed differences between narcissistic admiration and rivalry. Specifically, whereas admiration was associated (positively) with self-assessed intelligence, rivalry was correlated (negatively) with other-assessed intelligence.

Theoretically, the overarching goal of grandiose narcissism is to maintain favorable, grandiose self-views (Back et al., 2013; Morf & Rhodewalt, 2001). This might be achieved using two strategies: assertive self-enhancement and aggressive self-defense (Back, 2018). These two tendencies are manifested in the narcissistic facets of admiration and rivalry, respectively. Our research shows that the concept of intelligence might be used instrumentally in both strategies. Narcissistic admiration is characterized by inflated self-views, social boldness and active self-promotion (Back et al., 2013). Because intelligence is an agentic and highly valued attribute (Howard & Cogswell, 2018), it might be a perfect instrument for narcissistic individuals seeking admiration. Indeed, in line with previous studies (e.g., Gignac & Zajenkowski, 2021; Zajenkowski, Leniarska, & Jonason, 2020), we found that admiration was associated with higher levels of self-assessed intelligence. Narcissist beliefs that they are exceptionally smart has been found to increase their well-being (Zajenkowski, Leniarska, & Jonason, 2020). Additionally, by bragging about how intelligent they are, those high on admiration try to gain other's people attention and enhance their attractiveness (Zajenkowski, Leniarska, & Jonason, 2020).

By contrast, narcissistic rivalry was associated with a diminishing use of subjective intelligence. Specifically, we found that those high on rivalry devaluated other's people intelligence. Importantly, they did so regardless of whether others were unfriendly (i.e., rejected them) or nice to them (i.e., accepted them). Narcissistic rivalry is defined as a defensive (antagonistic) disposition activated when one's grandiose self is threatened (Back et al., 2018). To regain their status, those high on rivalry may devaluate others or even display aggressive behavior. This suggests that they are highly reactive and would display their antagonistic tendencies in ego-threatening situations. However, we found that they negatively assessed others' intelligence in both positive and negative social contexts. While admiration is considered to be a default narcissistic strategy, rivalry might tend to be developed by narcissistic individuals with a history of failures (Back, 2018). Correspondingly, lower levels of intelligence yield a higher correlation between narcissistic admiration and rivalry, i.e., the grandiose narcissists lifelong failures to achieve their lofty expectations may lead to greater narcissistic rivalry (diminish others) as an ego defense (Gignac & Zajenkowski, 2021, 2023); and our findings suggests that the resentment is displayed even

Table 4

Correlations between assessment of others' attributes in acceptance (below diagonal) and rejection (above diagonal) conditions.

	1	2	3	4	5	6
1. Intelligence	–	0.25**	0.22**	0.39**	0.46**	0.46**
2. Leadership	0.15	–	0.62**	–0.09	0.04	–0.01
3. Self-confidence	0.10*	0.62**	–	–0.07	0.06	0.08
4. Empathy	0.45**	–0.10	–0.04	–	0.55**	0.65**
5. Morality	0.54**	0.08	0.09	0.56**	–	0.56**
6. Kindness	0.34**	–0.06	0.04	0.71**	0.46**	–

* $p < .05$.

** $p < .01$.

when others show them sympathy. Thus, individuals high on rivalry may see others as unintelligent in a relatively chronic manner.

Our study also sheds new light on the lay concept of intelligence. Although intelligence is regarded as a prototypical agentic attribute (Abele & Wojciszke, 2014), subjective intelligence correlates only moderately ($r \approx 0.30$) with objective intelligence (Freund & Kasten, 2012). As Sternberg (1982) noted, the academic definition of intelligence represents only part of what people in the broader community mean by intelligence. Thus, the meaning that people assign to it might be much broader than what IQ tests measure and may go beyond the agentic domain (Howard & Cogswell, 2018). In the current study, we found that the concept of intelligence was used in social context not directly related to cognitive ability. Specifically, people evaluated others' intelligence as lower in the rejection condition than in the acceptance condition. Interestingly, intelligence was used in people's judgments in the same way as communal attributes (i.e., empathy, morality) rather than other agentic attributes (i.e., leadership, self-confidence). Furthermore, intelligence estimations were more strongly associated with communal than agentic attributes. These findings suggest that intelligence may incorporate some communal aspects used for moral judgments, for instance. Finally, the finding that subjective intelligence is used for self-enhancement or as a reaction to ego threat might be related to broader phenomena (e.g., better-than-average effect, or stereotype threat, respectively), not limited to narcissism.

While our study provided new insights into narcissistic rivalry and subjective intelligence, it was nonetheless, limited. First, we investigated only subjectively assessed intelligence, while it would be interesting to compare self- and other-evaluations with objective intelligence. We also acknowledge that we measured self-rated intelligence with a single-item, whereas research suggests that a multi-item approach may yield superior results (Gignac, 2021). This could reveal to what extent people over- or underestimate their own intelligence and the intelligence of others. Second, we compared the difference between self and other estimates only with respect to cognitive intelligence. Future studies might also examine difference scores on other attributes, which would show their importance for narcissistic individuals.

In conclusion, we found further support for the previous work suggesting that grandiose narcissism is a multidimensional construct (Back et al., 2013; Miller et al., 2021). Specifically, narcissistic admiration was positively correlated with self-assessed intelligence, whereas narcissistic rivalry was associated with negative views about others' intelligence. Additionally, we found that the lay concept of intelligence might be used expansively in some contexts, not necessarily related to cognitive ability.

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CRedit authorship contribution statement

Marcin Zajenkowski : Conceptualization, Methodology, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Visualization, Project administration. **Gilles E. Gignac** : Writing – original draft, Writing – review & editing. **Maria Leniarska** : Investigation, Resources, Writing – review & editing. **Anna Turek** : Investigation, Writing – review & editing. **Zuzanna Czepiel** : Investigation, Writing – review & editing.

Data availability

Data will be made available on request.

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