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Look how smart I am!: Only narcissistic admiration is associated with inflated reports of intelligence

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ABSTRACT

Individuals with high grandiose narcissism tend to think they are extraordinarily intelligent, and these views determine their psychological well-being. In the current research, we investigated how two aspects of grandiose narcissism—admiration and rivalry—are associated with objective intelligence, subjective intelligence, and intelligence-related beliefs. We expected that only narcissistic admiration, which reflects the agentic aspect of grandiose narcissism, would be associated with subjective intelligence as the latter is regarded as a prototypical agentic attribute. In Study 1 (N = 311) narcissism (i.e., admiration and rivalry) was uncorrelated with objective intelligence but admiration was related to inflated self-reported intelligence as well as global life satisfaction and domain-specific intelligence satisfaction. Furthermore, intelligence-related beliefs mediated the link between admiration and life satisfaction. In Study 2 (N = 211), consistent with the predictions, people with high admiration perceived intelligence as an important way to gain popularity. By contrast, individuals scoring high on rivalry perceived intelligence as a factor influencing social status and having low importance in interpersonal relations. Our findings suggest that intelligence is a key characteristic only for those narcissists who score high on the admiration dimension, but not the rivalry dimension.

The concept of narcissism has a long history in psychology, historically referring to people who were self-centered (e.g., Freud, 1914; Kohut, 1966). More recently, in the social and personality psychology literature, narcissism is regarded as a personality trait that varies between people (Hermann, Brunell, & Foster, 2018). Evidence suggests that narcissism is a heterogeneous phenomenon and may come in two forms: vulnerable and grandiose (Krizan & Herlache, 2018; Miller et al., 2011; Wink, 1991). Both types of narcissism share some characteristics, such as self-centeredness and sense of entitlement, however, they differ in other respects (Krizan & Herlache, 2018). Vulnerable narcissism is characterized by high negative affect, low self-esteem, sensitivity to criticism, and defensiveness (Wink, 1991), grandiose narcissism is characterized by exaggerated self-worth, social boldness, inflated positive self-views, and a desire for admiration (Campbell & Miller, 2011).

Presently, we examine the association between narcissism and intelligence-related beliefs and focus only on grandiose narcissism, because past research indicates that only this form is relevant in this context (Zajenkowski, Czarna, Szymaniak, & Dufner, 2019). Grandiose narcissists are focused on agentic goals such as gaining high social status, and dominance (Campbell & Foster, 2007). Because intelligence is instrumental in the attainment of such agentic goals, grandiose narcissists tend to think they are extraordinarily intelligent (Horward & Cogswell, 2018; Zajenkowski & Dufner, 2020) and tend to want others to see them that way (Wallace, Ready, & Weitenhagen, 2009). A central goal for grandiose narcissists is to maintain a highly positive view about themselves and inflated beliefs about their IQ might be an intrapsychic strategy serving this goal (Campbell & Foster, 2007). Specifically, believing they are intelligent provides the narcissist positive feelings (Zajenkowski & Czarna, 2015) but also makes them extremely sensitive to negative feedback about their intellectual abilities (Rhodewalt & Morf, 1998). However, the link between narcissism and intelligence is only reflected in self-assessed intelligence, not in objective assessment of the intelligence of narcissists (Dufner et al., 2012; Gabriel, Critelli, & Ee, 1994; Zajenkowski et al., 2019). Instead, grandiose narcissists perceive intelligence as a resource that can help them win the admiration of other people (Zajenkowski & Dufner, 2020). However, most research on the association between narcissism and intelligence—subjectively or objectively assessed—relies on traditional

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models of narcissism originating from the gold-standard measure, the Narcissistic Personality Inventory (Raskin & Hall, 1979).

A less common approach to grandiose narcissism is that it is composed of facets of admiration-seeking and rivalrous behaviors (Back, 2018; Back, Küfner, Dufner, & Rauthmann, 2013). While both are correlated—as is the case for nearly all "aspects" of narcissism regardless of the scale used to assess it (Rogoza, Cieciuch, Strus, & Baran, 2019)—both have been discriminated in nomological network tests. For instance, the admiration aspect is associated with high self-esteem, social dominance, need for achievement, agentic behavior, and extraversion whereas the rivalry aspect, by contrast, is associated with more disagreeableness, neuroticism, impulsivity, and anger and less self-esteem (Back et al., 2013; Rogoza et al., 2019; Rogoza, Rogoza, & Wyszyńska, 2016; Rogoza, Wyszyńska, Maćkiewicz, & Cieciuch, 2016) and longitudinal examinations of the stability of self-esteem (Geukes et al., 2017). In sum, admiration is an agentic mechanism to maintain positive self/other-regard by getting others to like them whereas rivalry is an antagonistic mechanism to avoid negative self/other-regard by devaluing other people, exhibiting aggression, and engaging in social conflict (Back et al., 2013). According to Back (2018) both dimensions are manifestations of grandiose narcissism. However, it needs to be acknowledged that the analysis of nomological network locates rivalry between narcissistic grandiosity and narcissistic vulnerability (Rogoza, Żemojtel-Piotrowska, Kwiatkowska, & Kwiatkowska, 2018). For instance, rivalry is positively associated with both admiration and traditional measures of vulnerable narcissism, whereas admiration and vulnerable narcissism are negatively, or relatively weakly positively, correlated (Rogoza et al., 2018, 2019). Moreover, considering the basic personality traits, admiration is primarily associated with extraversion, vulnerable narcissism with neuroticism while rivalry with disagreeableness (Rogoza et al., 2018). Nonetheless, rivalry seems to be slightly closer to grandiose rather than vulnerable aspect of narcissism (Rogoza et al., 2019).

A central goal for grandiose narcissists is to maintain a positive sense of self and the admiration of others facilitates this. However, such narcissists may opt for a variety of strategies to achieve this and advertising and even inflating their intelligence may be one of them (Campbell & Foster, 2007; Zajenkowski et al., 2019). Braggadocious behavior in relation to one's intelligence may enhance one's positive self-regard and allow them to strive to stand out among others (Back et al., 2013). In the current research we were interested how the two facets of grandiose narcissism (narcissistic admiration and rivalry) are associated with intelligence-related emotions and beliefs. Specifically, we examined their links with self-assessed intelligence, broad and domain-specific satisfaction as well as beliefs about the importance of intelligence in everyday life. We built our expectations on previous research showing that grandiose narcissism is associated with the overestimation of one's intelligence, higher satisfaction with life, and beliefs that intelligence is beneficial in the social world (e.g.,Dufner et al., 2012; Gabriel et al., 1994; Zajenkowski et al., 2019). However, those studies focused on the broad dimension of grandiose narcissism (i.e., measured with Narcissistic Personality Inventory), whereas in the current investigation we adopted a finer-grained approach by exploring more specific aspects of grandiose narcissism.

Intelligence is considered a prototypical agentic attribute (Abele & Wojciszke, 2014) and thus, it would seem likely that admiration—the agentic aspect—not rivalry—the antagonistic aspect (Back, 2018; Back et al., 2013)—should be associated with higher self-assessed intelligence (H1), greater satisfaction with the level of their intelligence (H2), well-being (H3), and beliefs that intelligence plays an important role in the social world (e.g., determining one's popularity among other people; H4). In addition, we expect that the association between self-assessed intelligence and admiration would remain substantial after controlling for objective intelligence (H5), because previous research found that narcissists tend to overestimate their intelligence (Dufner et al., 2012; Gabriel et al., 1994; Zajenkowski et al., 2019). Finally, because beliefs about narcissist's intelligence influence well-being (Zajenkowski et al., 2019), we expect that self-assessed intelligence and satisfaction with one's intelligence would account for the relationship between admiration and well-being (H6).

1. Study 1

In Study 1, we examined the associations between two aspects of grandiose narcissism, that is admiration and rivalry and intelligence assessed both subjectively and objectively. Moreover, we tested how admiration and rivalry are related to global life satisfaction and more domain-specific satisfaction with one's intelligence. Finally, we examined how intelligence-related beliefs account for the link between admiration and life satisfaction.

2. Method

2.1. Participants and procedure

A sample of 311 participants (204 women, 104 men, 3 missing responses) of Polish nationality, aged between 18 and 68 (M = 23.47, SD = 6.25) completed an online study. Participants were recruited via social network websites (e.g., Facebook). Of the total sample, 62.7% were undergraduate students, while the remaining had accomplished secondary (17.7%) or university (19.6%) education. All procedures performed in studies were in accordance with the ethical standards of the institutional research committee. Written informed consent was obtained from all participants after they were informed of the nature of the study, its general aims, and their rights to withdraw from the study. Power analysis (calculated in R package 'pwr') indicated that the current sample allowed for detecting a small correlation (r = 0.15) with a power > 0.85 (two-tailed α-level = 0.05).

2.2. Measures

The Polish version (Rogoza, Żemojtel-Piotrowska, Rogoza, Piotrowski, & Wyszyńska, 2016) of the Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013) was used to measure narcissism. The scale has nine items measuring individual differences in admiration (e.g., "I show others how special I am.") and nine measuring rivalry (e.g., "I secretly take pleasure in the failure of my rivals.") where participants were asked their agreement (1 = *disagree completely*; 6 = *agree completely*). Items were averaged to create indexes of admiration (ω = 0.88) and rivalry (ω = 0.86).

Intelligence was assessed in two ways. First, consistent with prior work (Zajenkowski, Stolarski, Maciantowicz, Malesza, & Witowska, 2016), we assessed subjective intelligence in a self-report fashion where participants estimated their intelligence compared to other people (1 = *very low*; 25 = *very high*). Although this is a single item measure, its predictive validity has been shown in several studies. For instance, it was correlated with objective intelligence at the level of ≈0.30 (e.g., Gignac & Zajenkowski, 2020), which is consistent with meta-analytic findings in this area (Freund & Kasten, 2012). Additionally, it was associated with low neuroticism (Zajenkowski & Gignac, 2018), openness/intellect and grandiose narcissism (Zajenkowski et al., 2019), which matches previous results (Chamorro-Premuzic, Moutafi, & Furnham, 2005; Dufner et al., 2012).

Second, intelligence was assessed in an objective fashion with the Advanced Progressive Raven Matrices (Raven, Court, & Raven, 1983). We used a short version of the test by choosing only every fourth item from the original version. Hence, there were nine items in the current study (ω = 0.60).

We assessed two kinds of satisfaction. First, we assessed general life satisfaction with the Polish version (Jankowski, 2015) of the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). The scale consists of five items (e.g., "In most ways my life is close to my

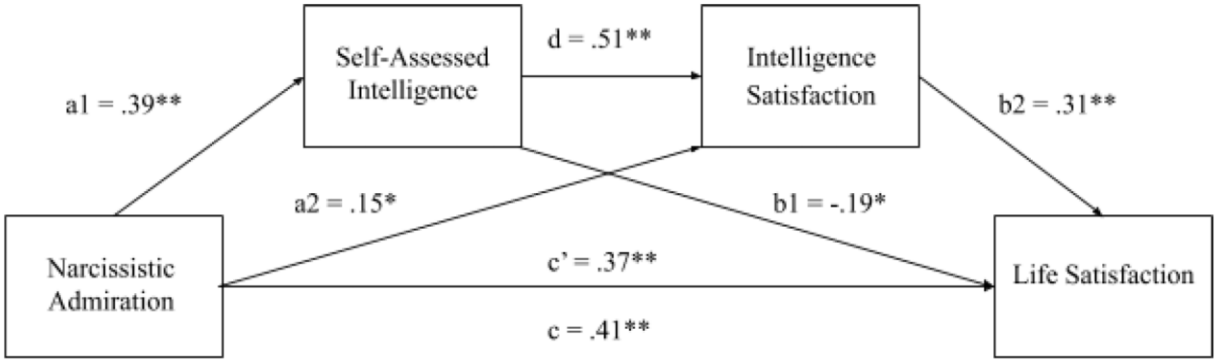

Fig. 1. The path model linking narcissistic admiration, self-assessed intelligence, intelligence satisfaction, and life satisfaction. The numbers are standardized regression coefficients. c represents the total effect, while c′ represents the direct effect (after controlling for mediators).
*$p < .05$; **$p < .01$.

ideal.") where participants reported her/his agreement (1 = *definitely disagree*; 7 = *definitely agree*). The items were averaged to create an index of life satisfaction (ω = 0.87). Second, we measured *satisfaction* with one's intelligence with a single item (i.e., "To what extent are you satisfied with the level of your intelligence?") where participants reported their agreement (1 = *strongly dissatisfied*; 7 = *strongly satisfied*).

2.3. Statistical analyses

Descriptive statistics and Pearson's correlations were analyzed in SPSS 25. The internal consistency (ω) was calculated in R package 'psych'. To test the differences in correlations between admiration and rivalry we used the R package 'cocor'. Finally, we used the 'lavaan' package in R to test the mediation presented in Fig. 1 and the significance of the indirect effects.

3. Results and discussion

Descriptive statistics and intercorrelations are presented in Table 1. Narcissistic admiration was correlated with subjective intelligence, life satisfaction, and satisfaction with intelligence, but not objective intelligence. In contrast, narcissistic rivalry was correlated with *less* life satisfaction and nothing else. We found that admiration and rivalry differed significantly with respect to their correlation with self-assessed intelligence (Fisher's $z = 5.11$, $p < .001$), intelligence satisfaction ($z = 6.70$, $p < .001$), and life satisfaction ($z = 8.94$, $p < .001$). In addition, life satisfaction was correlated with more subjective intelligence but not objective intelligence and satisfaction with intelligence was associated with subjective intelligence but not objectively assessed intelligence. However, we must note that in the current study the internal consistency coefficient of the IQ test was relatively low, probably because of the low number of items used in the short version of the Raven's test. Therefore, the correlations with objective intelligence should be taken with cautious.

Because narcissistic admiration and rivalry were correlated, we calculated partial correlations for each form of narcissism controlling for the other form of narcissism (see Supplemental material, Table 1). Moreover, we calculated partial correlations controlling for gender and age (see Supplemental material, Table 2). We did not observe substantial differences between zero-order and partial correlations.

Next, we estimated the relationship between the two kinds of narcissism and self-assessed intelligence controlling for gender and age along with their objective intelligence. In the hierarchical multiple regression model (see Table 2), self-assessed intelligence was the dependent variable, while gender and age (Step 1), objective intelligence (Step 2), and the two narcissisms (Step 3) were predictors. We found that gender, objectively assessed intelligence and admiration were significant predictors of self-assessed intelligence. Specifically, men rated their intelligence higher than women and both objectively assessed intelligence and admiration were positively associated with self-assessed intelligence. The zero-order correlations did not differ substantially from the effect of admiration ($r_{sp} = 0.38$) and objective intelligence ($r_{sp} = 0.11$).

Lastly, we analyzed a model tested previously by Zajenkowski et al. (2019) on grandiose narcissism and well-being. Specifically, we examined the hypothesis that narcissistic admiration leads to high self-assessed intelligence and high intelligence satisfaction, which in turn lead to high global life satisfaction (see Fig. 1). We found evidence for partial mediation. Specifically, the indirect effect from admiration through self-assessed intelligence and satisfaction with intelligence (0.06; 95% CI [0.03, 0.10]) was significant. Moreover, the indirect path via self-assessed intelligence to life satisfaction (−0.07; 95% CI [−0.42, −0.02]), and the indirect effect via intelligence satisfaction

Table 1
Descriptive statistics and intercorrelations of all variables from Study 1.

	M	*SD*	1	2	3	4	5
1. Narcissistic admiration	3.37	0.85					
2. Narcissistic rivalry	2.53	0.80	0.30**				
3. Self-assessed intelligence	17.47	2.86	0.40**	0.08			
4. Objectively assessed intelligence	3.68	1.70	0.00	0.01	0.13*		
5. Life satisfaction	4.18	1.21	0.40**	−0.14*	0.17**	0.07	
6. Intelligence satisfaction	5.03	1.16	0.34**	−0.08	0.57**	0.11	0.32**

* $p < .05$.
** $p < .01$.

Table 2
Regression models with gender, age, intelligence, personality, and narcissism as predictors and self-assessed intelligence as the dependent variable.

Step		*F*	ΔR^2	β	*p*
1	Gender	5.40	0.037**	−0.188	.001
	Age			−0.041	.479
2	Gender	4.66	0.010	−0.180	.002
	Age			−0.021	.718
	Objectively assessed intelligence			0.104	.079
3	Gender	13.80	0.150**	−0.160	.003
	Age			−0.009	.863
	Objectively assessed intelligence			0.115	.037
	Narcissistic admiration			0.406	.000
	Narcissistic rivalry			−0.078	.171

Note Gender coded: 0 – men, 1 – women.
** $p < .01$.

(0.05; 95% CI [0.01, 0.10]) were significant. However, in the first case we detected suppression; after controlling for narcissistic admiration, self-assessed intelligence was negatively associated with life satisfaction.

Collectively these results affirm that (1) both kinds of narcissism are correlated (Back et al., 2013) and yet they (2) maintain different correlations, in this case, with life/intelligence satisfaction and objective/subjective intelligence (Zajenkowski et al., 2019). Specifically, only admiration revealed a relatively strong and positive association with subjective aspects of intelligence, such as self-reported level of one's intelligence and intelligence satisfaction. Thus, intelligence seems to play an important role for individuals high in narcissistic admiration. However, it remains unknown how they understand the concept of intelligence. We addressed this question in Study 2.

4. Study 2

In Study 2 we examined how people characterized by narcissistic admiration rivalry perceive intelligence and its role in everyday life. Specifically, we asked participants to judge how advantageous intelligence is in several life domains. We used a method proposed by Zajenkowski et al. (2019) who asked participants how important intelligence was for several aspects of life. Extant research revealed that grandiose narcissists locate intelligence primarily in the social context by indicating that intelligence is important for interpersonal domains (Zajenkowski et al., 2019). In the current study we expected that only narcissistic admiration would be associated with such a belief.

5. Method

5.1. Participants and procedure

A sample of 214 participants (130 women, 80 men) of Polish nationality, aged between 18 and 36 (M = 23.14, SD = 2.89) were recruited via social network websites (e.g., Facebook) to complete an online study. Part (≈70%) of the sample overlapped with the sample from Study 1. Of the total sample, 56% of participants were university students, while the remaining accomplished secondary education or university (22%). Participants gave their informed consent and were asked to complete several measures, described below. The power analysis (calculated in R package 'pwr') indicated that the current sample allowed for detecting a small correlation (r = 0.18) with a power > 0.85 (two-tailed α-level = 0.05).

5.2. Measures

Narcissistic admiration (ω = 0.88) and rivalry (ω = 0.86) were assessed as in Study 1.

To assess one's beliefs about intelligence, we used Intelligence in Everyday Life questionnaire (Zajenkowski et al., 2019). The items examine individual differences in three broad categories: general life domains (e.g., life success or solving problems), life outcomes (e.g., income, school achievements or work success), and beliefs specific for narcissism (e.g., interpersonal relations, popularity or physical attractiveness). Participants were asked to estimate how favorable high intelligence is in all these aspects of life (1 = *not at all*; 5 = *very much*). The items were summed to create a total score (ω = 0.87) and were also treated as items.

6. Results and discussion

Narcissistic admiration was positively correlated with a belief that intelligence is generally favorable in everyday life and, specifically, in solving life problems, and gaining popularity among people (see Table 3). All these associations remained significant after rivalry was partialed out. Narcissistic rivalry was positively correlated with a belief that intelligence determines social status and popularity. However, only the former remained significant after controlling for admiration. Additionally, when admiration was partialed out, rivalry tended to correlate negatively with a belief that intelligence is important for interpersonal relations.

Table 3
Descriptive statistics and intercorrelations of all variables from Study 2.

	M	*SD*	Admiration	Rivalry
Admiration	3.38	0.83		
Rivalry	2.53	0.77	0.27**	
Intelligence in everyday life –domains				
Life success	4.26	0.87	0.13 (0.13)	0.03 (−0.06)
Life problems	3.68	1.00	0.15* (0.16*)	−0.01 (−0.05)
Work success	4.36	0.82	0.05 (0.04)	0.04 (0.03)
Good health	3.11	1.13	0.08 (0.07)	0.03 (0.01)
Good relationship	3.36	0.97	0.10 (0.12)	−0.06 (−0.09)
Income	4.14	0.88	0.09 (0.06)	0.13 (0.11)
Social status	4.05	0.97	0.11 (0.06)	0.17* (0.15*)
School achievements	4.41	0.84	0.04 (0.02)	0.06 (0.07)
Creativity	4.03	1.05	0.11 (0.11)	0.02 (0.02)
Interpersonal relations	3.86	1.07	−0.04 (0.08)	−0.12 (−0.14*)
Longevity	2.77	1.04	0.05 (0.06)	0.03 (−0.04)
Physical attractiveness	2.71	1.16	0.11 (0.12)	−0.02 (−0.05)
Popularity	3.21	1.08	0.19** (0.16*)	0.15* (0.10)
Intelligence in everyday life total	47.95	7.36	0.17* (0.16*)	0.05 (0.01)

Note. Coefficients in parentheses are partial correlations: with admiration controlling for rivalry, and with rivalry controlling for admiration.
* $p < .05$.
** $p < .01$.

Finally, the total score of the Intelligence in Everyday Life scale was significantly correlated with admiration, while for rivalry, the same correlation was not significant, as hypothesized. However, it needs to be acknowledged that, at the item level, admiration displayed relatively consistent pattern of (positive) correlations with various life domains, while in case of rivalry there were both positive and negative associations with life domains. Thus, it seems more adequate to analyze the associations of narcissistic rivalry with particular items rather than the aggregated score of the Intelligence in Everyday Life scale.

7. General discussion

Extant research indicates that grandiose narcissists desire to be regarded as having high intelligence (Zajenkowski et al., 2019). In the current investigation we distinguished between two aspects of grandiose narcissism—admiration and rivalry—and found that only admiration was associated with self-reported intelligence and satisfaction with one's intelligence, as hypothesized (H1 and H2). Moreover, the relationship between admiration and self-assessed intelligence remained substantial even after controlling for objective intelligence (H5). Additionally, these beliefs turned out to be important for psychological well-being of individuals with high admiration (H3 and H6). However, it must be acknowledged that intelligence-related beliefs explained only a small part of the admiration- life satisfaction relationship. Obviously, there are many other factors determining well-being of individuals scoring high on admiration. Our findings are consistent with the theoretical background of the narcissistic admiration/rivalry model according to which narcissists use two strategies to maintain grandiosity: self-promotion and self-defense (Back, 2018). Individuals with high admiration use the former strategy which manifests in striving for uniqueness, social confidence, dominance, and charm. Such behavior typically leads to increased popularity, interpersonal interest, and enhanced attraction. Intelligence seems to play an important role in winning other people's admiration. It has been suggested that cognitive ability became a central concept in modern (especially Western)

society, and self-assessed intelligence was found to predict greater well-being, self-confidence, and academic achievements above objective abilities (Chamorro-Premuzic, Harlaar, Greven, & Plomin, 2010; Horward & Cogswell, 2018). Being highly valued, intelligence might be a perfect instrument for narcissists seeking for admiration. By bragging how smart they are, narcissists may gain other's people attention; or at least narcissists believe this to be the case as revealed in Study 2. Generally, we expected (H4) that admiration would be associated with beliefs that intelligence plays an important role in the social world. We found support for this hypothesis only with respect to popularity, that is individuals with high admiration believed that intelligence primarily determines one's popularity. However, our interpretation that intelligence is an instrument for individuals with high admiration is rather speculative and based on one correlation. Thus, further research is necessary to determine whether narcissists scoring high on admiration use the topic of intelligence in their interpersonal relationships to influence how others see them.

Interestingly, narcissistic rivalry was unrelated to both subjective and objective intelligence as well as intelligence satisfaction. Nevertheless, people with high levels of rivalry believed that intelligence was an important factor in determining one's social status. Thus, they perceived intelligence primarily as a mechanism providing benefits in the social hierarchy. Moreover, those with high rivalry believed that intelligence is not favorable for interpersonal relations. This might be related to their high antagonism and a tendency to solve conflicts in more aggressive ways (Back et al., 2013). This tendency might be accompanied by a belief that social interactions do not rely on reflective strategies but more “forcible” solutions which do not require intellectual sophistication.

We also revealed differences between narcissistic admiration and rivalry in, so far, unexplored areas, but consistent with theoretical expectations. First, admiration reflects primarily the agentic aspect of grandiose narcissism (Back, 2018). Specifically, individuals with high levels of admiration strive for uniqueness and an increased sense of control in the social world. Consequently, they crave to be seen as intelligent, because intelligence correlates with several real-life outcomes, such as high school achievement, professional success, and more income (Gottfredson, 2002), all of which build one's social position. Moreover, intelligence is also perceived as a highly agentic attribute (Abele & Wojciszke, 2014). The current investigation suggests that, indeed, intelligence is central for the self-concept of those with high narcissistic admiration. By contrast, rivalry was unrelated to self-reported intelligence. Interestingly, rivalry is typically located between grandiose and vulnerable aspects of narcissism (Back, 2018; Rogoza et al., 2018) and vulnerable narcissism is essentially unrelated to subjectively assessed intelligence (Zajenkowski et al., 2019). Thus, intelligence might be more important to narcissists located closer to aspects of narcissism labeled as “grandiose” and/or “agentic”.

Second, admiration and rivalry have not been extensively studied in the context of emotional experiences and well-being. Our findings show a substantial difference between admiration and rivalry with respect to psychological well-being. Specifically, admiration was positively associated with life satisfaction, which might be a consequence of their strategy of self-promotion and self-enhancement. Manifesting their positive attributes, might win other people's admiration and bring them popularity, which in turn, might boost their self-worth and be a source of positive emotions. On the contrary, rivalry was negatively associated with life satisfaction. Low level of psychological well-being of those scoring high on rivalry might have roots in their antagonistic and hostile interpersonal style, which makes them unpopular among others and prone to rejection (Back, 2018). These interactions and negative social feedback may influence their general life satisfaction.

Another interesting finding concerns the relationship between self-assessed intelligence and life satisfaction. The zero-order correlation between these variables was significant and positive. However, in a mediation model, after removing the variance of narcissistic admiration, this association became significant and negative. It is likely that the part of self-assessed intelligence overlapping with life satisfaction is associated mainly with narcissistic admiration. According to this interpretation, self-assessed intelligence would be beneficial for well-being only when a person could brag how smart he/she is.

The current research is not free of limitations. First, we used only convenience samples, which included primarily students or participants with a university degree. It is possible that the topic of intelligence might be of special importance to such individuals. However, it is an open question whether narcissistic admiration might manifest in other ways as well, especially among less educated participants, for example through physical attractiveness. Moreover, in Study 1, we measured self-assessed intelligence as well as intelligence satisfaction with a single item. In future studies, it would be valuable to include longer measures which could potentially increase reliability of these instruments. Another problem is related to the fact that in our research self-assessed intelligence and intelligence satisfaction scores were highly correlated. Because participants first rated their intelligence level and then their satisfaction with it, it is possible that the former influenced the latter. In other words, someone who rates her/his intelligence as low might be more likely to assess her/his satisfaction as low. Thus, it would be interesting to examine, in future studies, how the order of the scale presentation influences the scores. Furthermore, because admiration and rivalry have been both find to correlate with basic personality traits (e.g., Rogoza, Wyszyńska, et al., 2016), it would be valuable to examine the unique contribution of both forms of narcissism to well-being and intelligence-related variables controlling for personality. Last, the present studies were correlational in nature. Thus, future studies might test how individuals with high admiration are sensitive to intelligence-related feedback or instruction in experimental research. For instance, grandiose narcissists were more persistent in solving a task framed as intelligence test in comparison to an instruction which not involved reference to intelligence (Wallace et al., 2009). A further question is whether narcissistic admiration might have similar effects.

CRediT authorship contribution statement

Marcin Zajenkowski: Conceptualization, Methodology, Investigation, Formal analysis, Writing - original draft, Writing - review & editing, Project administration, Funding acquisition.**Maria Leniarska:**Conceptualization, Investigation, Formal analysis, Writing - original draft.**Peter K. Jonason:**Conceptualization, Writing - original draft, Writing - review & editing.

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Appendix A. Supplementary data

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