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Adolescent Narcissism, Aggression, and Prosocial Behavior: The Relevance of Socially Desirable Responding

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ABSTRACT

An important threat to validity in personality research pertains to an individual's motivation to respond in a socially desirable manner on self-report inventories. This issue was examined in this study in the context of narcissism, aggression, and prosocial behavior in a sample of at-risk adolescents. Participants were 161 adolescents (128 males, 29 females, 4 not reported) ranging in age from 16 to 19 years who were attending a residential program for youth who have dropped out of school. Overall, socially desirable response tendencies were negatively correlated with vulnerable narcissism and self-reported aggression. Moreover, low socially desirable responses strengthened the relation between narcissism and self-reported aggression. Socially desirable responding was not associated with self- or peer-reported prosocial behavior and did not moderate the relation between narcissism and prosocial behavior. These findings indicate that the relation between narcissism and aggression is attenuated by concerns with social desirability. However, further work is needed in broader samples of adolescents to more closely examine whether social desirability concerns actually mitigate aggression among some youth or signify underreporting of one's problem behaviors.

Decades of personality research have investigated the role of socially desirable response patterns in the validity of self-reports. Social desirability has been conceptualized to include self-deceptive enhancement (i.e., an exaggeration of one's positive traits and the denial of negative traits such that one believes this self-perception to be true) and impression management (i.e., deliberate attempts to present oneself positively; Paulhus, 1986). This work has largely focused on adults and revolves around the use of personality inventories for employee selection or other circumstances in which responses have high individual stakes. Additional work has investigated the ability of adolescents to minimize self-reported scores on psychopathy as a function of social desirability (Rogers et al., 2002), yet the application of social desirability to adolescent self-report personality research has been limited. Because empirical investigations of individual differences in adolescents have continued to increase, the issue of socially desirable responding, or the possibility that this response style is itself an individual difference characteristic (Paunonen & LaBel, 2012) in youth, is necessary to address.

To complicate this issue, some self-perception constructs such as narcissism might be inherently tied to response patterns that are suggestive of positive impression management or unrealistically positive self-appraisal. As such, self-reports of narcissism and tendencies to engage in impression management or to self-enhance might go hand-in-hand. Socially desirable response patterns might not actually pose a threat to the validity of self-reported narcissism per se, but they could play a role in self-enhancement on other factors (e.g., behavioral functioning, relationships with others) as a function of narcissism. In other words, self-reported narcissism coupled with socially desirable responding might be associated with the inflation of one's beneficence and diminishment of one's engagement in problematic behaviors.

The purpose of this study was to evaluate the relation between socially desirable responding, in the form of self-deceptive enhancement and impression management, and adolescent narcissism, aggression, and prosocial behavior. This study is the first known empirical examination of how self-reported narcissism in adolescents relates to socially desirable response tendencies on self-report questionnaires. This aim begins to address the validity of adolescent reports of self-perception and self-presentation by considering whether self-reported narcissism corresponds to a propensity toward self-deceptive enhancement or impression management or whether it is indicative of true variance in narcissism. Another aim of this study was to examine whether socially desirable responding might suppress or attenuate relations between adolescent narcissism and constructs of behavioral interest, particularly when considered along with reports from peer informants. That is, this study investigated whether socially desirable responding moderates the established association between dimensions of adolescent narcissism and aggression (e.g., Barry & Wallace, 2010) as well as narcissism and prosocial behavior (e.g., Barry & Kauten, 2014).

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Narcissism and social desirability

Aside from the psychometric issues inherent in socially desirable responses, questions have been raised regarding the meaning of efforts toward self-enhancement and impression management in self-report measures. Taylor, Lerner, Sherman, Sage, and McDowell (2003) highlighted two such viewpoints, including that self-enhancement might be suggestive of situational variants in one's self-appraisal or, on the other hand, could indicate a broader personality style marked by narcissism or general self-inflation.

Because narcissism involves a self-presentational style aimed at being viewed favorably by others, an adolescent endorsing narcissistic features might likewise engage in socially desirable responding so as to maintain that high regard. Existing evidence with adults, however, does not clearly point to such a pattern. Raskin, Novacek, and Hogan (1991) found no association between narcissism and social desirability in adults, and Sedikides, Rudich, Gregg, Kumashiro, and Rusbult (2004) noted that the positive association between adult narcissism and self-esteem was independent of socially desirable responding. However, other researchers found that relatively narcissistic individuals tend to self-enhance, perhaps to "save face" after negative feedback (Campbell, Reeder, Sedikides, & Elliot, 2000).

These inconsistent findings might reflect varying associations between aspects of social desirability and narcissism as a function of the form of narcissism. Narcissism has been discussed as being nonpathological or pathological based on the core characteristics exhibited and their implications for interpersonal behaviors such as aggression. More specifically, nonpathological narcissism includes a tendency to view oneself as a leader, achievement motivation, and a willingness to exploit others for personal gain (e.g., Miller & Campbell, 2011; Pincus & Lukowitsky, 2010; Raskin & Terry, 1988). This form of narcissism is positively correlated with self-esteem and involves the sense of superiority traditionally regarded as prototypical of narcissists (Barry, Frick, & Killian, 2003). Some scholars have conceptualized nonpathological narcissism, measured by the Narcissistic Personality Inventory (Raskin & Terry, 1988), as synonymous with grandiose narcissism (e.g., Besser & Priel, 2010) based on its inclusion of largely positive and perhaps inflated self-appraisal. However, grandiose narcissism as an aspect of pathological narcissism (see later) includes a fragile sense of self and interpersonal strategies whereby one actively seeks to establish a sense of superiority through strategies such as self-sacrifice (Kauten & Barry, 2014) or exploitation of others (Miller et al., 2014). Nonpathological narcissism does not include a fragile or contingent sense of self-worth as a core feature and is centered around a variety of beliefs about one's superiority relative to others and ability to effectively function in leadership roles.

Part of the positively slanted self-presentation indicated by nonpathological narcissism might include socially desirable response patterns on questionnaires, despite a corresponding willingness to exploit others or demand attention from them. That is, among individuals high in nonpathological narcissism, there might be a general tendency to engage in self-deceptive enhancement as a means to maintain belief in one's superiority, as well as a desire to ingratiate oneself to others to gain favorable appraisals from them. However, someone with such narcissistic features might concomitantly eschew being liked by others in favor of being viewed as dominant. Thus, the relation between nonpathological narcissism and social desirability could point to varied interpersonal processes involved in the self-presentational style of the former.

Pathological narcissism, in contrast, is considered more maladaptive based on its correlates and has been associated with aggression, internalizing symptoms, and contingent self-worth in adolescents (Barry & Kauten, 2014). In short, this form of narcissism involves a fragile sense of self and use of specific strategies (e.g., grandiose displays, disconnectedness from others) meant to regulate one's self-esteem in the face of interpersonal threats and to elevate one's worth in the eyes of others (Pincus et al., 2009; Pincus & Lukowitsky, 2010). Pathological narcissism consists of the more specific domains of grandiose narcissism, which includes a lack of empathy, motivation to self-enhance, and exploitativeness, and vulnerable narcissism, which consists of feelings of insecurity, contingent self-esteem, difficulty with affective regulation, and withdrawing from others for fear of a lack of positive regard (Pincus et al., 2009; Thomas, Wright, Lukowitsky, Donnellan, & Hopwood, 2012).

Although grandiose and vulnerable narcissism are moderately to highly interrelated in adolescents, research has demonstrated that they have differential associations with various psychological constructs (e.g., self-esteem, depression, aggression; Barry, Loflin, & Doucette, 2015). These differences might also apply to socially desirable responding. Specifically, because grandiose narcissism involves fantasizing about one's worth or accomplishments and overt attempts to make oneself appear admirable through sacrifice, those characteristics likely predict one's tendency to engage in positive self-deception and impression management, respectively. Vulnerable narcissism, based on its inclusion of devaluing connections with others and limited self-disclosure as well as its relation to internalizing symptoms (e.g., Barry et al., 2015), might be associated with a lack of self-deceptive enhancement or efforts at impression management. That is, vulnerable narcissism likely involves limited beliefs in one's superiority and a lack of concern over convincing others of one's own worth, whereas grandiose narcissism would seem to function in the opposite manner.

Aggressive and prosocial behavior

Social desirability might also play a role in self-reported aggression among adolescents. Whereas self-reported aggression is a consistent behavioral correlate of adolescent narcissism (e.g., Barry, Grafeman, Adler, & Pickard, 2007; Barry & Wallace, 2010; Golmaryami & Barry, 2010; Thomaes, Bushman, Stegge, & Olthof, 2008), research has also documented an association between inflated positive self-views, or positive illusory bias (PIB), and aggressive behaviors (e.g., David & Kistner, 2000). By definition, PIB incorporates the appraisals of others (e.g., peers, teachers). A common factor in the relations of aggression with narcissism and with PIB might be a tendency to engage in self-deceptive enhancement. Based solely on self-reports, social desirability concerns might attenuate the association between narcissism and self-reported aggression as a function of

self-deceptive enhancement and deliberate attempts at impression management. However, when incorporating the perspective of others concerning aggression, attempts at social desirability might be ineffective, resulting in a discrepancy between self- and other reports of the same behavior, like those often seen with a PIB. That is, socially desirable responding might highlight those for whom a perceptual bias in aggression is most pronounced.

On the other hand, someone who endorses narcissistic tendencies and who also engages in impression management might use other strategies to obtain positive regard from others in addition to systematically underreporting their use of aggression. One such strategy could be prosocial behavior, and indeed, pathological narcissism, particularly grandiose narcissism, has been positively associated with self-reported prosocial behavior in adolescents (Kauten & Barry, 2014, 2016). It is possible that social desirability enhances this association, whereby individuals with narcissistic tendencies who also engage in self-deceptive enhancement or impression management report relatively higher prosocial behavior. As with aggression, this issue might crystallize with the incorporation of others' perspectives. Specifically, peers might not view individuals with narcissistic tendencies as engaging in prosocial behavior, especially for those who make concerted efforts at positive impression management on self-reports.

Hypotheses

Main effects

1. In this study, grandiose and nonpathological narcissism were expected to be positively correlated with both components of socially desirable responding (i.e., self-deceptive enhancement, impression management).
2. Vulnerable narcissism was expected to be negatively related to social desirability.
3. A negative correlation also was expected between both components of social desirability and self-reported aggression.
4. It was hypothesized that individuals who exhibit self-deceptive enhancement would be viewed by peers as engaging in relatively more aggression than individuals with lower self-deceptive enhancement.
5. It was expected that a perceptual bias in the form of higher peer-reported than self-reported aggression would be related to socially desirable responding.
6. It was hypothesized that prosocial behavior and socially desirable responding would be positively correlated.
7. Narcissism and self-reported prosocial behavior were expected to be positively related.
8. A perceptual bias in prosocial behavior (i.e., lower peer-reported than self-reported prosocial behavior) was expected to be associated with both components of socially desirable responding

Interactions

9. It was expected that each dimension of narcissism would be correlated with aggression, consistent with prior research. However, it was hypothesized that socially

desirable responding would moderate these relations such that socially desirable responding (i.e., self-deceptive enhancement and impression management) would attenuate the relations.

10. It was anticipated that socially desirable responding would strengthen the expected positive relation between narcissism and self-reported prosocial behavior.
11. A negative relation was expected between narcissism and peer-reported prosocial behavior, particularly for individuals who engage in relatively less self-deceptive enhancement or impression management.

Method

Participants

Participants were 161 adolescents (128 males, 29 females, 4 unreported) aged 16 to 19 years ($M = 16.80$, $SD = .77$ years) who were attending a 22-week voluntary residential program for adolescents who have dropped out of school. Approximately 53.4% of the participants reported their ethnicity as White, 29.2% self-identified as African American, and 1.2% were reportedly of other ethnicities (16.2% of participants did not report their ethnicity). Individuals attending this program typically report having dropped out of school because of various familial, academic, financial, or behavioral factors. The program is organized into platoons consisting of approximately 30 youth who attend classes and activities together as well as live in the same building. This sample was selected for a number of reasons, including that it is likely that individuals in such a program would exhibit more variability on narcissism and aggression than adolescents from community or detained settings and because the residential setting affords a unique opportunity to consider peer reports of aggression and prosocial behavior in the context of socially desirable response tendencies.

Measures

Balanced Inventory of Desirable Responding

The Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1998) is a 40-item self-report inventory that captures the self-deceptive enhancement and impression management aspects of socially desirable response tendencies. For the purposes of this study, one item was excluded (i.e., "I always declare everything at customs") because it was suspected that this item would not carry much meaning for this sample of youth who did not reside near a foreign country. The BIDR consists of two scales: Self-Deceptive Enhancement (e.g., "I am fully in control of my own fate"), which concerns positively biased self-views, and Impression Management (e.g., "I never take things that don't belong to me"), which assesses positive self-presentations that are intentionally aimed at influencing the perceptions of others (Paulhus, 1998). Responses are made on a 7-point scale ranging from 1 (*not true*) to 7 (*very true*). Items were scored dichotomously according to the procedures recommended by Paulhus (1998). Specifically, socially desirable responding was indicated if participants rated a 6 or 7 on an item and was not indicated for ratings of 5 or lower on the item. A bifactor model of the BIDR consisting of a general

social desirability factor and the narrower Self-Deceptive Enhancement and Impression Management factors has been supported in research with adults (Gignac, 2013). The internal consistency of the full BIDR scale was .78, whereas internal consistency of scores on Self-Deceptive Enhancement and Impression Management were .68 and .74, respectively.

Narcissistic Personality Inventory for Children

The Narcissistic Personality Inventory for Children (NPIC; Barry et al., 2003) consists of 40 items and assesses nonpathological narcissism. The NPIC was developed from the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), which has been widely used with adults. Respondents choose one of two statements for each item (e.g., "I usually show off when I get the chance" vs. "I try not to be a show off") and then select the chosen statement as *sort of true* or *really true* for them. Thus, items are scored on a 4-point scale, ranging from 0 (i.e., *really true of me* for the nonnarcissistic option) to 3 (i.e., *really true of me* for the narcissistic option). Total scores on the NPIC have been associated with adolescent aggression (Barry et al., 2007) and with negative evaluations by peers (e.g., Golmaryami & Barry, 2010; Grafeman, Barry, Marcus, & Leachman, 2015). In this sample, the NPIC had an internal consistency of $\alpha = .87$.

Pathological Narcissism Inventory

The Pathological Narcissism Inventory (PNI; Pincus et al., 2009) is a 52-item self-report measure of pathological narcissism. The PNI consists of two broad dimensions: grandiose (e.g., "I often fantasize about being rewarded for my efforts") and vulnerable (e.g., "It's hard to show others the weaknesses I feel inside") narcissism with responses made on a 5-point scale ranging from 0 (*not at all like me*) to 4 (*very much like me*). The PNI has demonstrated utility in terms of its associations with behavioral, emotional, and social functioning in adolescents (e.g., Barry et al., 2015). The internal consistencies were $\alpha = .86$ for grandiose narcissism and $\alpha = .92$ for vulnerable narcissism in this sample.

Peer Conflict Scale

The Peer Conflict Scale (PCS; Marsee et al., 2011) assessed self-reported aggression with 40 items whereby participants rate each statement (e.g., "I start fights to get what I want") on a 4-point Likert scale ranging from 0 (*not at all true*) to 3 (*definitely true*). The PCS assesses two forms of aggression: overt and relational. The internal consistency of the total PCS score was $\alpha = .95$ in this sample.

Prosocial Tendencies Measure

The Prosocial Tendencies Measure (PTM; Carlo & Randall, 2002) is an adolescent self-report measure of a variety of prosocial behaviors. The measure used in this study consisted of 20 items (e.g., "When people ask me to help, I don't hesitate") on a scale ranging from 1 (*does not describe me at all*) to 5 (*describes me greatly*). Three items (i.e., "I believe that donating goods or money works best when it is tax-deductible"; "I prefer to donate money anonymously"; "I often make anonymous donations because they make me feel good") were omitted because they were considered less relevant for youth in the age

group of our participants. The PTM includes multiple dimensions assessing different forms or contexts in which prosocial behavior might occur (Carlo & Randall, 2002). However, because the focus of our investigation was on broad associations of narcissism and social desirability with aggression and prosocial behavior, we only considered the overall score from the PTM, the internal consistency of which was $\alpha = .87$ in this sample.

Peer Nominations of Aggression and Prosocial Behavior

The peer nomination procedure described by Crick and Grotpeter (1995) was used for a peer-referenced assessment of aggression and prosocial behavior in this study. In this approach, participants were asked to nominate up to three members of their platoon on each of 15 items. There were 4 items indicative of overt aggression (e.g., "Starts fights") and 4 items indicative of relational aggression (e.g., "When mad at a person, ignores them or stops talking to them"). Nominations on item scores for relational and overt aggression were summed and z scored within the platoon. The overall peer nomination score on aggression was the sum of z scores on relational and overt aggression. The internal consistency for overall peer-nominated aggression was $\alpha = .88$. For prosocial behavior, 4 items were included (e.g., "Helps others"), with item nominations summed and then z scored within platoon. The internal consistency of nominations on prosocial behavior was $\alpha = .78$.

Procedure

The relevant university institutional review board approved this study prior to data collection. Parental consent was obtained on participants' initial enrollment in the residential program; subsequently, written assent and consent was obtained from youth attending the program. Participation in the study was entirely voluntary and did not affect participants' status in the program. Approximately 70% of the adolescents enrolled in the program agreed to participate in this study and provided complete self-report data. Participants accessed questionnaires for this study and a larger research project through the secure online survey program Qualtrics. Sessions were monitored by project personnel and were conducted in a classroom setting over two to four 30-min sessions. Approximately 18 weeks into the 22-week program, the peer nomination procedure was conducted with four of the seven platoons (three randomly selected male platoons and the only female platoon) following a separate assent and consent process.

Results

Descriptive statistics for the study variables are provided in Table 1. Both self-reported and peer-nominated aggression were somewhat positively skewed, indicating that most individuals in the sample reported or demonstrated relatively low levels of aggression. The only gender difference in study variables was for vulnerable narcissism, $t(155) = 3.68$, $p < .001$, $d = .76$, with females ($M = 2.44$, $SD = .90$) scoring somewhat higher than males ($M = 1.81$, $SD = .82$).

Correlations among study variables are displayed in Table 2. The two components of the BIDR (i.e., Self-Deceptive

Table 1. Descriptive statistics for variables of interest.

Variable (possible range)	M	SD	Range	Skew	α
Social desirability (0–40)	11.10	5.61	1–27	.22	.78
Self-deceptive enhancement (0–20)	6.48	3.41	0–14	.11	.68
Impression management (0–20)	4.62	3.40	0–15	.57	.74
Nonpathological narcissism (0–120)	52.73	18.35	12–113	.05	.87
Grandiose narcissism (0–5)	2.53	.91	.20–4.61	−.12	.86
Vulnerable narcissism (0–5)	1.92	.87	.22–4.22	.20	.92
Self-reported aggression (0–120)	21.38	20.32	0–120	1.97	.95
Peer-nominated aggression	.13	1.80	−1.72–5.20	1.33	.88
Self-reported prosocial (0–5)	1.89	.69	0.10–4.75	−.03	.87
Peer-nominated prosocial	.13	.92	−1.16–3.49	1.00	.78

Note. Scores for grandiose narcissism, vulnerable narcissism, and self-reported pro-social behavior are based on mean item scores. Peer-nominated aggression and prosocial behavior are based on *z* scores within participants' platoons (groups).

Enhancement and Impression Management) were moderately correlated with each other. In addition, consistent with our hypothesis, vulnerable narcissism was negatively associated with overall social desirability, self-deceptive enhancement, and impression management. Vulnerable narcissism was positively correlated with both self-reported aggression and self-reported prosocial behavior. Contrary to expectations, nonpathological narcissism had a weak, negative correlation with impression management, but it was significantly positively associated with both self-reported and peer-nominated aggression. In addition, contrary to our hypothesis, grandiose narcissism was not correlated with either dimension of social desirability, nor was it related to aggression. However, grandiose narcissism was positively correlated with self-reported prosocial behavior. As shown in Table 2, social desirability, and specifically impression management, was negatively correlated with self-reported aggression. However, socially desirable responding was not related to peer-nominated aggression or to either report of prosocial behavior.

Regression analyses

Aggression

To examine whether socially desirable responding moderated the relations between narcissism and aggression, a series of multiple regression analyses were conducted with self-reported aggression as the criterion in the initial models. Specifically, each of the three dimensions of narcissism was examined in separate analyses with overall social desirability (i.e., BIDR total

score) serving as the moderator. Each main effect variable (i.e., narcissism, socially desirable responses) was entered in the first step of the model, followed by the interaction term in the subsequent step. Results are displayed in Table 3. For the vulnerable narcissism model (Model 1), there was a negative main effect in the initial step for social desirability in the prediction of self-reported aggression. The interaction effect was calculated using the bootstrapping method described by Hayes (2013, 2015) and examined in a model with both main effects variables. The interaction effect in this model was significant (see Table 3). This effect was plotted according to the procedures recommended by Hayes (2013) and is depicted in Figure 1. As seen in Figure 1, the combination of high vulnerable narcissism and low socially desirable responding was associated with particularly high self-reported aggression in this sample, whereas vulnerable narcissism was not associated with aggression for individuals who exhibited high levels of socially desirable response tendencies.

To further investigate the moderation between vulnerable narcissism and social desirability, two separate models were then analyzed with self-deceptive enhancement and impression management as the moderator. First, for the model using self-deceptive enhancement, there was a positive main effect for vulnerable narcissism in predicting self-reported aggression. The interaction was also significant, with the highest self-reported aggression being tied to high vulnerable narcissism and low indications of self-deceptive enhancement (see Figure 2). For impression management, the first step of the model revealed a significant negative main effect for impression management. In the next step of the model, the interaction effect was significant. The pattern of the interaction again was such that the highest self-reported aggression corresponded to higher reports of vulnerable narcissism coupled with low impression management (see Figure 3).

In Model 2 with grandiose narcissism as a predictor and overall social desirability as the moderator, there again was a negative main effect for social desirability in the initial step. There was also a significant interaction in the subsequent step. Post hoc plotting of this interaction revealed that the pattern was highly similar to that for vulnerable narcissism such that grandiose narcissism in the presence of low socially desirable responding was associated with relatively high aggression. That is, despite a lack of zero-order association between grandiose narcissism and self-reported aggression, there was an

Table 2. Correlations among social desirability, narcissism, aggression, and prosocial behavior.

	1	2	3	4	5	6	7	8	9	10
1. Social desirability	—									
2. Self-deceptive enhancement	.82***	—								
3. Impression management	.82***	.35***	—							
4. Nonpathological narcissism	−.05	.09	−.17*	—						
5. Grandiose narcissism	−.06	.01	−.11	.36***	—					
6. Vulnerable narcissism	−.29***	−.28***	−.19*	.05	.60***	—				
7. Aggression (self-report)	−.24**	−.09	−.30***	.25**	.08	.20**	—			
8. Aggression (peer report)	−.05	.04	−.13	.32**	.20	.12	.22*	—		
9. Prosocial (self-report)	.09	.06	.08	.13	.39***	.20*	−.11	−.05	—	
10. Prosocial (peer report)	.16	.11	.15	−.11	−.09	−.20	−.14	.14	−.03	—

Note. Social desirability = Balanced Inventory of Desirable Responding total score. For peer-reported aggression and prosocial behavior, *n* = 86.
*p < .05. **p < .01. ***p < .001.

Table 3. Regression analyses predicting self-reported aggression.

Predictors	b	SE	R^2	ΔR^2	95% CI
Model 1			.08**		
Vulnerable narcissism	3.24	1.86	—		
Social desirability	−0.72*	.29*	—		
Vulnerable narcissism × social desirability	−1.02**	.34**	—	.05**	[−1.92, −.08]
Model 2			.06**		
Grandiose narcissism	1.45	1.72	—		
Social desirability	−.85**	.28**	—		
Grandiose narcissism × social desirability	−.88**	.31**	—	.05**	[−1.77, −.08]
Model 3			.12***		
Nonpathological narcissism	.27**	.08**	—		
Social desirability	−.83**	.27**	—		
Nonpathological narcissism × social desirability	−.03	.01	—	.02	[−.06, .01]

Note. Each model shows the main effects in the initial step and the interaction effect via bootstrapping method (Hayes, 2015). CI = confidence interval.
*$p < .05.$ **$p < .01.$ ***$p < .001.$

association among individuals with a low propensity toward socially desirable responding. This interaction is displayed in Figure 4.

This moderation was further examined via consideration of self-deceptive enhancement and impression management separately. In the model involving self-deceptive enhancement, there were no unique main effects, but the interaction effect was significant, with the highest self-reported aggression
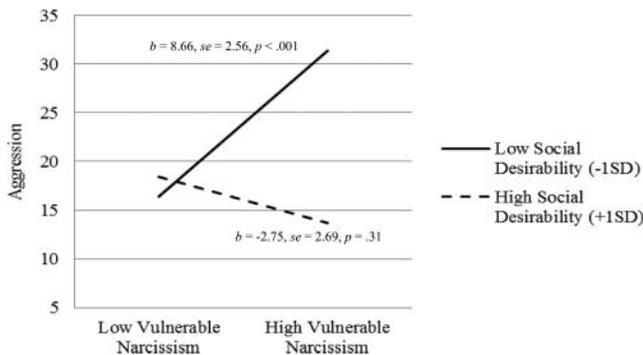

Figure 1. Interaction between vulnerable narcissism and social desirability in predicting variance in self-reported aggression.
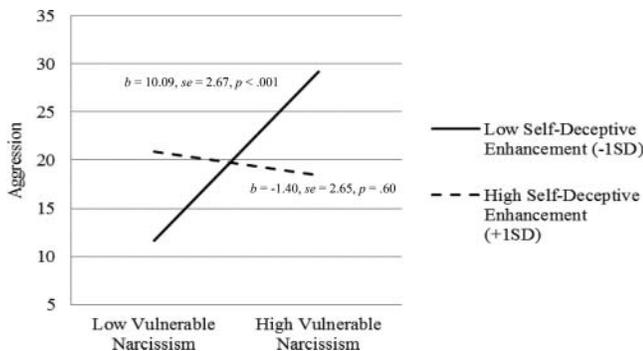

Figure 2. Interaction between vulnerable and self-deceptive enhancement in predicting variance in self-reported aggression.
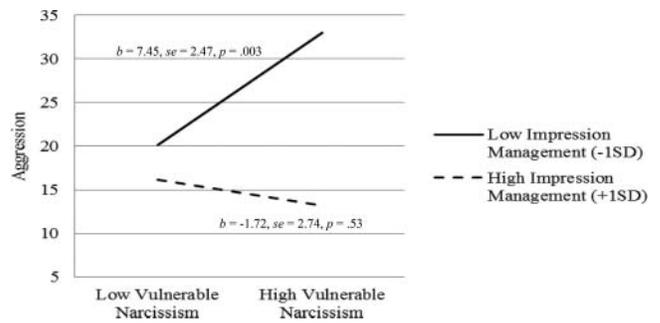

Figure 3. Interaction between vulnerable narcissism and impression management in predicting variance in self-reported aggression.

corresponding to a combination of high grandiose narcissism and low self-deceptive enhancement. In the model considering impression management, there was a significant negative main effect for impression management in the first step, and the interaction effect was significant in the next step with the same pattern described for self-deceptive enhancement. That is, the highest self-reported aggression was associated with high grandiose narcissism coupled with low impression management.

Finally, for the nonpathological narcissism model (Model 3), there was a significant main effect for narcissism and a significant negative main effect for social desirability R^2 for the model = .12. The interaction in this model was not significant at the p < .05 level of alpha but demonstrated the same pattern as described earlier for vulnerable and grandiose narcissism.

Each of the preceding regression models was repeated for predicting variance in peer-nominated aggression. The only significant effects involved nonpathological narcissism. Specifically, there were unique positive main effects for nonpathological narcissism when controlling for social desirability, controlling for self-deceptive enhancement, and controlling for impression management in the prediction of peer-reported aggression.

To consider whether perceptual bias on aggression was associated with socially desirable responding or narcissism, self-reported aggression was *z* scored and then subtracted from the *z* scored peer nomination score on aggression. Thus, high scores on this variable reflected underreporting on self-reported aggression relative to peer-referenced information. Next, based on the procedure described by Griffin, Murray, and Gonzalez (1999), a variable was created that dichotomized these difference scores (i.e., those with higher peer- than self-reported aggression were in the "deflators" category in that they might
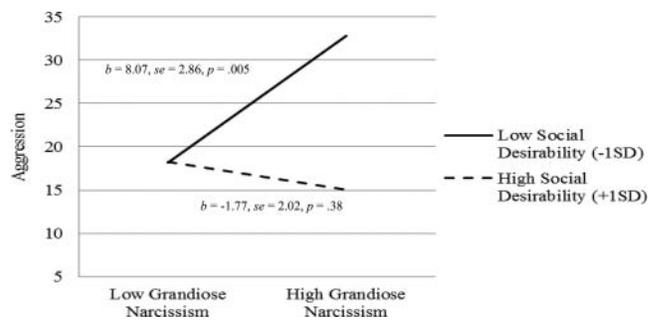

Figure 4. Interaction between grandiose narcissism and social desirability in predicting variance in self-reported aggression.

have downplayed aggression relative to peer informants, whereas those with equal or greater self-reported than peer-nominated aggression were in the "inflators" category). Separate regression models were analyzed where social desirability and its two components were regressed onto peer-nominated aggression, first for "deflators" in self-reported aggression and then for "inflators" on self-reported aggression, resulting in six models. There were no significant effects, indicating that perceptual bias in aggression was not associated with socially desirable responding.

Prosocial behavior

The preceding analyses were repeated first for self-reported prosocial behavior. Results of these analyses are presented in Table 4. The first model (Model 4) involved vulnerable narcissism, social desirability, and their interaction as predictors. In the first step of the model, there was a significant main effect for vulnerable narcissism. The interaction effect in this model was not significant.

In Model 5 involving grandiose narcissism to predict self-reported prosocial behavior, there were significant main effects for grandiose narcissism when controlling for overall social desirability, when controlling for self-deceptive enhancement, and when controlling for impression management. No significant interactions emerged. With self-reported prosocial behavior regressed onto nonpathological narcissism (Model 6), there were no significant main effects or interactions.

In regression analyses predicting peer-nominated prosocial behavior, there were no significant main effects or interactions in any of the models. The same procedure described earlier for examining perceptual bias in aggression was used for prosocial behavior. These regression analyses yielded no significant effects.

Discussion

Overall, the findings of this study indicate that adolescent narcissism is not inherently connected to socially desirable

Table 4. Regression analyses predicting self-reported prosocial behavior.

Predictors	b	SE	R^2	ΔR^2	95% CI
Model 4			.06**		
Vulnerable narcissism	.19***	.06***	—		
Social desirability	.02	.01	—		
Vulnerable narcissism × social desirability	−.01	.01	—	.003	[−.03, .01]
Model 5			.16***		
Grandiose narcissism	.29***	.06***	—		
Social desirability	.01	.01	—		
Grandiose narcissism × social desirability	−.01	.01	—	.01	[−.03, .01]
Model 6			.02		
Nonpathological narcissism	.01	.003	—		
Social desirability	.01	.01	—		
Nonpathological narcissism × social desirability	−.00	.001	—	.001	[−.001, .001]

Note. Each model shows the main effects in the initial step and the interaction effect via bootstrapping method (Hayes, 2015). CI = confidence interval.
**$p < .01$; ***$p < .001$.

responding. As hypothesized, vulnerable narcissism was negatively correlated with self-deceptive enhancement and impression management. Previous research has not considered this aspect of narcissism in regard to socially desirable responding, and these results suggest that adolescents with narcissistic features that are tied to internalizing problems (e.g., Barry et al., 2015), contingent self-esteem, and hiding one's perceived weaknesses are generally not apt to cast themselves in a favorable light on self-report inventories. However, contrary to our hypotheses, nonpathological narcissism had a weak, negative correlation with impression management, whereas grandiose narcissism was not associated with socially desirable responding. Thus, it appears that adolescents who, on self-report inventories, endorse high levels of narcissism, especially features indicative of grandiosity, do not necessarily also attempt to actively engage in socially desirable response sets. Instead, they might actually not care to portray a particularly positive persona. Alternatively, it could be that individuals who engage in socially desirable responding concomitantly underreport their narcissism (and aggression). However, there is no evidence that such systematically biased reporting occurred in our sample based on analyses of peer versus self-report of aggression. Although the veracity of self-reported adolescent narcissism cannot be definitively supported from these findings, our data indicate that such reports are not confounded by self-deceptive enhancement or intentional efforts at impression management.

For aggression, the apparent role of socially desirable response tendencies was rather intuitive in that individuals who engaged in socially desirable responding were more likely to report relatively low levels of aggression. Further consideration of the dimensions of social desirability provides some useful insight, as they were differentially associated with self-reported aggression. Impression management, viewed by Paulhus (1986) as a deliberate effort toward social desirability, was moderately negatively correlated with self-reported aggression, whereas self-deceptive enhancement, considered nondeliberate or nondeceitful, was not significantly associated with self-reported aggression. Higher tendencies toward impression management were also associated with lower self-reported aggression when controlling for dimensions of narcissism. What is unknown is whether this diminishment of aggression reflects actual lower engagement in aggressive behavior or underreporting. Notably, there was no relation between an individual's attempt at self-deceptive enhancement or impression management and peer perceptions of that individual's aggressive behavior. Thus, peers did not attribute relatively more (or less) aggression to individuals who engaged in socially desirable responding.

Consistent with prior research (e.g., Barry et al., 2007; Barry et al., 2015), nonpathological and vulnerable narcissism were positively associated with self-reported aggression. Nonpathological narcissism, in accordance with prior evidence (e.g., Golmaryami & Barry, 2010; Grafeman et al., 2015), was also associated with peer-reported aggression. An interesting caveat is that, consistent with previous research (Kauten & Barry, 2014), dimensions of pathological narcissism were associated with self-reported prosocial behavior. Thus, adolescent narcissism does not seem geared toward presenting oneself in an overly, unrealistically positive manner, but instead, individuals

with narcissistic tendencies (perhaps rightfully) see themselves as engaging in both antagonistic and helpful behaviors.

The description of narcissism by Raskin et al. (1991) might provide a framework for understanding some of these findings. In short, they noted that individuals with high levels of narcissism seek admiration but not approval and found that nonpathological narcissism was unrelated to social desirability. Furthermore, someone who endorses features of vulnerable narcissism (e.g., shame from not living up to expectations, hiding feelings from others) might take care to not make obvious attempts at self-aggrandizement. Instead, vulnerable narcissism could signal a tendency to mute one's positive self-appraisals for fear of criticism.

An alternative explanation concerns the idea that some individuals might underreport their narcissistic tendencies as a means of impression management. Therefore, the observed negative correlation between vulnerable narcissism and social desirability, as well as between nonpathological narcissism and impression management, might suggest that some adolescents who have relatively high levels of narcissism are driven to downplay any semblance of inflated self-portrayals, even though they also have propensities toward entitlement and preoccupation with being positively appraised by others. Likewise, individuals who are concerned with positive impression management might avoid endorsing items indicative of feelings of superiority or similar interpersonally aversive features of narcissism. However, the lack of clear associations in this study between peer-rated behavior and social desirability or narcissism makes it difficult to determine whether such a process plays out interpersonally.

Perhaps more important, socially desirable responding moderated the relation between dimensions of narcissism and self-reported aggression. Specifically, the combination of narcissism and low social desirability was related to higher self-reported aggression. Thus, in this sample, adolescents who reported the highest levels of aggression tended to acknowledge some degree of narcissism and made limited efforts to engage in impression management or self-deceptive enhancement. One interpretation of this pattern is that consistent with the preceding description, many individuals with narcissistic characteristics are willing to acknowledge being aggressive toward others and care little about being viewed as prosocial by others as long as they are viewed as superior (or not inferior). Therefore, they do not make concerted efforts to cast themselves in a favorable light but rather seek to be regarded as dominant. On the other hand, a self-reported tendency to impression manage among some individuals with narcissism might have provided motivation to lower their reports of aggression or might actually even provide a deterrent against the use of aggression as a social tactic. Moreover, enhanced beliefs about one's goodness (i.e., deceptive self-enhancement) might circumvent an individual's recognition of his or her aggression toward others even while he or she acknowledges features of narcissism.

Developmental level is another potentially relevant factor in this study. Adolescents might have a normative desire toward positive impression management, especially with peers, and even adolescents who are aggressive might also show positive behaviors toward peers even if the motives are deceptive (Hawley, 2003). However, among individuals high in narcissism,

adults might apply a wider array of interpersonal strategies, including impression management, to gain adoration from others (Morf & Rhodewalt, 2001) than narcissistic adolescents. In the adolescent sample in this study, impression management was not uniformly high, and such concerns did not play a role in the connection between pathological narcissism and self-reported prosocial behavior. Moreover, the relations between self-reported pathological narcissism and prosocial behavior held when controlling for social desirability. Taken together, the findings indicate that an assessment issue that remains to be addressed is how the presumed audience for an adolescent with narcissism shapes his or her reports of personal behaviors or attributes. That is, adolescents with high narcissism might have felt more comfortable in a questionnaire context expressing the different approaches (i.e., aggression, prosocial behavior) with which they seek to reach social goals than in overtly expressing those attitudes to peers. Context-dependent behaviors and self-presentations of adolescents with narcissism for aggression and prosocial behavior are necessary research avenues to pursue.

Finally, some researchers (e.g., McCrae & Costa, 1983; Paunonen & LeBel, 2012) have concluded that social desirability as typically assessed might have limited influence on the validity of self-report personality inventories. Instead, from this perspective, social desirability seems to capture personality traits (e.g., propensities toward impression management) that could themselves play a role in interpersonal functioning. Indeed, the results of this study point toward such an influence in the context of adolescent narcissism and aggression as opposed to signaling socially desirable responding as an inherent obstacle in this area of personality research. More diverse approaches to evaluating social desirability are needed in future research.

Limitations and future directions

This study had a number of limitations that must be noted. First, because the sample consisted of adolescents attending a residential program, the generalizability of the findings to adolescents in other settings is limited. This sample represented an initial attempt to address the extent to which self-perception, aggression, prosocial behavior, and socially desirable responding were linked in adolescents using self-report measures that are widely known and used. This sample offered a way to examine these relations along with peer reports of aggression and prosocial behavior among adolescents living and attending activities together in a residential setting. However, the extent to which these findings might be specific to adolescents in a residential setting who presumably have a more significant behavioral history than other adolescents is not known. Therefore, more work is needed to determine the relevance of our findings for a wider cross-section or matched community sample of adolescents.

Furthermore, the analyses pertaining to peer nominations had low statistical power because only a subset of participants completed that portion of the study. Thus, some relevant associations involving peer informants might not have emerged as statistically significant in this sample. In addition, as noted earlier and as with other questionnaire-based research on social desirability, the potential influence of context (i.e.,

questionnaires in research vs. everyday attitudes and actions) on self-reports as a function of narcissism could not be directly determined aside from the consideration of peer ratings and informant discrepancies on aggression and prosocial behavior. Moreover, the weak correlations between self- and peer reports of aggression and prosocial behavior might partly reflect the limited breadth of content in the peer nomination measure relative to the self-report measures. Additional collateral information on the constructs examined in this study would be useful for future research in this area. Finally, the reported moderation effects are relatively small; thus, caution is needed in interpreting our findings, as it is clear that many other factors play into adolescent aggression besides narcissism in concert with social desirability, particularly as it pertains to more diverse adolescent samples.

Further work is needed to refine our understanding of the issues that threaten the validity of adolescent self-report inventories beyond those pertaining to self-perception. For example, the moderation effects in this study were specific to pathological narcissism; thus, further examination is needed on how these less researched domains are involved in adolescent impression management and behaviors selected for attaining social goals. In addition, psychopathy, a multidimensional construct that includes narcissism, has been investigated in the context of self-report rating scales. In light of the relevance of psychopathy-linked tendencies, such as callous-unemotional traits, for understanding youth conduct problems (see Frick & White, 2008) and its inclusion of persistent and skillful dishonesty, socially desirable responding is paramount to consider as a threat to response validity. Past research among detained adolescents (Rogers et al., 2002) indicates that psychopathy in general is susceptible to socially desirable responding, but this issue has not been examined in broader samples of adolescents or with specific dimensions of psychopathy including narcissism.

In addition, the presumed audience for narcissistic self-presentations must be considered, as the target could help determine whether the desired superiority for a narcissistic individual is based on being seen as benevolent or dominant. In particular, these issues are in need of examination in regard to adolescent interactions with parents or other authority figures. In such contexts, the motivation to impression manage might be stronger among individuals with high levels of narcissism. Based on these findings, positive self-deception and impression management appear relevant for considering the meaning of self-reported narcissism, aggression, and prosocial behavior in day-to-day adolescent interactions.

References

Barry, C. T., Frick, P. J., & Killian, A. L. (2003). The relation of narcissism and self-esteem to conduct problems in children: A preliminary investigation. *Journal of Clinical Child and Adolescent Psychology*, *32*, 139–152.

Barry, C. T., Grafeman, S. J., Adler, K. K., & Pickard, J. D. (2007). The relations among narcissism, self-esteem, and delinquency in a sample of at-risk adolescents. *Journal of Adolescence*, *30*, 933–944.

Barry, C. T., & Kauten, R. L. (2014). Non-pathological and pathological narcissism: Which self-reported characteristics are most problematic in adolescents? *Journal of Personality Assessment*, *96*, 212–219.

Barry, C. T., Loflin, D. C., & Doucette, H. (2015). Adolescent self-compassion: Associations with narcissism, self-esteem, aggression, and internalizing symptoms in at-risk males. *Personality and Individual Differences*, *77*, 118–123.

Barry, C. T., & Wallace, M. T. (2010). Current considerations in the assessment of youth narcissism: Indicators of normative and pathological development. *Journal of Psychopathology and Behavioral Assessment*, *32*, 479–489.

Besser, A., & Priel, B. (2010). Grandiose versus vulnerable narcissism in threatening situations: Emotional reactions to achievement failure and interpersonal rejection. *Journal of Social and Clinical Psychology*, *29*, 874–902.

Campbell, W. K., Reeder, G. D., Sedikides, C., & Elliot, A. J. (2000). Narcissism and comparative self-enhancement strategies. *Journal of Research in Personality*, *34*, 329–347.

Carlo, G., & Randall, B. A. (2002). The development of a measure of prosocial behaviors for late adolescents. *Journal of Youth and Adolescence*, *31*, 31–44.

Crick, N. R., & Grotpeter, J. K. (1995). Relational Aggression, gender, and socio-psychological adjustment. *Child Development*, *66*, 710–722.

David, C. F., & Kistner, J. A. (2000). Do positive self-perceptions have a "dark side"? Examination of the link between perceptual bias and aggression. *Journal of Abnormal Child Psychology*, *28*, 327–337.

Frick, P. J., & White, S. F. (2008). Research review: The importance of callous-unemotional traits for the development of aggressive and antisocial behavior. *Journal of Child Psychology and Psychiatry*, *49*, 359–375.

Gignac, G. E. (2013). Modeling the balanced inventory of desirable responding: Evidence in favor of a revised model of socially desirable responding. *Journal of Personality Assessment*, *95*, 645–656.

Golmaryami, F. N., & Barry, C. T. (2010). The associations of self-reported and peer-reported relational aggression with narcissism and self-esteem among adolescents in a residential setting. *Journal of Clinical Child and Adolescent Psychology*, *39*, 128–133.

Grafeman, S. J., Barry, C. T., Marcus, D. K., & Leachman, L. L. (2015). Interpersonal perceptions of narcissism in an at-risk adolescent sample: A social relations analysis. *Journal of Research in Adolescence*, *25*, 92–100.

Griffin, D., Murray, S., & Gonzalez, R. (1999). Difference score correlations in relationship research: A conceptual primer. *Personal Relationships*, *6*, 505–518.

Hawley, P. H. (2003). Prosocial and coercive configurations of resource control in early adolescence: A case for the well-adapted Machiavellian. *Merrill-Palmer Quarterly*, *49*, 279–309.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.

Hayes, A. F. (2015). *Hacking PROCESS for bootstrap inference in moderation analyses*. Unpublished white paper, Author.

Kauten, R., & Barry, C. T. (2014). Do you think I'm as kind as I do? The relation of adolescent narcissism with self- and peer-perceptions of prosocial and aggressive behavior. *Personality and Individual Differences*, *61–62*, 69–73.

Kauten, R. L., & Barry, C. T. (2016). Adolescent narcissism and its association with different indices of prosocial behavior. *Journal of Research in Personality*, *60*, 36–45.

Marsee, M. A., Barry, C. T., Childs, K. K., Frick, P. J., Kimonis, E. R., Munoz, L. C., … Lau, K. S. L. (2011). Assessing the forms and functions of aggression using self-report: Factor structure and invariance of the Peer Conflict Scale in youths. *Psychological Assessment*, *23*, 792–804.

McCrae, R. R., & Costa, P. T. (1983). Social desirability scales: More substance than style. *Journal of Consulting and Clinical Psychology*, *5*, 882–888.

Miller, J. D., & Campbell, W. K. (2011). Addressing criticisms of the Narcissistic Personality Inventory (NPI). In W. K. Campbell & J. D. Miller (Eds.), *The handbook of narcissism and narcissistic personality disorder* (pp. 146–152). Hoboken, NJ: Wiley.

Miller, J. D., McCain, J., Lynam, D. R., Few, L. R., Gentile, B., MacKillop, J., & Campbell, W. K. (2014). A comparison of the criterion validity of popular measures of narcissism and narcissistic personality disorder via the use of expert ratings. *Psychological Assessment*, *26*, 958–969.

Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, *12*, 177–196.

Paulhus, D. L. (1986). Self-deception and impression management in test responses. In A. Angleitner & J. S. Wiggins (Eds.), *Personality assessment via questionnaire* (pp. 143–165). New York, NY: Springer-Verlag.

Paulhus, D. (1998). *Manual for the Balanced Inventory of Desirable Responding: Version 6*. Vancouver, BC, Canada: Unpublished manuscript, University of British Columbia.

Paunonen, S. V., & LeBel, E. P. (2012). Socially desirable responding and its elusive effects on the validity of personality assessments. *Journal of Personality and Social Psychology*, *103*, 158–175.

Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A. G. C., & Levy, K. N. (2009). Initial construction and validation of the Pathological Narcissism Inventory. *Psychological Assessment*, *21*, 365–379.

Pincus, A. L., & Lukowitsky, M. R. (2010). Pathological narcissism and narcissistic personality disorder. *Annual Review of Clinical Psychology*, *6*, 421–446.

Raskin, R. N., Novacek, J., & Hogan, R. (1991). Narcissism, self-esteem, and defensive self-enhancement. *Journal of Personality*, *59*, 16–38.

Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, *54*, 890–902.

Rogers, R., Vitacco, M. J., Jackson, R. L., Martin, M., Colllins, M., & Sewell, K. W. (2002). Faking psychopathy? An examination of response styles with antisocial youth. *Journal of Personality Assessment*, *78*, 31–46.

Sedikides, C., Rudich, E. A., Gregg, A. P., Kumashiro, M., & Rusbult, C. (2004). Are normal narcissists psychologically healthy? Self-esteem matters. *Journal of Personality and Social Psychology*, *87*, 400–416.

Taylor, S. E., Lerner, J. S., Sherman, D. K., Sage, R. M., & McDowell, N. K. (2003). Portrait of the self-enhancer: Well adjusted and well liked or maladjusted and friendless? *Journal of Personality and Social Psychology*, *84*, 165–176.

Thomaes, S., Bushman, B. J., Stegge, H., & Olthof, T. (2008). Trumping shame by blasts of noise: Narcissism, self-esteem, shame, and aggression in young adolescents. *Child Development*, *79*, 1792–1801.

Thomas, K. M., Wright, A. G. C., Lukowitsky, M. R., Donnellan, M. B., & Hopwood, C. J. (2012). Evidence for the criterion validity and clinical utility of the Pathological Narcissism Inventory. *Assessment*, *19*, 135–145.