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Research Article

Low Self-Esteem Is Related to Aggression, Antisocial Behavior, and Delinquency

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ABSTRACT—The present research explored the controversial link between global self-esteem and externalizing problems such as aggression, antisocial behavior, and delinquency. In three studies, we found a robust relation between low self-esteem and externalizing problems. This relation held for measures of self-esteem and externalizing problems based on self-report, teachers' ratings, and parents' ratings, and for participants from different nationalities (United States and New Zealand) and age groups (adolescents and college students). Moreover, this relation held both cross-sectionally and longitudinally and after controlling for potential confounding variables such as supportive parenting, parent-child and peer relationships, achievement-test scores, socioeconomic status, and IQ. In addition, the effect of self-esteem on aggression was independent of narcissism, an important finding given recent claims that individuals who are narcissistic, not low in self-esteem, are aggressive. Discussion focuses on clarifying the relations among self-esteem, narcissism, and externalizing problems.

The link between global self-esteem and aggression is currently being debated by researchers (Baumeister, Campbell, Krueger, & Vohs, 2003; DuBois & Tevendale, 1999) and in the popular media (e.g., Slater, 2002). Researchers on one side of the debate have argued that individuals with low self-esteem are prone to real-world externalizing problems such as delinquency and antisocial behavior (e.g., Fergusson & Horwood, 2002;

Rosenberg, Schooler, & Schoenbach, 1989; Sprott & Doob, 2000). However, others have questioned this claim, noting that several studies have failed to find a relation between low self-esteem and externalizing problems (e.g., Bynner, O'Malley, & Bachman, 1981; Jang & Thornberry, 1998; McCarthy & Hoge, 1984) or between low global self-esteem and laboratory measures of aggression (Bushman & Baumeister, 1998; Kirkpatrick, Waugh, Valencia, & Webster, 2002; Twenge & Campbell, 2003). On the basis of this research, Baumeister, Bushman, and Campbell (2000) suggested that "future research can benefit from discarding the obsolete view that low self-esteem causes violence" (p. 29). Instead, Baumeister and his colleagues have posited that any link between self-esteem and aggression probably occurs at the high end of the self-esteem continuum; that is, unrealistically high self-esteem (best captured by measures of narcissism), not low self-esteem, contributes to aggression and crime (e.g., Baumeister, Smart, & Boden, 1996).

At least three distinct traditions in the social sciences posit a link between low self-esteem and externalizing problems. Rosenberg (1965) suggested that low self-esteem weakens ties to society; according to social-bonding theory, weaker ties to society decrease conformity to social norms and increase delinquency (Hirschi, 1969). Humanistic psychologists such as Rogers (e.g., 1961) have argued that a lack of unconditional positive self-regard is linked to psychological problems, including aggression. Finally, neo-Freudians also posit that low self-regard motivates aggression. For example, Horney (1950) and Adler (1956) theorized that aggression and antisocial behavior are motivated by feelings of inferiority rooted in early childhood experiences of rejection and humiliation. More specifically, Tracy and Robins (2003) suggested that individuals protect themselves against feelings of inferiority and shame by externalizing blame for their failures, which leads to feelings of hostility and anger toward other people. Thus, three separate

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theoretical perspectives posit that externalizing behaviors are motivated, in part, by low self-esteem.

Despite these theoretical arguments, research on the link between low self-esteem and externalizing problems has failed to produce consistent results. An understanding of the precise nature of this relation has important theoretical implications, as well as practical implications given the media attention surrounding the issue. To bring new data to bear on this controversy, we report results from three studies that extend previous research in several ways. First, we used a multimethod approach to assessing self-esteem and externalizing problems. Previous research has relied almost exclusively on self-report measures, so it is possible that the relations that have been observed are due to shared method variance. Second, we examined several theoretically relevant variables that might account for the effects of self-esteem on externalizing problems, including IQ, academic achievement, socioeconomic status (SES), and the quality of parent-child relationships. Third, we used longitudinal data to test the hypothesis that low self-esteem is related to future externalizing problems (Study 2). Finally, we assessed narcissism to examine the possibility that unrealistically high self-esteem is related to aggression and to determine whether self-esteem and narcissism have independent effects (Study 3).

STUDY 1

Study 1 investigated the relation between self-reports and teacher ratings of self-esteem and self-reports of delinquency in a sample of 11- and 14-year-olds. We also controlled for two theoretically relevant variables—supportive parenting and academic achievement—that might account for the effects of self-esteem on delinquency.

Method

Participants

The sample included 292 (78% response rate) 11- and 14-year-old participants (mean age = 12.66 years, $SD = 1.57$; 55% female; 56.5% European American, 4.8% Asian American or Pacific Islander, 20.5% Hispanic American, 9.2% African American, and 9.0% “other” or not reported) from two schools in northern California.

Measures

Self-esteem was measured with the 10-item Rosenberg (1965) Self-Esteem Scale (RSE; $\alpha = .81$) and the 6-item Global subscale of the Harter (1985) Self-Perception Profile for Children (SPPC; $\alpha = .75$). Teachers completed a modified teacher version of the SPPC ($\alpha = .88$).

Delinquency was measured using a 12-item delinquent-behaviors scale adapted from Elliott, Huizinga, and Ageton (1985; $\alpha = .85$).

Supportive parenting (warmth, monitoring, use of inductive reasoning, and consistent discipline) was measured using a modified scale from the Iowa Youth and Families Project (e.g., Conger et al., 1992; $\alpha = .89$).

Academic achievement was measured by a composite of the Math and Reading percentile scores from the Stanford Achievement Test Battery.

Results and Discussion

Self-esteem was consistently negatively correlated with delinquency, regardless of whether self-esteem was assessed by the RSE ($r = -.35$), the self-report version of the SPPC ($r = -.39$), or the teacher version of the SPPC ($r = -.29$; all $p < .05$).¹ To explore these effects further, we compared the self-esteem scores of individuals who reported at least one delinquent act (76% of the sample) and those who reported no delinquent acts. The delinquent group had lower self-esteem than the nondelinquent group on all three self-esteem measures (Cohen's $d = 0.48$, 0.63, and 0.35 for the RSE, self-report SPPC, and teacher SPPC, respectively; all $p < .05$).

Baumeister et al. (1996) focused their critique of the low-self-esteem hypothesis on aggression, and it was possible that our results were due to delinquent behaviors not involving aggression. To address this issue, we divided the delinquency scale into a 2-item aggression scale (“got into a fight,” “beat someone up”) and a 10-item nonaggression scale (e.g., “lied to parents or teachers,” “used drugs or alcohol”). All the effects of self-esteem remained significant for both the aggression scale (rs ranged from $-.17$ to $-.26$, $p < .05$) and the nonaggression scale (rs ranged from $-.28$ to $-.39$, $p < .05$).

To test whether supportive parenting and academic achievement could account for the relation between low self-esteem and delinquency, we used structural equation modeling with latent variables defined by item parcels rather than individual items (Kishton & Widaman, 1994). Supportive parenting was defined by three parcels of eight items; self-esteem was defined by the RSE and the self- and teacher-based SPPC scales; delinquency was defined by three parcels of four items; and academic achievement was modeled as a manifest variable. An initial base model that included only self-esteem and delinquency had good fit, $\chi^2(8) = 9.09$, n.s. (comparative fit index, CFI = 1.00; root mean square error of approximation, RMSEA = .02, p close fit = .76), and the path linking self-esteem to delinquency was negative ($\beta = -.52$, $p < .05$). Figure 1 shows a model controlling for both supportive parenting and academic achievement. This model also had acceptable fit, $\chi^2(30) = 60.07$, $p < .05$ (CFI = .996; RMSEA = .06, p close fit = .24), and the relation between self-esteem and delinquency remained

¹ Age and gender did not moderate the relation between self-esteem and delinquency.

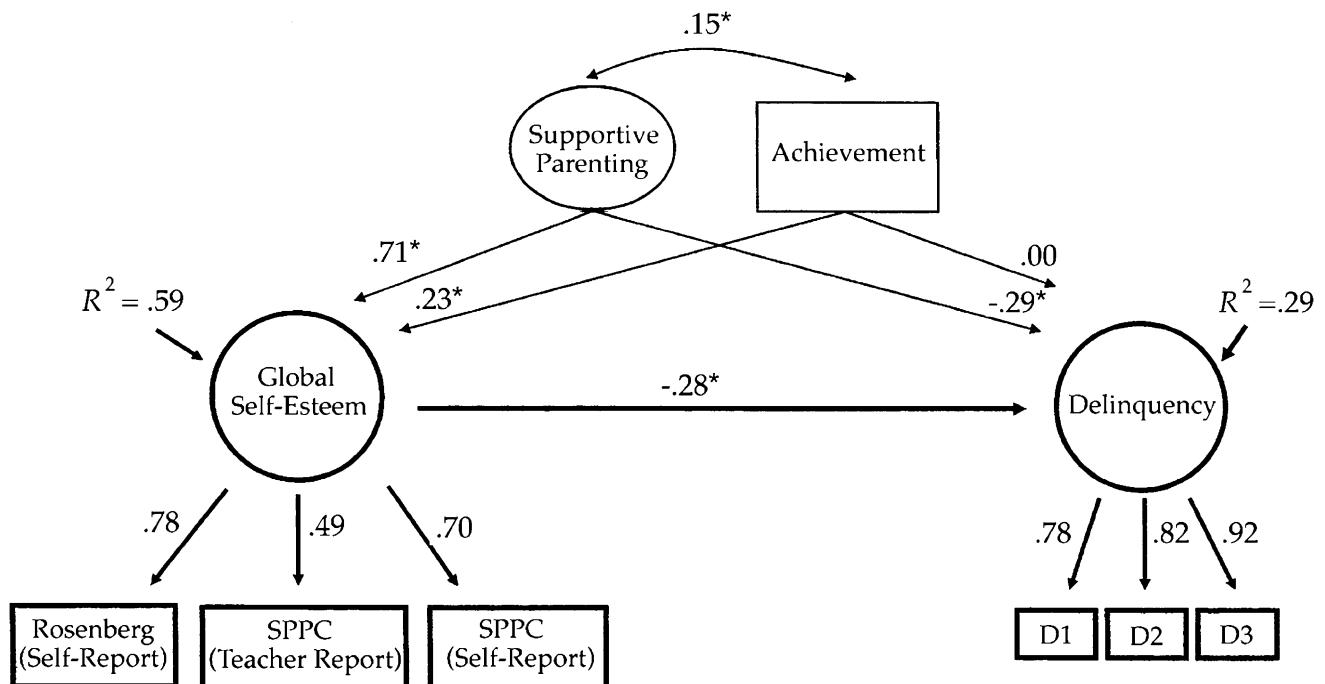


Fig. 1. Model linking global self-esteem and delinquency in Study 1 ($N = 292$). Standardized coefficients are reported, and asterisks indicate structural coefficients significant at the .05 level. Self-esteem was measured with the Rosenberg (1965) Self-Esteem Scale, the Global subscale from Harter's (1985) Self-Perception Profile for Children (SPPC), and a modified teacher report version of the Global subscale from the SPPC. The four-item parcels of delinquency items are labeled D1 through D3. Supportive parenting is a latent construct indexed by three eight-item parcels.

significant ($\beta = -.28, p < .05$). Thus, supportive parenting and academic achievement could not explain the relation between self-esteem and delinquency.

STUDY 2

The results of Study 1 provided support for the low-self-esteem hypothesis. In Study 2, we extended Study 1 in several ways. First, we used a longitudinal design to examine the prospective relation between self-esteem and externalizing problems. Second, Study 2 included non-self-report measures of externalizing problems, specifically, teacher- and parent-rated antisocial behavior. Third, Study 2 examined additional control variables, including the quality of parent-child and peer relationships, SES, and IQ. Finally, Study 2 was based on data from a representative birth cohort of New Zealanders, so the range of externalizing problems in the sample reflects the variation found in the general population.

Method

Sample

Participants were members of the Dunedin Multidisciplinary Health and Development Study (for details, see Moffitt, Caspi, Rutter, & Silva, 2001), a longitudinal investigation of a complete cohort of consecutive births between April 1, 1972, and March 31, 1973, in Dunedin, New Zealand. The present study

included participants who completed a measure of self-esteem at age 11 ($n = 812$; 48% female; 78% of the initial cohort) or age 13 ($n = 736$; 48% female; 71% of the initial cohort).²

Measures

Self-esteem was measured at age 11 and age 13 with the RSE. The use of a yes/no response format resulted in reliabilities that were somewhat lower than usual for the RSE ($\alpha = .64$ at age 11 and .60 at age 13).

Externalizing problems were assessed using the Rutter Child Scale (RCS; Rutter, Tizard, & Whitmore, 1970) and the Revised Behavior Problem Checklist (RBPC; Quay & Peterson, 1987). Teachers completed the RCS when the participants were ages 11 and 13; parents completed the RCS when the participants were age 11 and the RBPC when they were age 13. Information about the reliability and validity of these measures is provided by Moffitt et al. (2001).

Relationship with parents and peers was assessed at age 13 using the Inventory of Parent Attachment ($\alpha = .77$) and the Inventory of Peer Attachment (Armsden & Greenberg, 1987; $\alpha = .80$). These scales measure the degree to which adolescents

²Missing data do not appear to be a major cause for concern given the few differences between participants with and without self-esteem scores: Participants without self-esteem scores at age 11 were rated as more antisocial by their parents than participants with self-esteem scores ($d = 0.23, p < .05$), and participants without self-esteem scores at age 13 were rated as more antisocial by their parents and teachers than participants with self-esteem scores ($ds = 0.17$ and 0.20 , respectively, $ps < .05$).

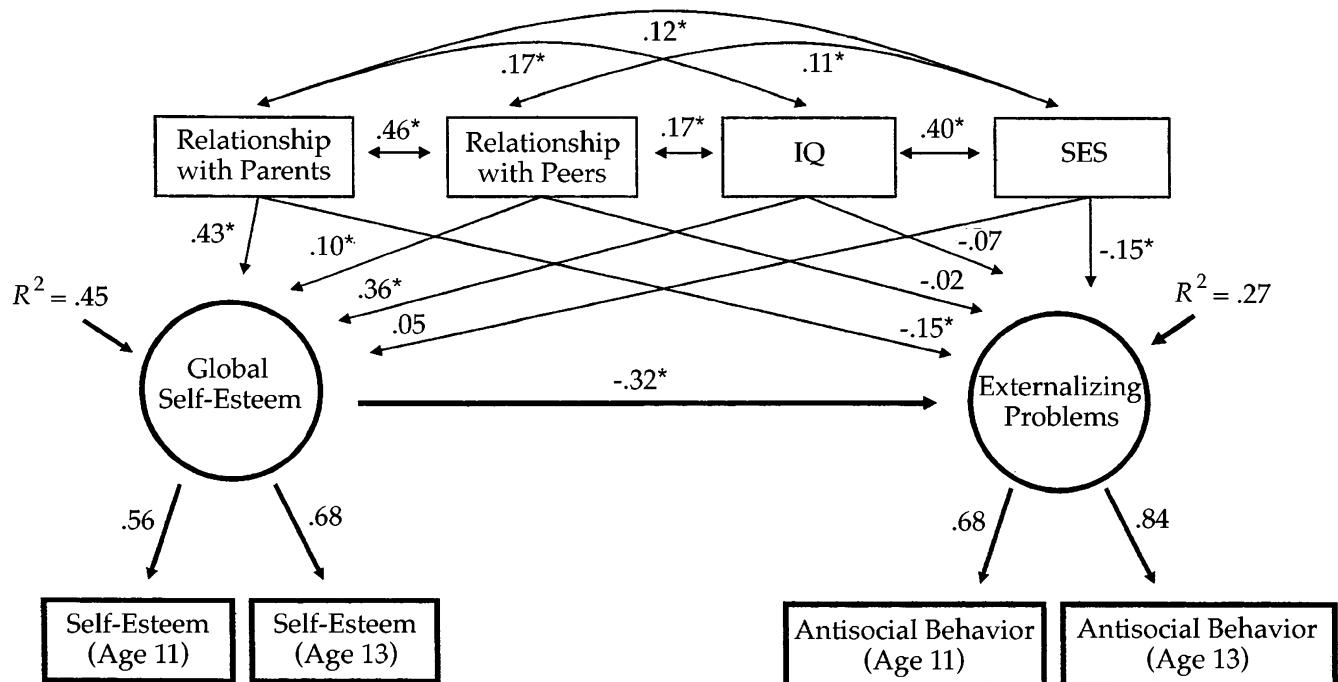


Fig. 2. Model linking self-esteem and externalizing problems in Study 2 ($N = 830$). Standardized coefficients are reported, and asterisks indicate structural coefficients significant at the .05 level.

feel they can trust, communicate with, and are not alienated from their parents or peers.

IQ was assessed using the mean of each participant's scores on the Wechsler Intelligence Scale for Children-Revised (Wechsler, 1974) at ages 7, 9, 11, and 13.

SES was calculated as the average social class of each participant's family from birth to age 15. Scores at each assessment ranged from 1 (parents are unskilled laborers) to 6 (parents are professionals).

Results and Discussion

Relation Between Self-Esteem and Externalizing Problems

Results were consistent with those of Study 1: Self-esteem was negatively correlated with parent reports of externalizing problems ($r = -.18$ at age 11 and $r = -.27$ at age 13, $p < .05$) and with teacher reports of externalizing problems ($r = -.16$ at age 11 and $r = -.18$ at age 13, $p < .05$). Moreover, self-esteem at age 11 was prospectively related to both parent and teacher reports of externalizing problems at age 13 (both $r = -.20$, $p < .05$). As in Study 1, the cross-method effects were significant; individuals with low self-esteem were more likely to engage in antisocial behaviors as reported by their parents and teachers. We divided the items on the antisocial-behavior scales according to whether they involved aggressive (e.g., fighting, bullying) or nonaggressive (e.g., lying, disobedient) behaviors, and the effects of self-esteem remained significant for both the aggression items (r s ranged from $-.13$ to $-.26$, $p < .05$) and the nonaggression items (r s ranged from $-.18$ to $-.21$, $p < .05$).

We next tested whether theoretically relevant third variables could account for the relation between low self-esteem and delinquency. The base model of self-esteem and externalizing problems had good fit, $\chi^2(1) = 3.61$, n.s. (CFI = .99; RMSEA = .06, p close fit = .32), and the path linking self-esteem to externalizing problems was negative ($\beta = -.49$, $p < .05$). Figure 2 shows a model linking self-esteem and externalizing problems, controlling for parent and peer relationships, IQ, and SES. This model had good fit, $\chi^2(9) = 19.81$, $p < .05$ (CFI = .99; RMSEA = .04, p close fit = .78), and the relation between self-esteem and externalizing problems remained significant ($\beta = -.32$, $p < .05$). Thus, parent and peer relationships, IQ, and SES could not explain the relation between self-esteem and delinquency.³

Cross-Lagged Relations Between Self-Esteem and Externalizing Problems

To examine the effect of self-esteem at age 11 on externalizing problems at age 13, we conducted cross-lagged analyses controlling for prior levels of externalizing problems. Although these analyses do not establish causal direction, they help rule out alternative causal interpretations related to temporal sequence. We created latent measures of self-esteem at ages 11 and 13 using five two-item parcels of RSE items, and latent measures of externalizing problems at ages 11 and 13 using an indicator of aggressive behaviors (a standardized composite of

³There was no evidence that gender, IQ, or SES moderated the relation between self-esteem and externalizing problems.

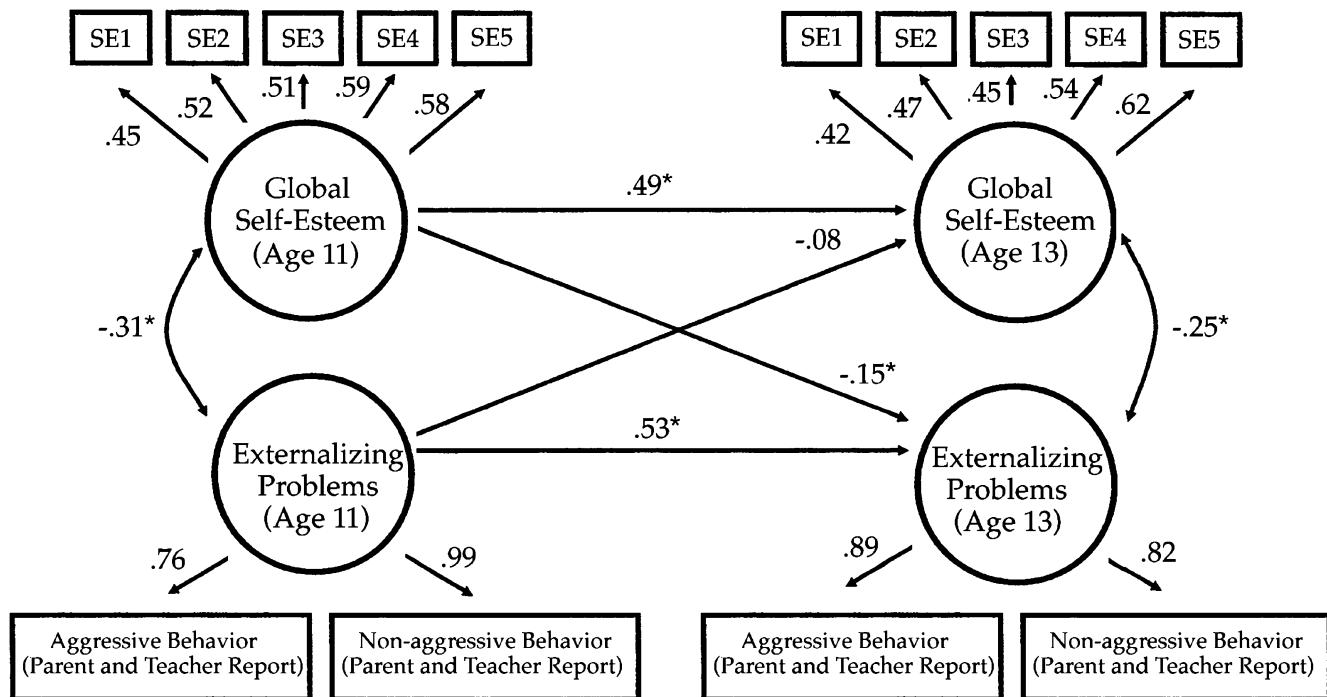


Fig. 3. Cross-lagged model linking self-esteem and externalizing problems in Study 2 ($N = 830$). Standardized coefficients are reported, and asterisks indicate structural coefficients significant at the .05 level. The five two-item parcels of self-esteem items are labeled SE1 through SE5.

parent and teacher reports) and an indicator of nonaggressive behaviors (a standardized composite of parent and teacher reports). To improve model fit, we allowed the errors for the indicators at age 11 to correlate with the same errors at age 13.

Figure 3 shows the cross-lagged model. This model had good fit, $\chi^2(64) = 116.06, p < .05$ (CFI = .99; RMSEA = .03, p close fit = 1.00), and self-esteem was concurrently related to externalizing problems at age 11 ($r = -.31, p < .05$) and age 13 ($r = -.25, p < .05$). The path linking self-esteem at age 11 to externalizing problems at age 13 was negative and significant ($\beta = -.15, p < .05$), whereas the path linking externalizing problems at age 11 to self-esteem at age 13 was negative but not statistically significant ($\beta = -.08, p = .11$). These results are consistent with the claim that low self-esteem leads to increases in externalizing problems. However, given the magnitude of the effect and the nonexperimental design, we are hesitant to conclude that self-esteem causes future externalizing problems.

STUDY 3

The results of Studies 1 and 2 support the low-self-esteem hypothesis. In Study 3, we tested the hypothesis (Baumeister et al., 1996, 2003) that unrealistically high, not low, self-esteem predicts aggression by assessing both self-esteem and narcissism and examining their relations with reports of real-world aggression. Previous research on narcissism has used laboratory measures of aggression, and it is not clear whether the findings generalize to real-world aggression.

Method

Sample

The sample consisted of 3,143 undergraduate students (68.3% female; mean age = 19.6 years, $SD = 1.6$) from a large research university in northern California. They participated in exchange for course credit.

Measures

Self-esteem was measured with the RSE ($\alpha = .90$). *Narcissism* was measured by the 40-item Narcissistic Personality Inventory (Raskin & Terry, 1988; $\alpha = .84$). *Aggression* was assessed using the 29-item Buss-Perry Aggression Questionnaire (AQ; Buss & Perry, 1992). The AQ includes a Total Aggression scale ($\alpha = .90$) and four subscales: Physical Aggression ($\alpha = .83$), Verbal Aggression ($\alpha = .76$), Anger ($\alpha = .81$), and Hostility ($\alpha = .84$).

Results and Discussion

Table 1 shows correlations of self-esteem and narcissism with aggression.⁴ Results were consistent with the findings of Studies 1 and 2: Self-esteem was negatively correlated with the Total Aggression scale of the AQ ($r = -.30, p < .05$) and with all of the subscales except Verbal Aggression. Note that self-esteem was related to the Physical Aggression subscale, which has been linked to real-world displays of violence (Bushman & Wells, 1998). In contrast, narcissism was positively correlated

⁴Gender did not moderate any of these relations.

TABLE 1*Results of Correlational and Regression Analyses Predicting Aggression From Self-Esteem and Narcissism (Study 3)*

Predictor	Total Aggression		Physical Aggression		Verbal Aggression		Anger		Hostility	
	Zero-order correlation	β								
Self-esteem	-.30*	-.39*	-.11*	-.19*	.02	-.09*	-.26*	-.33*	-.48*	-.51*
Narcissism	.18*	.30*	.21*	.27*	.31*	.34*	.14*	.24*	-.05*	.11*
Multiple R	—	.41*	—	.28*	—	.33*	—	.35*	—	.49*

Note. $N = 3,143$.* $p < .05$.

with the Total Aggression scale ($r = .18, p < .05$) and with all of the subscales except Hostility. Thus, we found support for the claim that narcissistic individuals are prone to aggression.

Self-esteem and narcissism were moderately related ($r = .32, p < .05$), so we conducted multiple regression analyses to test whether they had independent effects on aggression (Table 1). In general, the effect sizes increased in the multiple regression analyses (e.g., the zero-order relation between self-esteem and Total Aggression was $-.30$, whereas the regression coefficient controlling for narcissism was $-.39$). We conducted Sobel tests to determine if these apparent suppression effects were statistically significant (MacKinnon, Krull, & Lockwood, 2000). For the total AQ scale and all four subscales, the effects of self-esteem were significantly stronger when narcissism was included in the equation than when it was not included (all $zs > -4.90, ps < .05$), and, similarly, all of the effects of narcissism were significantly stronger when self-esteem was included in the equations (all $zs > 6.28, ps < .05$). Thus, low self-esteem and narcissism contribute independently to aggressive thoughts, feelings, and behaviors, and in fact serve as mutual suppressors.⁵

GENERAL DISCUSSION

In three studies, we found a robust relation between low self-esteem and externalizing problems. This relation held for different age groups, different nationalities, and multiple methods of assessing self-esteem and externalizing problems; after controlling for potential confounding variables; and when we delved beneath the broad construct of externalizing problems and examined specific aggressive thoughts, feelings, and behaviors. Moreover, our results indicate that self-esteem may foretell future externalizing problems; 11-year-olds with low

self-esteem tended to increase in aggression by age 13. Finally, the effect of low self-esteem on aggression was independent of narcissism; in fact, when healthy self-regard was disentangled from narcissistic self-perceptions, the relation between low self-esteem and aggression became even stronger. Thus, our results support the concern (Baumeister et al., 1996) about the dangers of narcissism but do not support the conclusion that low self-esteem is unrelated to externalizing problems. In this section, we discuss conceptual and methodological issues that may help explain the inconsistencies in the literature on the association between low self-esteem and externalizing problems.

Baumeister et al. (1996) suggested that inflated high self-esteem (as captured by measures of narcissism) is a better predictor of aggression than low self-esteem. This suggestion seems to be based on the assumption that low self-esteem and narcissism are opposite ends of the same continuum (self-hate vs. self-love). For example, Baumeister et al. noted that “an effective and valid [self-esteem] scale would identify the arrogant, conceited narcissist just as well as the person who holds an unbiased appreciation of his or her own well-recognized good qualities” (pp. 28–29). Accepting this view may result in the need to pit the low-self-esteem hypothesis against the narcissism hypothesis; that is, antisocial individuals have either low self-esteem or its antithesis, narcissism. Moreover, conceptualizing low self-esteem and narcissism as opposite ends of the same continuum leads to the concern that “the societal pursuit of high self-esteem for everyone may literally end up doing considerable harm” (Baumeister et al., 1996, p. 29).

However, this concern may not be warranted because it is possible to draw a distinction between healthy self-regard and narcissistic self-views. For example, Rosenberg (1965) noted that “when we deal with self-esteem, we are asking whether the individual considers himself adequate—a person of worth—not whether he considers himself superior to others” (p. 62). In contrast, narcissists describe themselves as special, extraordinary people who are better and more deserving than others. Empirically, measures of self-esteem and narcissism typically correlate only in the .20s to low .30s, which is far below the level of convergent validity one would expect between two self-report measures of the same construct. Thus, the precise relation between self-esteem and narcissism remains an open question.

⁵To address the concern that self-esteem lacks predictive validity after controlling for neuroticism (e.g., Judge, Erez, Thoresen, & Bono, 2002), we repeated the analyses reported in Table 1 for the subsample of participants ($n = 2,516$) who completed the Big Five Inventory Neuroticism scale (John & Srivastava, 1999). Controlling for neuroticism reduced the size of the coefficients for self-esteem in Table 1, but they remained statistically significant in all cases (e.g., for predictions of Total Aggression, β for self-esteem = $-.27$ and β for narcissism = $.30, ps < .05$).

Several conceptualizations are currently being debated in the self-esteem literature, including whether narcissism is an exaggerated form of high self-esteem, a particular facet of self-esteem, a highly contingent and unstable form of self-esteem, a need to feel superior to others, or a defensive shell of inflated self-esteem that compensates for unconscious feelings of inadequacy (e.g., Campbell, Rudich, & Sedikides, 2002; Kirkpatrick et al., 2002; Morf & Rhodewalt, 2001; Tracy & Robins, 2003). Although resolving this issue is beyond the scope of this article, our results indicate that self-esteem and narcissism have independent effects on externalizing problems, thus demonstrating their discriminant validity. Moreover, when narcissism is partialled out of self-esteem, the regression coefficient for self-esteem more closely captures Rosenberg's (1965) conceptualization of self-esteem and provides clear support for the low-self-esteem hypothesis.

Another way to reconcile the inconsistent results in the literature is to consider methodological differences between our work and previous laboratory research on self-esteem and aggression. Although experimental measures of aggression have a great deal of external validity (Anderson & Bushman, 1997), they do not necessarily have the same correlates as measures of real-world aggression and antisocial behavior. In fact, in their review of the literature, Anderson and Bushman (1997) noted that lab and real-world studies sometimes produce discrepant results, and suggested that "rather than take the perspective that one 'side' or the other is wrong, it may be more prudent to try to locate the source of the discrepancies in psychological processes that may differ in the two settings" (p. 33).

There are several possible sources of the discrepancy between our findings and those of the previous lab studies. First, lab studies typically examine a specific form of aggression, namely, aggression provoked by a competitive task in which self-evaluative processes have been activated. In contrast, real-world externalizing problems occur in a wide range of contexts, and these other forms of aggression may have distinct correlates.

Second, aggressive behavior in the lab does not lead to any serious harm to the other person, whereas real-world aggression often does; blasting someone with white noise does not have the same consequences as hitting someone. The correlates of milder forms of aggression, particularly those that have no clear negative repercussions, may differ from the correlates of other forms of aggression.

Third, aggressive behaviors occurring in the lab are not anti-social to the same extent as real-world aggression. One could argue that it is socially appropriate to blast one's opponent with white noise in the context of an experiment that has been sanctioned by the university. In contrast, the externalizing behaviors assessed in the present research are explicitly socially undesirable, antisocial, and in most cases illegal. Thus, the discrepancy between our findings and those of previous lab studies may reflect the fact that individuals with narcissistically high self-esteem are more likely to be aggressive when it is

socially desirable (e.g., lab paradigms for assessing aggression, athletic events, some corporate settings), whereas individuals with low self-esteem are more likely to be aggressive when it is socially undesirable and contrary to social norms. Future research should examine the specific motivational processes underlying different forms of aggressive behavior in individuals with low versus high self-esteem.

Finally, the relation between low self-esteem and aggression was generally small to moderate in the present studies. This result might provide the simplest explanation for inconsistencies in the literature. If the true effect size is small, then it is not surprising that some studies have reported null findings because of lack of power and fluctuations in observed effect sizes across samples due to systematic and random factors. Moreover, from a meta-analytic perspective, variation in effect sizes across studies indicates the presence of moderator variables. Thus, researchers need to develop theoretical models that generate testable predictions about the boundary conditions on the effect of low self-esteem.

Although much work on these exciting and controversial topics remains to be completed, we believe it is reasonable to conclude that both low self-esteem and narcissism contribute to externalizing problems. Our findings provide strong support for a replicable link between low self-esteem and externalizing problems, and we recommend that the low-self-esteem hypothesis not be discarded prematurely.

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