INTRODUCTION

Although some recent literature suggests that high self-esteem is linked to aggressive behavior [Baumeister et al., 1996; Kirkpatrick et al., 2002], findings concerning the association between self-esteem and aggression have still been inconsistent. Specifically, some researchers have noted a link between elevated levels of self-esteem—particularly in the form of narcissism—and aggression [e.g., Barry et al., 2007; Baumeister et al., 2000; Bushman and Baumeister, 1998; Washburn et al., 2004], whereas other studies have shown an association between low self-esteem and aggression [e.g., Donnellan et al., 2005; Ferguson and Horwood, 2002]. As a result of these disparate findings, questions remain regarding the role of self-perception variables in aggressive behavior. One issue involves distinguishing between narcissism and self-esteem, which are related, but separate constructs. In essence, self-esteem involves one’s self-evaluation, whereas narcissism includes a presentation that implies that one’s self-esteem is quite high but may actually involve an unstable sense of self-worth [Zeigler-Hill, 2006] with a preoccupation toward receiving admiration and positive appraisals from others [Raskin et al., 1991]. The present study attempts to shed additional light on the association between self-perception (i.e., self-esteem, narcissism) and aggression in adolescents by examining one potential contributing variable, locus of control (LOC).

According to Rotter [1990], LOC refers to the extent to which someone believes that outcomes are based on his or her own actions or “personal characteristics versus the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable” (p. 489). Individuals with more of an external LOC tend to believe that events in their lives are controlled by external forces over which they have no control, whereas an internal LOC is the belief that outcomes in one’s life are under his/her own control [Rotter, 1990]. An internal LOC has been related to a host of positive outcomes, including high academic achievement in adults [Findley and Cooper, 1983] and emotional well-being in adolescent girls [Armstrong and Boothroyd, 2008]. High self-esteem has also been associated with an internal
LOC [Griffore et al., 1990], with low self-esteem corresponding to an external LOC. Moreover, an external LOC has been related to negative outcomes such as aggression [Zainuddin and Taluja, 1990] and depression [Aiken and Baucom, 1982] in adults.

One’s LOC could influence the connection between self-perception and aggression. For example, individuals with low self-esteem may engage in aggression if they also feel that they are helpless and lack control in their lives. Aggression may be one way to gain a sense of control and boost one’s self-perception. Another possibility is that these individuals resort to aggression in an attempt to shield their low self-worth by acting in a hostile or coercive manner toward others. Essentially, although both external LOC and low self-esteem may each be risk factors for aggression, the presence of both variables may further heighten the risk for aggression. To date, this issue has not been extensively investigated, particularly in adolescents. Because high self-esteem per se has not linked to strong concerns with social status or the opinions of others [Baumeister et al., 2000; Kernis, 2003], individuals with high self-esteem may not feel a need to use aggression to obtain social goals to exert control. Therefore, LOC may not have an impact on the relation between high self-esteem and aggression.

However, as noted above, narcissism—one form of an inflated self-perception or overly positive self-presentation—has been associated with aggression. Baumeister et al. [2000] emphasize the importance of considering additional risk factors for aggression aside from a global sense of self-esteem, and they assert that it is too simplistic to think of self-regard as either high or low. Specifically, it may not be high self-esteem, but a threatened ego for individuals with a seemingly exaggerated level of self-esteem, which promotes aggression [Baumeister et al., 2000; Bushman and Baumeister, 1998]. Overall, low self-esteem may be related to aggression, especially self-reported aggression [e.g., Donnellan et al., 2005; Ferguson and Horwood, 2002; Tracy and Robins, 2003], but when positive self-perceptions take on the form of narcissism, a correlation between positive self-perceptions and aggression emerges [e.g., Baumeister et al., 2000; Bushman and Baumeister, 1998]. In the present study, we consider LOC as one variable that may shed light on when low self-esteem and inflated self-perceptions (i.e., narcissism) would be related to aggressive behavior.

Researchers have examined different potential moderating variables in regards to narcissism and aggression. The most extensively investigated variable is ego threat (e.g., negative performance feedback). Individuals with higher levels of narcissism are believed to be invested in protecting a positive self-image; therefore, the individual may respond aggressively if he/she feels that his/her self-worth is under attack or scrutiny [Baumeister et al., 2000]. Ego threat may be an important variable in the narcissism–aggression relation, but it is obviously not the only factor, as other variables (e.g., attributional style) have been shown to play a role [Stucke, 2003]. LOC has not been previously studied as a factor in the narcissism–aggression relation. However, an internal LOC among individuals who typically strive for control and power may increase the likelihood that these individuals would respond if that control is threatened. Aggression could serve important social functions for individuals with high levels of narcissism as well as for individuals with low self-esteem.

Aggression research has identified two commonly discussed functions of aggression: reactive and proactive [see Marsee et al., in press]. Reactive aggression is thought to be impulsive and unplanned in response to a perceived threat [Dodge and Coie, 1987]. On the other hand, proactive aggression describes actions that are planned in an attempt to gain something [Dodge and Coie, 1987]. No perceived threat or provocation needs to occur for an individual to engage in proactive aggression. Distinguishing between these different manifestations of aggression may help clarify the underlying motives of individuals with higher levels of narcissism. Results have been inconsistent regarding the connection between adolescent narcissism and reactive aggression, with at least one study showing such an association [Thomaes et al., 2008] and another showing a lack of association [Seah and Ang, 2008].

Seah and Ang [2008] found that narcissism was associated with self-reported proactive aggression as did Washburn and et al. [2004]. Similarly, individuals with narcissistic traits tend to exploit others to achieve their goals [Hotchkiss, 2005], as a main goal for these individuals is maintaining their supposed superior social status [Morf and Rhodewalt, 2001]. If such individuals believe that they control the outcomes in their lives, they likely take action, including through proactive aggression, to achieve a desired goal. Because narcissistic individuals want to appear to have control over events in their lives [Raskin et al., 1991], it is possible that proactive aggression is one tool that they would use to exert control in hopes of obtaining a desired outcome. Therefore, internal LOC may actually be associated with proactive aggression among individuals with narcissistic traits because of the heightened sense of control or need for power that are tied to narcissism [e.g., Raskin and Terry, 1988]. Since individuals with narcissistic traits tend to exploit others.
to achieve their goals [Hotchkiss, 2005], they may try to exert their heightened sense of control through exploitation of others, including acting aggressively toward them. An internal LOC may not increase the risk of goal-directed aggression for individuals low on narcissism who do not have a strong desire for status or power over others. Therefore, individuals with high levels of narcissism in combination with an internal LOC may be more likely to act aggressively to maintain their perceived dominance. Such a model would presumably not explain the connection between narcissism and reactive forms of aggression, which appear to emerge specifically after socially threatening situations [Bushman and Baumeister, 1998].

Low self-esteem has been associated with both proactive and reactive aggression in young adolescents [Barry et al., 2007]. Different from the pattern expected for narcissism, low self-esteem may be tied to both reactive and proactive forms of aggression, especially for adolescents with an external LOC. Individuals with low self-worth coupled with a sense of uncontrollability may respond aggressively after a perceived threat to their self-image to protect themselves from further degradation. They may also proactively utilize aggressive tactics in an attempt to gain control due to the perceived helplessness they feel. Such a pattern may actually underline findings that youth who are both bullies and victims of bullying tend to have lower self-esteem than their peers who are engage in bullying behavior but are not victimized [Pollastri et al., 2010].

Hypotheses

Self-esteem was expected to be positively correlated with narcissism and an internal LOC but negatively correlated with both reactive and proactive aggression (Hypothesis 1). It was hypothesized that narcissism would be associated with proactive aggression and an internal LOC (Hypothesis 2). It was also predicted that LOC would moderate the self-esteem–aggression relation such that low self-esteem would be associated with both forms of aggression for individuals who demonstrate an external LOC (Hypothesis 3). Finally, it was predicted that LOC would moderate the narcissism–aggression relation such that narcissism would be particularly associated with proactive aggression among individuals with more of an internal LOC (Hypothesis 4).

METHOD

Participants

Participants were 174 youth (145 males, 26 females) who ranged in age from 16 to 19 (M = 17.04 years, SD = .88). Participants were enrolled in a voluntary 22-week military-style residential program for youth who have dropped out of school. The majority of participants (60.3%) were Caucasian, with 37% of participants self-identifying as African American, and 2.7% identifying themselves as being from other racial/ethnic backgrounds.

Materials

Demographic information. Participants reported their racial/ethnic background, age, and sex. Age was obtained primarily for descriptive purposes. However, sex and racial/ethnic background were explored as potential moderators in the relations under investigation, although no a priori hypotheses were made regarding these demographic characteristics.

Rosenberg Self-Esteem Scale [RSE; Rosenberg, 1965]. The RSE has been widely used in the study of self-esteem and consists of ten items rated on scales ranging from 0 (strongly disagree) to 3 (strongly agree). The present study revealed an internal consistency of .87 for the total RSE score.

Narcissistic Personality Inventory for Children [NPIC; Barry et al., 2003] The NPIC is derived from the Narcissistic Personality Inventory (NPI) for adults [Raskin and Terry, 1988] and contains 40 forced-choice items. The NPI was developed to measure nonpathological narcissism [Raskin and Hall, 1979]. Narcissism, as measured by the NPIC, appears to capture notions of grandiosity, entitlement, and vanity that are thought to be fundamental to the construct [Barry and Wallace, 2010]. For each item, participants chose one statement from a pair (e.g., “I can talk my way out of anything” or “I try to accept what happens to me because of my behavior”) and then rated the selected statement as being “sort of true” or “really true,” resulting in a 4-point response scale for each item. The present study revealed an internal consistency coefficient alpha of .83 for the NPIC.

Rotter’s Internal–External Locus of Control Scale [Rotter, 1966] Rotter’s Internal–External Locus of Control Scale was designed to assess an internal (e.g., “People’s misfortunes result from the mistakes that they make”) versus an external (e.g., “Many of the unhappy things in people’s lives are partly due to bad luck”) LOC. This measure has been previously used with adolescents [e.g., Ugualk et al., 2007]. Internal consistency ranged from .65 to .79, and test–retest reliability ranged from .55 to .83 in the initial research on this scale [Rotter, 1966]. The present study revealed a low internal consistency coefficient alpha of .42 for this scale.
TABLE I. Correlations Among the Variables of Interest

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<tr>
<td>1. Self-esteem</td>
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<td>2. Narcissism</td>
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<td>4. Overall aggression</td>
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<td>5. Proactive aggression</td>
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<td>6. Reactive aggression</td>
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<td>7. Gender</td>
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Note. LOC, locus of control. Gender coded as 0 = male, 1 = female.

*P < .05; **P < .01.

Peer Conflict Scale [PCS; Marsee et al., 2004]
The PCS is a self-report questionnaire designed to measure aggression. Participants rated each item (e.g., “I start fights to get what I want”) on a scale from 0 (not at all true) to 3 (definitely true). In a recent confirmatory factor analysis there was support for separate dimensions assessing reactive and proactive aggression for both boys and girls and across high school, detained, and residential samples [Marsee et al., in press]. The current sampled revealed internal consistency coefficients of .94 and .91 for proactive and reactive aggression, respectively. An overall coefficient alpha of .96 was revealed for the current sample.

Procedure
Parental informed consent was obtained at the time that adolescents enrolled in the intervention program, with approximately 90% of parents allowing the researchers to describe the study to them and consenting for their adolescents to be invited to participate. After consent from the parents, the youth were given the opportunity to agree or refuse to participate in the study through signing an informed assent form. Refusal to participate in the study did not affect a youth’s status in the intervention program. Surveys were completed in a classroom setting in groups of approximately 12–18 adolescents. Data collection for this study and the larger project of which it was a part required approximately three 45-min sessions that took place over the course of 2 weeks.

RESULTS
The variables of interest demonstrated adequate variability to test the associations of interest. However, aggression was positively skewed (i.e., proactive aggression, 2.35; reactive aggression, 1.35), which reflects the fact that some individuals reported high levels of aggression, whereas most participants reported little or no aggression.\(^1\) Correlational analyses were conducted to examine the relations among the variables of interest (i.e., overall aggression, reactive and proactive aggression, LOC, narcissism, and self-esteem) with results shown in Table I. First, self-esteem was negatively correlated with overall aggression, \( r = −.20, P = .03 \), proactive aggression, \( r = −.17, P = .03 \), and reactive aggression, \( r = −.20, P = .01 \), but positively correlated with narcissism, \( r = .28, P = .01 \). As expected, self-esteem was negatively correlated with the measure of LOC, \( r = −.22, P = .01 \), such that higher levels of self-esteem were associated with more of an internal LOC. Therefore, Hypothesis 1 was supported. Narcissism was positively correlated with proactive aggression, \( r = .16, P = .05 \), but it was not significantly associated with LOC. Therefore, Hypothesis 2 was partially supported.

A multiple regression analysis was used to test our prediction that LOC would moderate the association between self-esteem and aggression (see Table II). Centered predictor scores were used, with the interaction term for self-esteem and LOC entered on a subsequent step. For proactive aggression, there was no significant main effect for self-esteem or LOC in this model, \( R^2 \) for the model = .05, \( P = .03 \). However, there was a significant interaction between LOC and self-esteem on the subsequent step, \( \beta = −.19, P = .02 \), change in \( R^2 \) = .03. Regression lines depicting the interaction model were graphed (see Fig. 1) according to the procedures outlined by Holmbeck [2002]. As indicated in Figure 1, the combination of low self-esteem and an external LOC was associated with the highest levels of proactive aggression. Internal LOC did not

\(^1\)In an attempt to correct for skew, the aggression variables were transformed. Initially, the variables were trimmed. Specifically, the top 5% of the data were removed. This procedure did not impact the results of the study. Next, the data were winsorized so that the top two extreme scores were changed to one score above the next highest score. Again, the results remained unchanged. Therefore, analyses reflect the full sample data.
TABLE II. Multiple Regression Analyses with Self-Esteem and External locus of control (LOC) as Predictors of Overall Aggression, Reactive Aggression, and Proactive Aggression

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<td>Main effects</td>
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<tr>
<td>Self-esteem</td>
<td>−.18*</td>
<td>−.12</td>
<td>.03*</td>
<td>−.14</td>
<td>−.08</td>
<td>.03*</td>
<td>.05</td>
<td>−.14</td>
<td>.03*</td>
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<td>External LOC</td>
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<td>.15</td>
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<td>−.20*</td>
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<td>SE × LOC</td>
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<td>R² for model</td>
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Note. SE, self-esteem.
*P < .05; **P < .01.

Fig. 1. Interaction between self-esteem and locus of control (LOC) in the prediction of proactive aggression.

Fig. 2. Interaction between self-esteem and locus of control (LOC) in the prediction of reactive aggression.

appear to influence the relation between self-esteem and proactive aggression.

The steps of this multiple regression were repeated using reactive aggression as the criterion variable. There was a significant main effect for self-esteem, β = .20, P = .02, R² for the model = .05, P = .03, indicating a negative association between self-esteem and reactive aggression, but there was no significant main effect for LOC. The main effect of self-esteem was qualified by its interaction with LOC, β = −.17, P = .04, change in R² = .03. Regression lines depicting the interaction model were graphed (see Fig. 2). The pattern of this interaction was similar to that found for proactive aggression. For the prediction of overall aggression, there was also a self-esteem by LOC interaction that followed the same pattern (see Table II). It should be noted that LOC by self-esteem interactions held while controlling for both gender and race, and neither of these variables moderated any of these relations. Therefore, Hypothesis 3 was supported.

Hypothesis 4 predicted that LOC would moderate the relation between narcissism and proactive aggression. Multiple regression analyses were also used to test this hypothesis (see Table III). In the model predicting proactive aggression, there was a significant main effect for narcissism, β = .15, P = .04, indicating a positive association between narcissism and proactive aggression. In addition, there again was a significant main effect for LOC, β = .21, P = .01, with external LOC predicting higher proactive aggression. However, there was no significant interaction between narcissism and LOC for predicting proactive aggression. For reactive aggression, there were no significant main effects or interactions, whereas there was only a main effect for external LOC in the model predicting overall aggression (see Table III). Therefore, Hypothesis 4 was not supported. It should be noted that there was not a significant LOC by narcissism interaction while controlling for race and that race did not moderate any of the relations involving narcissism.

To test whether gender influenced the findings regarding narcissism and LOC, a three-way interaction involving narcissism, gender, and LOC was examined using multiple regression analysis. For proactive aggression, prior to entering the interaction terms, there was a significant main effect for LOC, β = .23, P = .01, indicating a positive association between external LOC and proactive aggression. The addition of the interaction terms revealed a significant two-way interaction between gender and narcissism in the prediction of proactive aggression, β = −.28, P < .001. The change in R², including all interaction terms was .09, change in F(3, 149) = 5.35, P = .01. The regression lines depicting the two-way interaction were graphed according to the procedures outlined by Holmbeck
TABLE III. Multiple Regression Analyses with Narcissism and External locus of control (LOC) as Predictors of Overall Aggression, Reactive Aggression, and Proactive Aggression

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<th>Overall aggression</th>
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<td>Main effects β</td>
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<td>Narcissism</td>
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<td>External LOC</td>
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<td>R² for model</td>
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<td>Note. Narc. narcissism.</td>
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* P < .05; ** P < .01.

Fig. 3. Interactions of narcissism, gender, and locus of control (LOC) in the prediction of proactive aggression.

Fig. 4. Interactions of narcissism, gender, and locus of control (LOC) in the prediction of reactive aggression.

In the present study, self-esteem was negatively correlated with aggression. This finding is consistent with some previous research particularly in regards to self-reported aggression [e.g., Donnellan et al., 2005]. Other literature, however, suggests that inflated, fragile, or unstable self-esteem, rather than absolute level, may be factors in aggression [Kernis et al., 1989]. Thus, the association between self-esteem and aggression continues to appear complex. The current findings underscore the importance of considering factors.
that may influence the relation between self-esteem and aggression. It appears to be entirely too simplistic to suggest that either high or low self-esteem causes aggression. Rather, it may be more useful to examine the unique role of self-esteem in aggressive behavior relative to other self-perception variables, including narcissism, as well as the factors that might help contribute to an association between self-esteem and aggression.

Results from the present study suggest that LOC is one factor that influences the relation between adolescent self-esteem and both reactive and proactive aggression. As with the present study, a low self-esteem/external LOC combination has been associated with negative consequences in adults [e.g., Zainuddin and Taluja, 1990]. On the other hand, an internal LOC is usually associated with adaptive characteristics [e.g., Armstrong and Boothroyd, 2008]. Likewise, in the present study, an internal LOC was not associated with aggression and did not heighten the risk of aggression based on either self-esteem or narcissism. Therefore, aggression may be pronounced in adolescents who not only have negative self-perceptions but who also perceive a lack of control over events. Aggressive behaviors could be a coping mechanism such that these individuals may use aggression to regain control over outcomes that are perceived both negatively and out of their control. For example, an adolescent who is being teased may respond with reactive aggression to regain control of the situation and ultimately end the aversive experience. Likewise, an adolescent may use proactively aggressive means as a way of bolstering their low self-concept. On the other hand, individuals with secure high self-esteem may not feel like they have to resort to such strategies in response to negative events [Zeigler-Hill, 2006].

An additional possibility not examined in this study is that individuals who exhibit more aggression may develop an external LOC and lower levels of self-esteem due to the consequences of their behavior. Aggressive individuals may not be viewed favorably by their peers thus influencing their self-esteem in a negative manner. These individuals may also feel that they have no control over social outcomes because of peer rejection resulting from their behavior, furthering their external LOC and low self-esteem. Future research should examine this possibility through longitudinal designs. It is important to determine the direction of this relation for treatment and intervention. If aggression is the precipitant for lower self-esteem and an external LOC then reducing the individual's aggression through strategies aimed at increasing impulse control and improving coping with negative events would be primary. However, if an external LOC coupled with low self-esteem tends to result in subsequent aggression then those perceptions take on central importance in intervention efforts.

Contrary to expectations, LOC was not related to narcissism in this sample. Additionally, narcissism was not significantly correlated with reactive aggression. This finding is inconsistent with some previous findings [e.g., Barry et al., 2007; Bushman and Baumeister, 1998; Stucke, 2003; Washburn et al., 2004]. It should be noted that reports of aggression for this sample were significantly skewed (see Table I); thus, this particular sample of adolescents may have been relatively unlikely to report using reactive aggression, irrespective of their levels of narcissism. It is also interesting to note that narcissism was associated with high levels of both proactive and reactive aggression in this sample for males but not for females, a finding that is consistent with other research and may point to socialized differences in how males and females with narcissistic tendencies respond to stressful situations [Thomaes et al., 2010]. Thus, further research should consider if narcissism is a particular risk factor for male aggression, whereas females with narcissistic tendencies may engage in other coping strategies. Another consideration is that self-report measures may not be sensitive enough to pick up on reactive aggression. Indeed, previous studies of narcissism and aggression have often measured reactive aggression by provoking an individual in a laboratory situation [e.g., Bushman and Baumeister, 1998; Thomaes et al., 2008].

Participants with high levels of narcissism were still relatively likely to report engaging in proactive aggression, consistent with other findings [Seah and Ang, 2008]. Bogart et al. [2004] suggest that because social comparison is particularly important to people who are higher on narcissistic traits, these individuals may be more likely to direct efforts at increasing their social status relative to others. However, when typical social interactions do not help improve these individuals’ grandiose images, they are likely to respond with aggression [Raskin et al., 1991]. Proactive aggression may be one approach used by individuals with high levels of narcissism to gain the respect and admiration of their peers. The present study indicated that LOC does not play a significant role in this process; thus, future research should be devoted toward further identification of variables that do. For example, Ang et al. [2010] concluded that beliefs supporting about aggression helped explain the link between narcissism and bullying behavior.
It is important to note that the present study revealed a low internal consistency coefficient alpha of .42 for the measure of LOC. In addition, as previously stated, participants in this study were enrolled in a military-style residential program. To be successful in the program, youth had to follow a strict schedule and abide by program rules. Consequently, the measure of LOC may not have fully reflected participants’ general propensities toward an internal or external LOC. Although speculative, it is plausible that, at the time of this study, participants felt a lack of control over events and their environment, even though some of them may typically have a greater sense of personal control outside of the program.

The current study had a number of additional limitations, one of which was the generalizability of this sample to the overall population of adolescents, as participants were at-risk adolescents enrolled in a residential program. In addition, this sample consisted mainly of Caucasian males. Nevertheless, given the at-risk nature of this sample, it had the potential advantage of demonstrating good variability on the constructs of interest in this study, including aggression that although skewed, may have been higher and more variable than what would have been observed in a community sample. Another important limitation was the reliance upon the individual’s self-report for all variables examined in this study. Self-reports could be affected by socially desirable responding, attempts to deceive the researcher, or inaccurate recall of past behaviors. Consistent with other research (e.g., Webster and Kirkpatrick, 2006), self-reported aggression was associated with self-reported low self-esteem in the present study; however, the use of other methods of assessing aggression may have contributed to some of the inconsistent findings noted above. In particular, the connection between self-esteem and aggression may not hold for reports of aggression made by other informants (see Thomaes and Bushman, 2011). Self-report measures are useful in their convenience and in their unique ability to evaluate self-perception constructs (e.g., self-esteem, narcissism, LOC) such as those examined in this study. Nevertheless, future studies should employ other methods to evaluate some of the variables of interest. Lastly, as noted above, the internal consistency for the Rotter may have been lower and may have made it harder to detect relations of interest, even though some hypothesized effects were detected. This issue underscores the need to consider alternative means of assessing these constructs.

Future studies should address some of these limitations by obtaining data from additional sources and different samples (e.g., community). Replication in a community sample is needed to determine, for example, if the results would differ depending on factors such as context or the sample distribution of aggression. Although this study provides information on the low self-esteem/external LOC relation for predicting aggression in adolescents, additional moderating variables may also play a role (e.g., hostile attributions, ego threat, shame) and are worthy of further consideration. As noted above, there are mixed views on the relation between self-esteem and aggression [e.g., Bushman and Baumeister, 1998; Donnellan et al., 2005]. However, to help clarify this issue, there appear to be variables that influence how self-esteem relates to aggression. It will be critical for future investigations to designate important intrapersonal, contextual, and developmental factors that influence the self-perception-aggression relation and that, in turn, might inform efforts to curtail youth aggression.

REFERENCES


