Self-Esteem in Pure Bullies and Bully/Victims: A Longitudinal Analysis

Alisha R. Pollastri, Esteban V. Cardemil, and Ellen H. O’Donnell

Abstract
Past research on the self-esteem of bullies has produced equivocal results. Recent studies have suggested that the inconsistent findings may be due, in part, to the failure to account for bully/victims: those children who both bully and are victims of bullying. In this longitudinal study, we examined the distinctions among pure bullies, pure victims, bully/victims, and noninvolved children in a sample of 307 middle school students. Analyses of cross-sectional and longitudinal results supported the importance of distinguishing between pure bullies and bully/victims. In addition, results revealed some interesting sex differences: girls in the pure bully and bully/victim groups reported significant increases in self-esteem over time, with girls in the pure bully group reporting the greatest increase, whereas boys in these groups reported no significant changes in self-esteem over time.

Keywords
bullying, self-esteem, bully/victims, peer aggression, sex differences

Bullying is a subset of aggressive behavior in which verbal or physical violence is used over time in a relationship characterized by an imbalance of

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strength and power (Olweus, 1993). In the United States, nearly 1 in 3 youths report that they are involved “moderately” or “frequently” in a bullying relationship, and many researchers have found that such involvement (as bullies, victims, or both) is associated with poorer psychosocial adjustment and long-term negative consequences (for a review, see Smith, 2004).

Although the relationships between bullying and psychosocial adjustment across many domains are well documented, results from the past decade’s research on the relationship between bullying and self-esteem in particular have been inconsistent. Identification of the factors that affect self-esteem is essential because self-esteem is arguably one of the central and most important aspects of the self-concept (Greenwald, Bellezza, & Banaji, 1988), having been found to affect competition, social conformity, attraction, achievement, helping, and coping with stressful life events (Campbell & Lavallee, 1993). Research has also suggested that self-esteem is closely related to depression, hopelessness, and the contemplation of suicide (Nolen-Hoeksema, Larson, & Grayson, 1999). Moreover, research has found that self-esteem can be highly influenced by factors such as family experiences, peer interactions, and life events (Block & Robins, 1993), making it likely to be affected by experiences like bullying and victimization.

Although change in self-esteem has been documented from late childhood through early adulthood, research on self-esteem during the transition to middle school in particular has found that peer strain during this time can lead to decreased self-esteem (Fenzel, 2000; Wenz-Gross, Siperstein, Untch, & Widaman, 1997). Given that peer status in late elementary school remains generally stable into high school (Zettergren, 2005), it is particularly important to understand the ways in which peer strain, such as that caused by bullying and victimization, might affect self-esteem during this transition from late childhood into early adolescence.

Research examining the relationship between bullying and self-esteem has primarily focused on the self-esteem of victims, and results consistently indicate that children who are victimized have significantly lower self-esteem than those who are not victimized (for a review, see Hawker & Boulton, 2000). However, research on children who bully others has not produced such clear results. It has often been assumed that those who bully have low self-esteem, but this assumption has received equivocal empirical support (see Baumeister, Smart, & Boden, 1996). Though some research has found that children who bully have lower self-esteem than those who do not bully (e.g., Rigby & Cox, 1996), others have found this not to be the case (e.g., Olweus, 1993; Slee & Rigby, 1993). Still others have found that children who bully have higher self-esteem than those who do not (Kaukiainen et al., 2002).
What might explain these inconsistent findings? O’Moore and Kirkham (2001) argue that it may be due in part to the failure to account for bully/victims: those children who both bully and are also victims of bullying. Research on this group of children suggests that, in general, bully/victims exhibit more disturbed psychosocial functioning as compared to pure victims, pure bullies, and uninvolved children (Haynie et al., 2001; Schwartz, Proctor, & Chien, 2001). Bully/victims have been described as exhibiting an overreactive or emotionally dysregulated pattern of behavior, such that their aggressive behaviors are less goal directed and more reactive than the behaviors of children who bully but are not victimized (Olweus, 1978; Stephenson & Smith, 1989). In a promising series of studies by O’Moore and colleagues (for a summary, see O’Moore & Kirkham, 2001), the relationship between bullying and self-esteem was inconsistent until bully/victims were excluded from the sample.

The recent move to conduct research on bully/victims has been valuable for a number of reasons. First, it has led to the identification of children who are most at risk for problems in adjustment (e.g., Schwartz et al., 2001). Second, the distinction between bully/victims and pure bullies has provided a possible clue as to the previously unclear relationship between bullying and self-esteem. That is, if previous research on bullies included children who should have more appropriately been considered bully/victims, then comparisons across studies would yield inconsistent and confusing results. To date, however, studies of bullying and self-esteem that account for bully/victims are rare.

The Current Study

To further our understanding of the relationship between bullying and self-esteem, we conducted a study that addresses some of the limitations of prior research. First, we distinguished between pure bullies and bully/victims to extend the current research on bully/victims and to clarify the aforementioned inconsistent findings. Second, we conducted this study longitudinally, as, to our knowledge, no research has longitudinally examined the relationship between bullying and self-esteem in particular.

In this study, therefore, we examine the concurrent and longitudinal relationships between type of bullying involvement and self-esteem. We had several hypotheses. First, consistent with the research that has indicated an emotionally dysregulated coping pattern and the poorest psychosocial adjustment for children who are bully/victims, we predicted that the children in this group would have the lowest self-esteem at the start of the study and would
report decreasing self-esteem over time. Second, consistent with the findings of O’Moore and Kirkham (2001), we predicted that children who endorsed bullying (but denied being a victim) at the beginning of the study would have higher self-esteem than pure victims and bully/victims. We also predicted that pure bullies would report increasing self-esteem over time, as engaging in bullying behaviors over time without also experiencing victimization by others may signify a dominant role in the social environment, which increases in importance as children enter adolescence (e.g., Wigfield & Eccles, 1996). Finally, it has been reported that in childhood and adolescence, girls typically begin to experience a decrease in self-esteem whereas the self-esteem of boys typically increases or stays the same (Block & Robins, 1993; McLeod & Owens, 2004). Therefore, we were interested in exploring whether a sex difference exists in the relationship between involvement in the bullying relationship and the change in self-esteem over time.

**Method**

**Participants**

Participants were students from four schools located in two cities in the northeast United States. Participants for this study were initially recruited for a longitudinal study examining depressive symptoms among a sample of low-income and minority children and were chosen because of proximity to the sponsoring university. All four schools were located in urban, low- to lower-income neighborhoods. Three of the four schools reported that the familial economic situations of more than 84% of the students made them eligible to receive free or reduced-price lunch. The fourth school reported that 44% of students were eligible to receive free or reduced-price lunch, which is still higher than the state average (29%). All four of the schools had very racially and ethnically diverse populations.

Approval for this research was sought and obtained from the university’s institutional review board and the public school systems involved. A total of 565 consent forms were sent home to the parents of all 5th and 6th graders from the participating schools, and 307 children received parental consent and provided their own assent to participate in the study (170 fifth graders and 137 sixth graders). The average age of the children was 10.7 years at Time 1 and 12.2 years at Time 2. The racial/ethnic composition of the research sample was as follows: 13% African American, 7% Asian American, 26% White, 15% Cape Verdean, 28% Latino, 9% Other or Biracial, and 2% left this item blank.
The data analyzed here represent the first and final (fourth) waves of data collection, which are separated by a period of 1.5 years (Fall Year 1 and Spring Year 2). For the purposes of this article, these waves will be referred to as Time 1 and Time 2. At Time 2, the total number of participants was reduced to 215 (122 girls and 93 boys), mostly due to high residential transience. Reasonable efforts were made to locate children who dropped out of the study at each wave, and efforts were made to administer questionnaires to children who had transferred to other schools within the county.

**Procedure**

At the time of each assessment, participating students completed a series of self-report questionnaires, including those used in the present study, sitting in small groups of 5 to 15 students during school hours. Members of the research staff supervised children in this task, assisting any children who had difficulty with the instruments by reading portions to them. Teachers were not present in the room during data collection. All students who participated in the study were given US$10 gift certificates to local shopping malls at each assessment point.

**Relevant Measures**

**Self-esteem.** The Self-Perception Profile for Children (SPPC; Harter, 1985) was chosen as it is widely used with good reliability and validity (Granleese & Joseph, 1994). As the purpose of this study was to extend and clarify prior research findings on the relationship between bullying behaviors and self-esteem, we examined the SPPC subscale for global self-esteem. This subscale includes the mean of five items scored on a 4-point Likert-type scale ranging from 1 to 4, with 4 representing higher self-esteem. The range of mean global self-esteem scores was 1.5 to 4.0 at Time 1 and 1.83 to 4.0 at Time 2. The internal reliability for the global self-esteem subscale of the SPPC was acceptable ($\alpha = .71$ at Time 1 and .78 at Time 2).

**Bullying and victimization.** The Bullying Behavior and Peer Victimization Scales (BBPVS; Austin & Joseph, 1996) are composed of 12 items that tap bullying behavior and peer victimization among children. These scales were constructed specifically for use with Harter’s SPPC, and as such, the BBPVS items are integrated within the SPPC. Each scale contains six items for which the participant chooses which statement of two is more true for him or her (e.g., “Some children are not called horrible names/Other children are often called horrible names”; “Some children do not hit and push other children...
around/Other children do hit and push other children around”), then chooses whether the selected statement is “really true for me” or “sort of true for me,” resulting in a 4-point Likert-type scale from 1 to 4, with higher scores representing more victimization or more bullying behaviors. A mean score is calculated for each scale. At both time points, the range of scale scores was 1.0 to 4.0. The internal reliability for both scales was acceptable ($\alpha = .82$ and .83).

In past studies, researchers have used a cutoff score of 2.5 on each of the BBPVS scales to indicate high bullying or victimization (see Austin & Joseph, 1996). However, because of our use of sex as a variable of interest, it was necessary to identify those girls and boys that expressed more bullying and/or victimization behaviors relative to other same-sex peers. Because results indicated a trend for a significant sex difference in bullying involvement, $\chi^2(3, N = 273) = 6.36$, $p < .1$, we created median splits for each sex (for bullying, boys median = 2.00, girls median = 1.67; for victimization, boys median = 2.00, girls median = 2.08). We used this median split to classify children by their status as noninvolved ($N = 107$; 46 boys, 61 girls), pure bully ($N = 34$; 19 boys, 15 girls), pure victim ($N = 34$; 18 boys, 16 girls), or bully/victim ($N = 93$; 38 boys, 55 girls).

One question that may arise from these results is whether, like self-esteem, the bullying behaviors of the participants changed over time. Examination of the data indicated that the bullying involvement group of more than half of the participants (52%) remained stable from Time 1 to Time 2. Of those who changed groups, the majority were children for whom bullying and victimization scores were closest to the median cutoff scores at Time 1. The purpose of this study was to examine change in self-esteem over time as predicted by bullying behaviors at Time 1; however, more information on the stability of bullying involvement over time can be found in the work of Pellegrini and Long (2002).

**Results**

**Cross-Sectional Analyses**

We conducted cross-sectional analyses on Time 1 data to provide a point of reference for later analyses on change over time. One-way ANOVAs conducted on Time 1 data indicated significant main effects of sex, $F(1, 284) = 7.44$, $p < .01$, and bullying involvement type, $F(3, 261) = 12.27$, $p < .0001$, on global self-esteem. Overall, boys reported higher self-esteem than girls, and noninvolved children reported the highest self-esteem, followed by pure bullies, pure victims, and bully/victims. Figure 1 presents the mean self-esteem scores for each of the four bullying involvement types. Consistent
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2.7 2.9 3.1 3.3 3.5 3.7
Pure Victims (PV) Pure Bullies (PB) Bully/Victims (BV) Noninvolved (NI)

Figure 1. Comparisons of baseline self-esteem by bullying involvement
Note: The following comparisons were obtained with paired t tests: Combined sex comparisons: PV < NI***; PB > BV*; BV < NI***. Comparisons of boys: PV < NI*. Comparisons of girls: PV < NI***; PB > BV**; BV < NI***. Comparisons within bully involvement type: BV(B) > BV(G)***.
*p < .05. **p < .01. ***p < .001.

with our expectations, the self-esteem scores of bully/victims were significantly lower than those of pure bullies, t(122) = 2.53, p < .05.

The interaction of bullying involvement type and sex also significantly predicted self-esteem at Time 1, above and beyond the main effects of the independent variables, F(7, 261) = 3.22, p < .05. Probing this interaction indicated that in the bully/victim group, boys had significantly higher self-esteem than girls (see Figure 1). In addition, girls in the pure bully group reported higher self-esteem than girls in the bully/victim group; this pattern was not evident for boys.

Longitudinal Analyses

To examine the extent to which bullying involvement type and sex were related to change in self-esteem over time, we conducted an ANCOVA in which we predicted self-esteem at Time 2, including both bullying involvement type and sex as independent variables and controlling for self-esteem at Time 1. Results indicated that neither bullying involvement type, F(3, 175) = 0.62, p = ns, nor sex, F(1, 192) = 2.71, p = ns, significantly predicted self-esteem at Time 2 when controlling for self-esteem at Time 1. However, the
interaction of bullying involvement type and sex significantly predicted self-esteem at Time 2 when controlling for self-esteem at Time 1, $F(8, 175) = 3.63, p < .05$.

Probing this interaction with paired $t$ tests indicated that the self-esteem of girls showed a significant increase over time in both the pure bully, $t(8) = -2.28, p = .05$, and the bully/victim groups, $t(34) = -2.44, p < .05$, whereas the self-esteem of boys did not change significantly in either the pure bully, $t(9) = 0.26, p = ns$, or the bully/victim groups, $t(26) = 0.00, p = ns$ (see Figure 2). In addition, the girls in the pure bully group reported a significantly greater increase in self-esteem from Time 1 to Time 2 than the girls in the bully/victim group, $t(43) = 1.98, p = .05$. In contrast, the girls in the noninvolved group reported a significant decrease in self-esteem over time, $t(43) = -2.20, p < .05$, whereas the boys in the noninvolved group reported a significant increase in self-esteem over time, $t(29) = 2.22, p < .05$.

**Discussion**

The extant literature has produced inconsistent answers to the question of whether bullies have higher or lower self-esteem compared to other children. We argue that these inconsistencies may be due to the fact that previous classifications of children who bully included two distinct groups of children with
significant differences in self-esteem: pure bullies and bully/victims. Our findings provide support for this distinction in two ways. First, the self-esteem scores of bully/victims were significantly lower than those of pure bullies. And second, the girls in the pure bully group reported a significantly greater increase in self-esteem over time than the girls in the bully/victim group.

In addition, results from this study contribute to a better understanding of how sex and bullying involvement influence self-esteem. Cross-sectional analyses indicated an overall pattern of results that is consistent with prior findings. Overall, boys reported higher self-esteem than girls. Noninvolved children had the highest self-esteem, followed by pure bullies and pure victims. Consistent with emerging research on bully/victims (O’Moore & Kirkham, 2001), children in the bully/victim group reported the lowest self-esteem; however, further analyses suggest that this difference is seen only for the girls in this sample. This pattern of results suggests that boys who bully, regardless of whether they are victimized by others, have relatively high global self-esteem similar to boys who are not involved in the bullying relationship. On the contrary, girls who are victimized by others, whether they bully or not, appear to experience lower self-esteem as compared to girls who are not involved as bullies or victims.

Longitudinal findings were partially consistent with our predictions. Interestingly, results indicated that a child’s sex affected his or her change in self-esteem. Specifically, whereas boys in the pure bully group and the bully/victim group reported no significant change in self-esteem, girls in both groups reported a significant increase in self-esteem, with girls in the pure bully group reporting the greatest increase. This finding is intriguing for at least two reasons. First, it has been reported that in childhood and adolescence, girls typically begin to experience a decrease in self-esteem whereas the self-esteem of boys typically increases or stays the same (Block & Robins, 1993; McLeod & Owens, 2004). In our study, although girls in the noninvolved group reported a reduction in self-esteem consistent with this literature, girls who bully reported an increase in self-esteem. Thus, consistent with notions reflected in popular media (like the movie “Mean Girls”) if not yet in the psychological literature, the social advantage for girls of bullying appears to be related to an increase in these girls’ sense of global self-worth.

Second, this finding raises the question of why girls who bully report increasing self-esteem whereas boys who bully do not. It may be that, consistent with arguments that girls are more oriented toward interpersonal relationships than boys (e.g., Hall & Halberstadt, 1980), such social dominance may be more central to an adolescent girl’s global self-esteem. In addition, boys commonly bully in a more overt and physical manner than girls
(Coie & Dodge, 1998). As many of the BBPVS items could be interpreted as reflective of either overt or covert behaviors (for example, “some children often pick on other children . . .”), girls and boys in the bullying groups may exhibit different behavioral profiles, with the boys’ bullying behaviors being more noticeable and socially unacceptable than the girls’ behaviors. Thus, teachers may be more likely to identify and punish boys who bully, thereby limiting any increase in self-esteem that may be associated with social dominance.

This study’s findings should be interpreted in light of a number of limitations that provide avenues for future research. First, the limited stability of the categorical groupings used in this study was likely affected by many factors. One factor may have been the use of median splits to define our groups, and a second factor may have been the expectable change in such behavior over time across the age group studied (e.g., Pellegrini & Long, 2002). Although the stability of these categorizations is limited by use of a median split for categorization, use of a more conservative approach such as including only the top and bottom third of the sample, while eliminating much of the mobility between categories, reduced the power and eliminated significant effects for this sample. In future studies, larger sample sizes will allow researchers to use statistical methods in which they can examine changes in self-esteem for groups in which bullying behaviors stay largely the same as well as in groups in which bullying behaviors change over time. In addition, future research using hierarchical linear modeling (HLM), might explore whether the relationship between bullying behaviors is dynamic; that is, bullying behaviors may affect changes in self-esteem, which may in turn affect changes in bullying behaviors.

Second, there are inherent limitations to examining a global construct such as self-esteem as it relates to specific behaviors in children. For instance, further research will need to explore the relationship between bullying behaviors and more proximal factors such as friendship quality and loneliness to better understand factors that mediate the relationship between social behaviors and self-esteem. Similarly, future research should explore how the findings may be similar or different for other global constructs related to self-esteem, such as self-efficacy or sense of coherence.

Third, this study draws exclusively on an urban sample, which is both a strength and limitation of the research. Though examining this phenomenon in an understudied population makes the study a valuable contribution to the literature, it should be considered that the rates of aggression in this population may be different than in a more representative sample, affecting the meaning of bullying and victimization in this group as well as
the relationship between bullying or victimization and self-perceptions. In addition, because of the literature suggesting that self-esteem can vary across cultural groups (e.g., Heine, 2004), future research on factors associated with self-esteem in diverse populations such as this one may consider exploring whether the relationships vary by race or ethnicity.

Finally, the BBPVS, despite its widespread use in the bullying literature, does not allow us to discern between specific types of bullying. For instance, future studies may consider more directly assessing the implications on self-esteem of involvement in relational bullying; that is, bullying with psychological tactics (e.g., withholding of friendships, spreading malicious gossip) rather than with physical or verbal approaches. Recent findings on relational and social aggression during childhood and adolescence (Ostrov & Crick, 2007; Underwood, 2003) suggest that this distinction may prove especially helpful in understanding the relationship between bullying involvement and adjustment for girls.

Despite the aforementioned limitations, this research supports our contention that research on bullying behavior should distinguish pure bullies from bully/victims. In addition, it suggests that type of bullying involvement, sex, and the interaction of these variables each plays an important role in the self-esteem of the children in this sample. To our knowledge, this is the first published study in which sex emerged as an important moderating factor of the relationship between bullying and self-esteem. This sex difference, though not previously reported, is not completely surprising, due to the extensive literature that has found sex differences in both self-esteem (e.g., McLeod & Owens, 2004) and peer aggression (Coie & Dodge, 1998) in middle school children as well as the different social expectations and consequences for bullying in girls versus boys (e.g., Underwood, 2003).

Further research in this area is warranted due to its implications for schools that are actively working toward reducing bullying behaviors and enhancing inclusive climates. For instance, this research suggests that there may be some sex-specific protective factors associated with bullying behaviors. First, unlike girls in this sample, boys who were victimized by bullies had increased self-esteem if they bullied in addition to being victimized. Therefore, interventions that offer assertiveness training to victimized boys may have a positive impact on self-esteem, whereas the focus for victimized girls should be on discovering strategies for avoiding victimization. Second, unlike boys, girls who bullied reported increasing self-esteem over time. Perhaps future research on intervention programs to increase girls’ self-esteem could identify the protective functions that bullying may have for girls, such as providing feelings of efficacy and control, to explore ways to
promote such functions without increasing or encouraging harmful bullying behaviors.

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