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Prosocial Behavior Moderates the Effects of Aggression on Young Adolescents' Friendships

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Abstract

The current study explored how prosocial behavior may moderate how aggression is related to the features of adolescents' friendships. Young adolescents ($N = 910$) completed friendship nominations in the fall and spring of their first year of middle school. Behavioral nominations of aggression and prosocial behavior were also collected in the fall. A subsample ($N = 374$) of adolescents and their reciprocated friends reported on friendship quality. Prosocial behavior moderated how aggression was related to the likelihood of having a mutual best friendship in the fall. Dyadic data analyses also revealed that when prosocial behavior was low, aggression was negatively related to friendship quality. Examination of temporal patterns in best friendships indicated that when prosocial behavior was low, aggression was marginally predictive of having different best friends in the fall and spring relative to having a stable best friendship across the school year.

Keywords

aggression; prosocial behavior; friendship; early adolescence

The long-held notion of aggression as a universally maladaptive behavior for child development has not been questioned until fairly recently. Although past research has clearly demonstrated robust links between aggression and such markers of social maladjustment as peer rejection and victimization (see Rubin, Bukowski, & Laursen, 2009, for a review), recent research has demonstrated variability in how aggression is related to the features of friendships (e.g., Brendgen, Vitaro, Turgeon, & Poulin, 2002; Rose, Swenson, & Carlson, 2004). Scholars have noted that there is heterogeneity amongst aggressive children and have explored how this variability is related to friendship adjustment by examining subgroups of aggressive children, including popular-aggressive (Rodkin, Farmer, Pearl, & Van Acker, 2000; Rose et al., 2004), depressed-aggressive (Brendgen et al., 2002), and even prosocial-aggressive youth (e.g., Hawley, Little, & Card, 2007). The goal of this study was to further explore how prosocial behavior may explain variability in the associations of aggression with features of young adolescents' friendships.

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Friendships of Aggressive Youth

Friendship is a close, mutually recognized, voluntary dyadic relationship characterized by shared positive affect (Rubin, Bukowski, & Parker, 2006). Gottman (1983) argued that the friendship context provides the necessary conditions in which children can demonstrate their highest level of social competence. For instance, Leary and Katz (2005) found that aggression was more related to negative behavior with *peers* than with best friends. Similarly, although research has consistently linked aggression with biases in social information processing during peer interactions (e.g., Crick & Dodge, 1994), the social information processing of aggressive youth has been found to be comparable to that of non-aggressive youth in hypothetical ambiguous provocation situations involving best friends (Burgess, Wojslawowicz, Rubin, Rose-Krasnor, & Booth-LaForce, 2006). Thus, it appears as if aggressive youth may behave differently with friends than with other peers. As such, the context of friendship may provide an important milieu for understanding the behavioral heterogeneity of aggressive youth.

Approximately 75% to 80% of Western children have a mutual best friendship (Rubin et al., 2006). As previously stated, however, the literature in regards to the prevalence of friendships among aggressive children has been less than consistent. Some researchers have found aggressive children to have fewer reciprocated friendships than non-aggressive children (e.g., Hektner, August, & Realmuto, 2000), whereas others have found no differences in friendship prevalence among aggressive and non-aggressive children (e.g., Brendgen et al., 2002).

Further, there are discrepant findings regarding the stability of aggressive versus non-aggressive youths' friendships. For example, Brendgen et al. (2002) found that the stability of aggressive children's friendships did not differ from the friendships of non-aggressive children across a six month period. In contrast, there is some evidence that aggressive children may have difficulty establishing lasting, stable friendships with peers (e.g., Ellis & Zarbatany, 2007; Parker & Seal, 1996). Additionally, Parker and Seal (1996) examined friendship formation and dissolution among 8-to-15 year olds at a 6-week summer camp and found that children who continually lose and replace friends were described by peers to be aggressive and unreliable.

Similarly, much of the literature on the quality of aggressive youths' friendships has been mixed. Some researchers have found that aggressive children's friendships do not differ from their non-aggressive peers' friendships in such positive qualities as intimacy, positive engagement, and relationship satisfaction (e.g., Patterson, Kupersmidt, & Griesler, 1990). For example, Bagwell and Coie (2004) found that aggressive boys did not differ from nonaggressive boys on self-reported friendship quality; at the same time, the best friends of aggressive boys did not differ in their evaluations of friendship quality when compared to the evaluations of the friends of nonaggressive boys. However, others have found aggression to be related to lower friendship quality and friendship conflict. Cillessen, Jiang, West, and Laszkowski (2005) found physical and relational aggression to be related to self- and friend-reported conflict, and negatively related to reports of companionship, closeness, helping, and security. Additionally, Poulin and Boivin (1999) found that whereas aggressive children

reported supportive and satisfying friendships with their friends, the friends of these children reported low satisfaction with the same friendships.

Aggression and Prosocial Behavior

The mixed findings regarding aggressive youths' friendships may be partially accounted for by the presence of prosocial behaviors. Aggressive and prosocial behavioral profiles have traditionally been thought to be mutually exclusive or negatively correlated; put concisely, it has not been thought that aggressive children could also behave prosocially among their peers (e.g., Rubin et al., 2006). However, researchers have shown that children can be both highly aggressive *and* highly prosocial (Pulkkinen & Tremblay, 1992). For example, aggressive and nonaggressive boys make similar rates of prosocial initiations during their interactions with friends (Piehler & Dishion, 2007). Additionally, Hawley and colleagues (e.g., Hawley, 2002; Hawley et al., 2007) have identified a group of youth who use both prosocial (e.g., cooperation and helping) and coercive (e.g., threatening others) strategies to obtain their social goals; Hawley has labeled these youth "bistrategic controllers." Bistrategic youth have been found to be just as well-adjusted as prosocial youth in a variety of outcomes such as academic achievement, self-esteem, and peer status (e.g., Hawley, 2003).

Although relatively small in number, empirical research has provided compelling evidence for the potential "buffering" effects of prosociality on aggressive youths' friendships (e.g., Hawley et al., 2007). Bukowski and Abecassis (2007) found that whereas aggression was negatively associated with the number of friendship nominations received among young adolescents, the association was positive for youth who were also prosocial. Hawley and colleagues (2007) found that prosocial children received the most friendship nominations, followed by bistrategic youth, whereas aggressive/coercive youth had the fewest best friendship nominations. Bistrategic and prosocial youth also reported their friendships to be more intimate than aggressive/coercive youth. Further, whereas the friends of bistrategic youth reported them to be more overtly and relationally aggressive, they reported the quality of their friendships to comprise more fun than the friendships of aggressive/coercive youth. As such, it appears that the presence of prosociality may negate some "costs" of aggression, at least in friendships. Such a view is consistent with the bulk of research demonstrating the positive links between prosociality and both adaptation and successful interpersonal relationships across development (see Rubin et al., 2009, for reviews).

The Current Study

Although the extant evidence suggests that prosocial behavior may affect how aggression is associated with friendship nominations and friendship quality, little work has examined how prosocial behaviors may affect how aggression predicts the likelihood of having a mutual (reciprocated) best friendship or whether a best friendship is stable over the school year. Best friendship loss and instability may have negative implications for social adjustment during adolescence (e.g., Bowker, in press; Chan & Poulin, 2009; Ford, Cillshaw, Meltzer, & Goodman, 2007; Parker & Seal, 1996). Thus, we examined the friendship prevalence, friendship stability, and temporal patterns in friendship gain or loss in a sample of young

adolescents during their first year in middle school. The transition from elementary to middle school is often quite stressful for youth (Brown, 1990). During this transition, youth leave the security of one teacher, encounter greater academic challenges (Eccles & Midgley, 1990), and may be separated from old friends and/or move into a larger peer group in which many peers are unfamiliar to them. School transitions “shake up” the social hierarchy, increasing adolescents’ use of aggression as a strategic means to increase status and establish dominance in the changing (and possibly threatening) peer environment (e.g., Cillessen & Mayeux, 2004; Pellegrini, 2002).

Given the possible benefits of *both* aggressive and prosocial behaviors during this transition, it may be interesting to assess whether a combination of the two behaviors contribute to the qualities of friendship during early adolescence. Much of the work on friendship quality has focused on target child’s reports of friendship quality, with little regard to how the friend feels about the friendship. Those who use dyadic data analyses with friendship quality suggest that friends tend to agree on some features of friendship, but disagree on others (Simpkins, Parke, Flyr, & Wild, 2006). Because aggressive children tend to overestimate their peer group status and the extent to which they are liked by others (e.g., Brendgen et al., 2002), it is especially important to consider *both* aggressive youths’ perspectives and the perspectives of their friends in regards to the quality of their friendships. Moreover, because research has documented the importance of friends’ behaviors on child adjustment (see Rubin et al., 2009, for a review), it is also pertinent to examine how the behaviors of children *and their friends* influence how aggressive youth view their friendships. As such, in our study we use the Actor-Partner Interdependence Model (Kenny, Kashy, & Cook, 2006) to examine how both adolescent and friend’s aggression and prosocial behavior are related to reported friendship quality. We hypothesized that prosocial behavior would moderate, or buffer, the effects of aggression on reported friendship quality from both adolescent and their friend.

Method

Participants

Participants were drawn from a large normative sample of sixth graders from three diverse public middle schools. The sample consisted of 910 sixth graders (50.3% girls). The mean age of the sample was 11.93 years. Approximately 41% of the sample was European American, 10.7% was African American, 16.7% was Asian American, 11.3% was Latino/a, 5.4% was multiethnic or other, and 14.9% was unknown. Available demographic information indicated that the majority of families could be classified as middle to upper-middle class. The proportion of students in free or reduced lunch programs ranged from approximately 0.07-to-0.35.

Procedure

Near the middle of the fall semester and the end of the spring semester, 6th grade participants completed friendship nominations and questionnaires assessing peer perceptions of participants’ social behavioral characteristics and social reputations. The children were

informed that their answers were confidential and were instructed not to discuss their answers with classmates.

Of the 910 young adolescents, a subset of 187 mutual friendship dyads (374 individuals, 99 female dyads) was also invited to the laboratory to complete a battery of questionnaires. Invitations for the laboratory session were based on adolescents' scores on aggression and social withdrawal from the Extended Class Play (ECP) and whether they had a mutually recognized best friend. During laboratory sessions, both the target adolescent and their best friend completed questionnaires about friendship quality.

Measures

Friendship Nominations—In both the fall and spring, participants were asked to write the names of their “very best friend” and their “second best friend” at their school. Children could only name same-gender friends in their grade, and only mutual (reciprocated) best friendships were subsequently considered. Children were considered “best friends” if they were each other’s very best or second best friend choice. The identification of a best friendship is similar to procedures used in other studies focused on best friendships (e.g., Bukowski, Hoza, & Boivin, 1994; Parker & Asher, 1993). Although children could nominate any same-gender child in their grade as their best friend, only participating children completed the friendship nominations; therefore, it was impossible to determine whether a friendship was reciprocated when a nonparticipating child was identified as a best friend.

Temporal Changes in Friendship—The friendships nominations described above were used to assess the changes in involvement in mutual best friendships across the school year. Drawing from previous research (e.g., Bowker et al., 2010; Parker & Seal, 1996; Wojslawowicz, Rubin, Burgess, Booth-LaForce, & Rose-Krasnor, 2006), five temporal changes in the stability of friendships were assessed. The *stable group* comprised adolescents who had the same mutual best friendship at both T1 and T2. The *replaced group* comprised adolescents who had a mutual best friendship at T1, but a different mutual best friend at T2. The *dissolved friendship group* comprised adolescents who had a mutual best friendship at T1, but no longer had any mutual best friendship at T2. The *gained group* comprised adolescents who did not have a mutual best friendship at T1, but then formed a mutual best friendship at T2. The *chronically friendless group* comprised adolescents who did not have a mutual best friendship at either T1 or T2.

Peer Assessments of Social Behavior—Participants completed the *Extended Class Play (ECP)* (Wojslawowicz et al., 2006) in the fall of the school year. Participants were instructed to nominate up to three boys and up to three girls in their grade for each item. All item scores were standardized within sex and school to adjust for the number of nominations received and also the number of nominators; each child received a score on aggression and prosocial behavior. The *ECP* has been validated in several previous studies (e.g., Burgess et al., 2006). Aggression ($\alpha = 0.91$) comprised seven items that assessed physical and relational aggression, such as ‘someone who hits or kicks other kids’, ‘someone who spreads rumors’, and ‘someone who fights’. Prosocial behavior ($\alpha = 0.88$) comprised six items that

assessed helping, sharing, and caring behaviors, such as ‘someone who plays fair’, ‘someone who helps others’, and ‘someone who is trustworthy’.

Friendship Quality—For adolescents and their friends who came into laboratory, the *Friendship Quality Questionnaire-Revised (FQQ; Parker & Asher, 1993)* was used to assess their perceived friendship quality. The 40-item *FQQ* yields six subscales in the areas of companionship/recreation, validation/caring, help/guidance, intimate disclosure, conflict/betrayal, and conflict resolution ($\alpha = 0.73 - 0.90$).

Results

Descriptive Statistics and Gender Differences

In the fall of 6th grade, 62% of adolescents had at least one mutual best friend and 38% were best-friendless. In the fall, girls were more likely to have a best friend (69.2%) than boys (54.9%), $\chi^2(1) = 19.89, p = 0.001$. Of the 565 youth with a friendship in the fall of 6th grade, there were enough data on 557 to examine whether their friendships were stable across the school year. For these adolescents, 67.0% had a stable best friendship from the fall to the spring. Boys (65.0%) were as likely as girls (68.5%) to have stable best friendships, $\chi^2(1) = 0.74, p = 0.39$.¹

Additionally, based on fall and spring friendship nominations, adolescents were divided into five groups: 1) the *stable* group ($n = 409$), 2) the *chronically friendless* group ($n = 207$), 3) the *gained* group ($n = 138$), 4) the *dissolved* group ($n = 90$), and 5) the *replaced* group ($n = 58$). Analyses revealed that boys (30.7%) were more likely to be in the chronically friendless group than were girls (15.3%) and that girls (51.1%) were more likely to be in the stable group than were boys (39.6%), $\chi^2(4) = 37.73, p = 0.001$.

Predicting Friendship Prevalence and Friendship Stability

Hierarchical logistic regression analyses were conducted to examine whether aggression (step 1), prosocial behavior (step 2), and the aggression X prosocial interaction (step 3), controlling for gender, predicted the likelihood of having a best friend in the fall of 6th grade. Additionally, with only those youth who had a best friendship in the fall of 6th grade, hierarchical logistic regression analyses were conducted to examine whether aggression, prosocial behavior, and the aggression X prosocial interaction predicted the stability of a best friendship across the school year. As seen in Table 1, no main effect emerged for aggression in the prediction of whether adolescents had a best friend in the fall of 6th grade; however a main effect for prosocial behavior emerged. Prosocial behavior increased the odds of having a best friend. The aggression X prosocial interaction was also significant; when probing the interaction using one *SD* below and above the *M* on prosocial behavior (Aiken & West, 1991), aggression was marginally associated with having a best friend when prosocial behavior was high ($\beta = 0.70, p = 0.10$), but marginally and negatively associated when prosocial behavior was low ($\beta = -0.38, p = 0.10$).

¹Interactions of gender with aggression and prosocial behavior were also examined for all analyses. Only 2 out of 45 possible interactions were significant, and thus interactions of gender with aggression and prosocial behavior were removed from analyses for parsimony.

Also in Table 1 are results from hierarchical logistic regression analyses predicting friendship stability across the school year. For these analyses, we could only use adolescents who had a best friendship in the fall ($n = 557$). There was neither a significant main effect for aggression, nor a significant aggression X prosocial behavior interaction. However, there was a main effect for prosocial behavior such that as prosocial behavior increased the likelihood of a best friendship being stable across the school year also increased.

Predicting Temporal Patterns in Friendship

Multinomial regression analyses were used to compare how aggression, prosocial behavior, and the aggression X prosocial interaction predicted the five friendship stability groups, controlling for gender. Odds ratios for group membership relative to the stable best friendship group can be found in Table 2. There were no main effects for aggression but prosocial behavior decreased the odds of being in the chronically friendless, the gained, and the dissolved groups relative to the stable friendship group. The aggression X prosocial interaction was only significant in predicting membership in the replaced group relative to the stable group ($\beta = -1.55$, $OR = 0.55$, $p = 0.05$). To probe this interaction, adolescents were divided into three groups based on their prosocial behavior: a *low group* ($n = 109$) whose prosocial behavior was more than 1 *SD* below the mean, an *average group* ($n = 670$) whose prosocial behavior was between -1 *SD* and $+1$ *SD*, and a *high group* ($n = 131$) whose prosocial behavior was greater than 1 *SD* above the mean. Odds ratios for aggression predicting membership in the replaced group relative to the stable group were then computed for each group. Although individual odds ratios for these groups were not significant, trends indicated that for the low prosocial group, aggression increased the likelihood of being in the replaced group relative to the stable group ($OR = 2.66$, $p = 0.16$). For the average ($OR = 0.99$, $p = 0.99$) and high prosocial group ($OR = 0.31$, $p = 0.23$), aggression was unrelated to being in the replaced versus stable group.

Dyadic Analyses Predicting Friendship Quality

For the smaller subsample of friends for which we had *both* friends' reports of friendship quality, Actor-Partner Interdependence Model analyses (APIM, Kenny et al., 2006) were used to examine whether both adolescent and friend aggression, prosocial behavior, and the interaction between aggression and prosocial behavior (controlling for gender) predicted reported friendship quality. The APIM explicitly examines potential mutual influences within dyadic contexts and allows the investigation of whether and how both dyad-level characteristics (e.g., sex) and dyad members' characteristics (both child and friend) predict both adolescent and friend report of friendship quality. Descriptive statistics for friendship quality subscales and intraclass correlations representing how friends' reports of friendship quality subscales were associated are displayed in Table 3.

Both the child's and their friend's prosocial behavior were positively related to report of companionship. Adolescent aggression was negatively related to self-reported validation, whereas both adolescent and friend prosocial behavior were positively related to reported validation. There was also an adolescent aggression X prosocial behavior interaction for validation. Interaction probing (Preacher, Curran, & Bauer, 2006), revealed that adolescent aggression was not significantly related to reported validation when their prosocial behavior

was high ($\beta = 0.02, p = 0.91$), but when prosocial behavior was low, adolescent aggression was negatively related to self-reported validation and caring from their friend ($\beta = -0.29, p = 0.001$).

Predicting reports of help and guidance, there was one main effect for friend's prosocial behavior. The more that the friend was prosocial, the more the adolescent reported their friendship as one involving the giving and receiving of help and guidance. Examining reports of intimate disclosure, there were main effects for both adolescent and friend prosocial behavior. The more the adolescent was prosocial, the more he/she reported disclosing intimate information to their friend. Similarly, the more their friend was prosocial, the more the adolescent reported disclosing to his/her friend. Predicting conflict resolution, there was a negative effect for adolescent aggression; the more the adolescent was aggressive, the lower they reported conflict resolution within their friendship. There was also an adolescent aggression X prosocial behavior interaction predicting self-reported conflict resolution. Interaction probing revealed that when adolescent prosocial behavior was high, aggression was not significantly related to reported conflict resolution ($\beta = -0.00, p = 0.95$), but when prosocial behavior was low, adolescent aggression was negatively predictive of reported conflict resolution ($\beta = -0.25, p = 0.001$).

Finally, examining reported friendship conflict, there was a positive effect for friend aggression; the greater the friend's level of aggressive behavior, the more conflict the adolescent reported having with the friend. There was also a negative effect for friend's prosocial behavior, such that the greater the friend's prosocial behavior, the less conflict the adolescent reported there was in the friendship. Lastly, there was a negative adolescent aggression X prosocial behavior interaction. Interaction probing revealed that when adolescent prosocial behavior was high, aggression was not significantly related to reported conflict within the friendship ($\beta = -0.11, p = 0.18$), but when prosocial behavior was low, aggression was positively related to reported friendship conflict ($\beta = 0.20, p = 0.01$).

Discussion

Much research has been devoted to understanding how aggressive behavior is related to the features of youth's friendships, yet this line of inquiry has yielded inconsistent findings. In an effort to understand the variability in results, the current study sought to examine one factor hypothesized to affect how aggression was related to the presence, stability, and quality of adolescents' best friendships: prosocial behavior. Generally, results indicated that aggression in the presence of high prosocial behavior was not related to friendship features. However, when prosocial behavior was low, aggressive behavior was associated with poor friendship characteristics.

More specifically, regarding the presence and stability of best friendships, no significant main effects for aggression were found. However, prosocial behavior was significantly predictive of having a best friend in the fall of 6th grade and significantly associated with the likelihood of a stable best friendship across the school year. These findings add evidence to the robust literature that has demonstrated consistent links between prosocial behaviors and both peer acceptance and having friends (Bowker et al., 2010).

Also predicting best friendship prevalence in the fall, aggression was found to be marginally associated with having a best friend when prosocial behavior was *high* and marginally negatively associated with having a best friend when prosocial was *low*. Additionally, examination of temporal patterns in best friendships indicated that when prosocial behavior was low, aggression was marginally predictive of having different best friends in the fall and spring relative to having a stable best friendship. Although the marginal significance of these effects indicate they should be interpreted cautiously, they may explain some of the inconsistencies found in past examinations of aggression and friendship prevalence (e.g., Brendgen et al., 2002; Hektner et al., 2000).

In dyadic analyses of friendship quality, main effects of adolescent or friend aggression were found for three of the six subscales. Adolescent aggression negatively related to self-reported validation and conflict resolution and friend's aggression was positively related to adolescent report of conflict. Consistent with the findings on prevalence and stability, effects of prosocial behavior were present for all friendship quality subscales, but effects for friend's prosocial behavior were more common than adolescent's own prosocial behavior. Adolescents who have prosocial friends and are prosocial themselves report better quality friendships than youth with less prosocial friends and who are less prosocial themselves.

More important to the goals of this study, the interactions between adolescent aggression and prosocial behavior predicted reported friendship quality. For youth who were low on prosocial behavior, aggression was negatively associated with validation and conflict resolution and positively associated with conflict. For prosocial youth, aggression was unrelated to these friendship qualities. In other words, high prosocial behavior buffered adolescents from the negative effects of aggression on friendship quality. Although others have pointed to the importance of prosocial behaviors for friendship quality (Berndt, 1981; Cillessen et al., 2005; Markiewicz, Doyle, & Brendgen, 2001; Sebanc, 2003), our study is the first to examine how prosocial behavior buffers friendship quality from the negative influences of aggressive behavior. Our results suggest that aggression does not negatively impact friendships when youth are also prosocial, but when youth have a prosocial deficit they may have more trouble making and keeping high quality friendships.

Another explanation for the interaction effect is that less prosocial, aggressive youth may be less socially skilled during conflict. Conflict occurs in all relationships, but the way it is resolved influences the quality of the relationship (Laursen, 1996). For instance, one strategy for conflict resolution is negotiation, which represents a more adaptive form of resolution and also requires social skills that emulate prosocial behaviors (Bagwell & Coie, 2004). It may be that less prosocial, aggressive youth use more maladaptive forms of resolution, which exacerbate conflict and negatively affect other aspects of the relationship (e.g., perceptions of validation). Prosocial aggressive adolescents, on the other hand, may use more prosocial strategies, which in turn impact their perceptions, and their friends' perceptions, of friendship quality positively.

Although not a focus of the study, there were several gender differences that deserve attention. Boys were less likely to have a reciprocated best friendship in the fall, and were more likely to be chronically friendless or experience dissolution from fall to spring than

were girls. Regarding friendship quality, girls rated their friendships higher on validation, help/guidance, and intimate disclosure than did boys. Many researchers have argued that girls focus more on dyadic relationships than boys (e.g., Maccoby, 1998), and may place more value on prosocial behavior than do boys (Berndt, 1981).

Limitations and Future Directions

One limitation of the current study was that aggression was studied as a single construct instead of differentiating between forms of aggression. Indirect forms of aggression are more covert and aimed at damaging the target's social relationships or social standing (also known as covert, social, or relational aggression) whereas direct forms include verbal and physical aggression such as hitting, pushing, name calling, taunting, and threatening (Card, Stucky, Sawalani, & Little, 2008). Recent evidence indicates that as children transition into middle and high school, overt aggression becomes more associated with peer dislike, while the association of indirect aggression with perceived popularity gets larger (Cillessen & Mayeaux 2004). Additionally, in a meta-analysis Card et al., (2008) found that indirect forms of aggression may actually be positively related to prosocial behavior. Perhaps then the moderating effect of prosocial behavior on how aggression is related to friendship features depends on the form of aggression. Although we could not examine this issue herein because of a lack of items clearly differentiating forms of aggression, future investigations comparing how direct and indirect forms of aggression interact with prosocial behavior in their relations to friendship features are warranted.

Similarly, it may be necessary to further differentiate forms of prosocial behavior as well. Lindenberg (2006) described at least five kinds of prosocial behavior: cooperation, fairness, altruism, trustworthiness, and being considerate. Some forms of prosocial behavior may be more relevant for friendship success (e.g., trustworthiness) than others and, if so, these forms may be more likely to moderate how aggression affects friendship success. Although forms of prosocial behavior were not considered in this study, we recommend that they be considered in future research.

Future examinations should also explore the other characteristics of highly prosocial, highly aggressive youth. It is likely that adolescents high on both aggression and prosocial behavior are the same adolescents who are perceived as popular by their peers; this combination of behaviors may be the most effective at achieving perceived popularity status and social dominance during early adolescence than aggression or prosocial behavior alone (e.g., Hawley, 2003; LaFontana & Cillessen, 2002). For example, Parkhurst and Hopmeyer (1998) found that perceived popularity was associated with both aggression and prosocial behavior. Perceived popularity may also buffer how aggression is associated with friendship characteristics; Rose et al. (2004) found that relational aggression was associated with friendship conflict for youth who were disliked but not for youth who were perceived as popular. Thus, it is currently unclear whether it is prosocial behavior or perceived popularity (or both) that buffers friendships from the negative implications of one member's aggression. We suggest that prosocial behavior, more so than perceived popularity, is the necessary element for youth to establish positive, lasting friendships in adolescence, especially for youth who are also aggressive. However, future work should compare the

effects of perceived popularity and prosocial behavior in how they buffer friendships from adolescent aggression.

It is also possible that our findings may not hold during other developmental periods. The school transition from elementary to middle school is quite stressful (Brown, 1990), and is a time when social sanctions against aggression may be lessened as youth struggle to move up the social hierarchy (Pellegrini, 2002). Thus, it is possible that prosocial behavior buffers friendships from aggressive behaviors only during this period, when social dominance and centrality are highly desired. Aggression during other life periods, even when accompanied by prosocial behaviors, may be associated with maladaptive outcomes. Alternatively, it is also possible that these prosocial, aggressive youth may seek out contexts where their “bi-behavioral” tendencies are effective (e.g., business, politics) and they may continue to excel socially and professionally. Clearly more work is needed to understand the long-term trajectories associated with the combination of highly aggressive and highly prosocial behavior.

Overall, our results indicate other behaviors important for social functioning, like prosocial behavior, may affect how aggression is perceived by peers and the friendship consequences of aggressive behavior. It may be that while children do not enjoy being around or being friends with aggressive others, the social “cost” of aggression may be mitigated by the presence of prosocial behaviors.

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Table 1
 Hierarchical Logistic Regression Analyses Predicting Best Friendship Prevalence in the Fall of 6th Grade and Friendship Stability Across the School Year from Aggression and Prosocial Behavior

Step		Best friendship in the fall		Stable best friendship	
		B	OR	B	β
1	Gender (Boys = 1; Girls = 0)	-0.62***	0.54***	-0.17	
	Aggression	-0.07	0.94	-0.16	
2	Prosocial behavior	2.09***	3.59***	1.77***	
3	Aggression X prosocial behavior	0.52*	1.49***	-0.16	

Note.

* $p < 0.05$;

$p < 0.01$;

*** $p < 0.001$.

Odds Ratios for Aggression and Prosocial Behavior Predicting Membership in Friendship Groups Compared to the Stable Best Friendship Group

Table 2

	Chronically best friendless	Gained	Dissolved	Replaced
Gender (Boys = 1; Girls = 0)	3.15 ^{***}	0.16	1.68 [*]	0.64
Aggression	1.02	0.80	1.01	0.94
Prosocial behavior	0.17 ^{***}	0.34 ^{***}	0.50 ^{***}	0.85
Aggression X Prosocial behavior	0.71	0.61	1.11	0.55 [*]

Note.

^{*} $p < 0.05$;

$p < 0.01$;

^{***} $p < 0.001$.

Table 3
Descriptive Statistics, Intraclass Correlations, and Standardized Estimates for Adolescent and Friend Effects for Aggression and Prosocial Behavior on Friendship Qualities

	C	VC	HG	ID	CR	Co
<i>M</i> (<i>SD</i>)	3.91 (0.78)	4.15 (0.62)	3.84 (0.73)	3.67 (0.92)	4.19 (0.76)	1.64 (0.65)
<i>ICC</i>	0.62	0.27	0.28	0.43	0.22	0.41
Gender (Boys = 1; Girls = 0)	-0.06	0.19***	-0.13*	-0.37***	-0.09	-0.04
Adolescent aggression	0.02	-0.14**	0.00	0.06	-0.12*	0.05
Friend aggression	-0.04	0.06	0.04	0.05	0.01	0.14**
Adolescent prosocial	0.10*	0.14**	0.01	0.12*	0.10	-0.09
Friend prosocial	0.15**	0.15**	0.19***	0.20***	0.03	-0.13**
Adolescent aggression X prosocial	0.00	0.12**	0.06	0.01	0.11*	-0.13**
Friend aggression X prosocial	-0.01	0.01	0.02	0.02	0.00	-0.09

Note.

* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$.

C = Companionship; VC = Validation and Caring; HG = Help and Guidance; ID = Intimate Disclosure; CR = Conflict Resolution; Co = Conflict.