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Social Aggression and Social Position in Middle Childhood and Early Adolescence: Burning Bridges or Building Them?

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Abstract

Because the mechanism of harm used in social aggression generally involves the manipulation of peer relationships, it is important to consider its social correlates. The current paper uses social dominance theory as a frame to review developmental research on social aggression perpetration and three indicators of social position: sociometric status, perceived popularity, and social network position. Consistent with social dominance theory, social aggression is positively associated with indicators of social position that reflect influence in the peer hierarchy (i.e., perceived popularity and social network position). However, these behaviors are also negatively associated with indicators of social position that reflect likeability (i.e., sociometric status), suggesting that they are not without social trade-offs. Thus, depending on how social position is operationalized, social aggression can be associated with building or burning bridges to peers. Potential moderators and implications for intervention within school-based contexts are discussed.

A rise in empirical research and increased popular press coverage (e.g., Simmons, 2002; Wiseman; 2002) has sparked a growing public interest in behaviors such as rumor spreading and social exclusion that are intended to harm others by damaging their social relationships. Distinct from physical and verbal aggression, these behaviors represent a subtle form of aggression has been widely documented in middle childhood and early adolescence (see Archer & Coyne, 2005; Underwood, 2003 for reviews). Three overlapping terms have been used to describe this subtle form of aggression: social aggression (e.g., Cairns, Cairns, Neckerman, Gest, & Gariépy, 1988; Galen & Underwood, 1997), indirect aggression (e.g., Lagerspetz, Bjorkvist, & Peltonen, 1988), and relational aggression (e.g., Crick & Grotpeter, 1995). These terms differ in their degree of emphasis on confrontational (e.g., threats to end a friendship) and nonconfrontational (e.g., gossiping) behaviors (Xie, Cairns, & Cairns, 2005). However, despite this distinction, Archer and Coyne (2005) concluded that “the three terms essentially cover the same form of aggression” (p. 213).

This paper uses *social aggression* as an umbrella expression for all three terms. Although Cairns and colleagues initially used the term, social aggression, to identify nonconfrontational forms of aggression that involve harming others indirectly through the social community (Cairns et al., 1988; Xie et al., 2005), others have expanded the definition to incorporate direct, confrontational behaviors, including nonverbal facial expressions and gestures (Galen & Underwood, 1997). Thus, *social aggression* is selected because, in its

most expansive form, it captures a broader array of subtle aggression than the alternative terms.

Because the mechanism of harm used in social aggression generally involves the manipulation of peer relationships, it is important to consider its social correlates. Specifically, how are these behaviors associated with children's social position, and what implications do these associations have for future research and preventive interventions? Although the negative social influence of behaviors such as rumor spreading, gossiping, and social exclusion are well established for victims in middle childhood and early adolescence (e.g., Craig, 1998; Crick, Nelson, Morales, Cullerton-Sen, Casas, & Hickman, 2001; Crick & Nelson, 2002; Putallaz, Grimes, Foster, Kupersmidt, Coie, & Dearing, 1997), their relationship with social position is less apparent for perpetrators. Therefore, this review explores associations between social aggression and three forms of perpetrators' social position in middle childhood and early adolescence: perceived popularity, social network position, and sociometric status. Specifically, the review frames empirical evidence within the context of social dominance theory to explain why social aggression is differentially related to forms of social position that reflect influence in the peer hierarchy (i.e., perceived popularity and social network position) and those that reflect likeability (i.e., sociometric status). Findings are discussed in light of their implications for future research and school-based intervention efforts.

Linking Social Aggression and Social Position: Insight from Social Dominance Theory

Social position is a multi-faceted construct that has been defined in multiple ways. While measures of perceived popularity (e.g., Parkhurst & Hopmeyer, 1998) and social network position (e.g., Wasserman & Faust, 1994) emphasize prominence within the peer group, measures of sociometric status (e.g., Coie, Dodge, & Coppetelli, 1982) emphasize likeability. Studies comparing these different indicators of social position suggest that they are only moderately correlated, and are related to different peer-nominated social and behavioral characteristics (Gest, Graham-Bermann, & Hartup, 2001; LaFontana & Cillessen, 2002; Lease, Kennedy, & Axelrod, 2002; Parkhurst & Hopmeyer, 1998). Social dominance theory provides a framework for understanding differential associations between social aggression and perpetrators' perceived popularity, social network position, and sociometric status. This framework clarifies the complex relationship between social aggression and distinct indicators of social position, and highlights the adaptive function of socially aggressive behaviors.

Social dominance theory begins with the observation that individuals tend to organize themselves in social hierarchies (Hawley, 1999; Sidanius & Pratto, 1999). Sidanius, Pratto, van Laar, & Levin (2004) proposed a complex, multi-level explanation for these ubiquitous hierarchies that considers the interplay between contextual, psychological, and ethological factors. However, they noted that the unequal distribution of scarce resources is the most proximal source of these hierarchies. Approaching social dominance from a developmental perspective, Hawley (1999) described dominant children and adolescents as those who

control the allocation of resources. Among these resources are social contacts and play partners. Children compete for access to their peers using both coercive (e.g., aggression) and cooperative (e.g., prosocial behavior) strategies.

Developmental researchers have used social dominance theory to explain general forms of bullying that include both physical and social aggression (Nishina, 2004; Mouttappa, Valente, Gallagher, Rohrbach, & Unger, 2004; Pelligrini & Bartini, 2001; Pelligrini, 2004; Walcott, Upton, Bolen, & Brown, 2008). Specifically, social dominance theory emphasizes the adaptive role of these behaviors, suggesting that children and early adolescents use them to garner increased peer admiration and enhanced social standing. Because children are less tolerant of coercive, physically aggressive strategies as they grow older (Hawley, 1999), less visible forms of social aggression may be particularly advantageous for securing one's social standing in middle childhood and early adolescence. For example, in ethnographies of upper grade elementary school students (i.e., fourth through sixth grade) and middle school students (i.e., sixth through eighth grade), Adler and Adler (1998), Merton (1997) and Eder (1985) provided rich descriptions of the ways in which social aggression can be used to maintain social position and power by allowing social elite individuals to distance themselves from individuals occupying lower social status and demonstrate social dominance within their own peer group.

Social dominance theory has different implications for the associations between social aggression and distinct indicators of social position. In particular, social dominance theory implies that some children use social aggression as a mechanism toward advancement in the peer social hierarchy. Thus, these behaviors should be positively associated with perceived popularity and social network position because these indicators focus more heavily on children's prominence within their peer group. Yet, while social aggressive behaviors have benefits for position in the peer hierarchy, they are not executed without costs to forms of social position that highlight likeability. For example, Crick (1996) suggested that the repeated use of social aggression over time could alienate certain peers, leading to decreased sociometric status. Likewise, in a study of self-reported goals and aggressive strategies among fourth through sixth grade students, Delveaux and Daniels (2000) found that children's self-reported endorsement of socially aggressive strategies were positively related to the goal of maintaining relationships with the peer group as a whole and negatively related to the goal of maintaining relationships with the target of the aggression. This finding suggests that children were willing to use social aggression to advance themselves among their peer group even if it resulted in the loss of specific individual relationships. In sum, because social aggression allows children and early adolescents to sustain a privileged place in the peer hierarchy (i.e., more popularity and social network centrality), they may be willing to use these behaviors at the expense of sociometric status.

Consistent with social dominance theory, empirical evidence implies that the use of social aggression requires a trade-off between different indicators of social position. When perceived popularity is used to operationalize social position, studies have found a positive relationship with social aggression. In a sample of seventh grade students, Xie, Cairns, & Cairns (2002a) demonstrated that confrontational forms of social aggression correlated positively with teacher-rated popularity. Likewise, in a cluster analysis of teacher-rated

characteristics of seventh and eighth grade African American girls, Farmer, Estell, Bishop, O'Neal, & Cairns (2003) found that one subtype, "popular" girls, exhibited above average ratings on both measures of popularity and social aggression. Finally, Rose, Swenson, and Waller (2004) demonstrated positive concurrent and six month longitudinal associations between peer-nominated popularity and social aggression among seventh and ninth grade students.

Social network position is also positively linked to social aggression. In a series of studies using social cognitive mapping techniques, Xie et al. (2002a, 2002b) demonstrated positive associations between network centrality and social aggression among predominantly Caucasian students in the fourth and seventh grades. Network centrality was also linked to high levels of social aggression in first, fourth, and seventh grade African American girls (Xie, Farmer, & Cairns, 2003). Also employing social cognitive mapping, Ellis and Zabatany (2007) demonstrated that levels of social aggression in third through eighth grade groups with high network centrality led to increases in member's social aggression over a three-month period. Lastly, using cognitive social structures (see Krackhardt, 1987; Neal, 2008), recent work with third through eighth grade students suggests that the relationship between social aggression and network centrality may be curvilinear, peaking at moderate levels (Neal, 2009). In agreement with social dominance theory, children and early adolescence may be most likely to employ socially aggressive strategies at moderate levels of network centrality because they have access to the social connections necessary to effectively use these behaviors, but also still have room to advance up the peer hierarchy.

In contrast, when sociometric status is used to operationalize social position, studies have often found that these behaviors are associated with more peer rejection and less peer acceptance. Research on third through sixth grade students has linked standardized peer-nominated rejection and social aggression cross-sectionally for both boys and girls (e.g., Crick & Grotpeter, 1995; Rys & Bear, 1997), and over a sixth month period for girls (Crick, 1996). Additionally, in a three-year longitudinal study tracking children from third to sixth grade, Zimmer-Gembeck, Geiger, and Crick (2005) demonstrated negative associations between standardized social preference scores and social aggression.

Research using classification systems to assign children to sociometric groups have also linked social aggression to higher levels of peer rejection. In particular, among samples ranging from third to sixth grade, these studies have demonstrated that social aggression was highest among children who were sociometrically classified as controversial (i.e., high levels of both peer acceptance and rejection) or rejected, both cross-sectionally (Crick & Grotpeter, 1995) and after a period of four months (Tomada & Schneider, 1997). The high levels of social aggression among controversial children are particularly notable. As social dominance theory implies, these children might sacrifice their sociometric status with some peers to gain favor with others.

Providing further evidence of a trade-off between different indicators of social position, several studies have directly compared the relationship of social aggression and sociometric status (i.e., standardized social preference scores) to that of social aggression and peer-nominated perceived popularity in samples of students ranging from fourth to tenth grade

(Cillessen & Rose, 2005; LaFontana & Cillessen, 2002; Lease et al., 2002; Prinstein & Cillessen, 2003; Vaillancourt & Hymel, 2006; Wagner et al., 2008). Their findings generally suggest that while socially aggressive children are often perceived as socially popular, they are not well liked by peers. Bolstering this evidence, longitudinal research following children between fifth and ninth grade demonstrated that both the positive effect of social aggression on perceived popularity and the negative effect of social aggression on social preference increase over time (Cillessen & Mayeux, 2004).

Taken together, social dominance theory and the studies reviewed above underscore the complicated association between social aggression and indicators of social position. In accordance with social dominance theory, social aggression is positively associated with perceived popularity and social network centrality, aspects of social position related to influence in the peer hierarchy. At the same time, because these behaviors may disaffect certain peers, they are negatively associated with measures of sociometric status, aspects of social position related to peer likeability. These findings have implications for future research and school-based prevention and intervention efforts.

Future Directions for Research

Social dominance theory provides a useful explanatory framework for the existence of differential associations between social aggression and distinct indicators of social position. However, research on several potential moderators including (1) age (2) social dominance orientation (3) contextual factors and (4) form of social aggression is needed to provide a greater understanding of the relevance of social dominance theory to relationships between social aggression and social position under varying individual and social conditions.

Social dominance theory points to age as an important potential moderator between social aggression and various indicators of social position. Hawley (1999) suggests that while younger children are able to effectively use coercive, physically aggressive behaviors to achieve social dominance, these behaviors may be less tolerated by peers and less effective in advancing in the social hierarchy as children grow older. Thus, older children may have to seek out alternate methods of securing a favored social position. The combination of decreased peer tolerance for physical aggression and developmental advances in cognition and social skills that provide early adolescents with enhanced capacity to manipulate social relationships may make socially aggressive behaviors an increasingly viable strategy for securing social dominance. Specifically, Rose et al. (2004) noted that “the ability to aggress strategically in ways that are socially dominant, that display superiority, and that result in perceived popularity likely requires advanced interpersonal skills that may develop with age” (p. 385). This is especially true of more sophisticated forms of social aggression such as rumor-spreading and social exclusion that move beyond non-verbal gestures such as eye-rolling, and require the coordination of social relationships. Several cross-sectional studies suggest that older children use more socially aggressive strategies than younger children, with the use of these behaviors peaking in early adolescence (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Landau, Bjorkqvist, Lagerspetz, Osterman, & Gideon, 2002; Tiet, Wasserman, Loeber, McReynolds, & Miller, 2001; Xie, 2002a; Xie et al. 2003). Linking social aggression to social dominance, Rose et al. (2004) found cross-

sectional developmental differences whereby positive associations between social aggression and perceived popularity were consistently present for seventh and ninth grade students, but not for third and fifth grade students. Likewise, in a four-year longitudinal study following children from fifth to ninth grade, Cillessen and Mayeux (2004) found that age moderated the positive association between social aggression and perceived popularity, with this relationship strengthening as children reached early adolescence. More longitudinal research is needed to advance the understanding of developmental models of the relationships between social aggression and perceived popularity, as well as other indicators of social position, including sociometric status and social network position.

In addition to age, social dominance orientation is another potential moderator that may inform the understanding of linkages between social aggression and measures of social position. Social dominance orientation reflects a person's attitude toward hierarchy and inequality, and is shaped by both individual and contextual factors (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius et al., 2004). Individuals who are high in social dominance orientation (i.e., favor more hierarchy and inequality in their environments) may be more likely to seek out strategies that enhance their own social dominance, including social aggression. Thus, future research should explore whether social dominance orientation in children and early adolescence leads to stronger relationships between social aggression and measures of social position that reflect position in the peer hierarchy.

Future studies should also consider whether certain contextual factors, including classroom racial composition and behavioral norms, moderate associations between social aggression and social position. For example, research has demonstrated the influence of classroom racial composition on the association between social aggression and perceived popularity among fourth through sixth grade students (Meisinger, Blake, Lease, Palardy, & Olejnik, 2007). Results demonstrated that the relationship between social aggression and perceived popularity was significantly more positive in majority-Black classrooms than majority-White classrooms. Moreover, recent research has suggested the importance of group norms in moderating relationships between social aggression and social position. Among secondary school students in the Netherlands, those who engage in general bullying behaviors are less sociometrically rejected when these behaviors reflect classroom norms (Sentse, Scholte, Salmivalli, & Voeten, 2007) or norms among peers perceived as popular (Dijkstra, Lindenberg, & Veenstra, 2008). Further research in this vein will advance social dominance theory by illuminating the contextual conditions that allow socially aggressive behaviors to be particularly useful strategies for advancement in the peer hierarchy.

Finding that different individual indicators of aggressive behavior were associated with distinct social features led Gest et al (2001) to consider "the utility of considering individual peer reputation items as separate dependent variables rather than as components of multi-item scales" (p. 37). Likewise, it is useful to consider whether different forms of social aggression are differentially associated with social position. For example, because confrontational (e.g., direct threats to end a friendship) forms of social aggression are not anonymous, they may be more damaging to sociometric status and less advantageous for advancing one's position in the social hierarchy than nonconfrontational alternatives (e.g., rumor-spreading). Thus, from the perspective of social dominance theory, future research

in this area can help identify forms of social aggression that may be particularly effective strategies for achieving privileged social positions among peers.

Implications for Intervention

Although social aggression has some benefits for perpetrators, the negative effects of these behaviors for victims warrant prevention and intervention efforts (Underwood, 2003). Specifically, victims of social aggression experience higher levels of depression, loneliness, and social anxiety and increase their use of aggressive behaviors (e.g., Craig, 1998; Crick et al., 2001; Crick & Nelson, 2002). Despite these compelling reasons, efforts to prevent and reduce socially aggressive behaviors remain under-developed. Existing school-based programs targeting these behaviors among third (Fraser et al., 2005) and fifth grade samples (Cappella & Weinstein, 2006) have focused on improving social skills with mixed results in decreasing perpetration of social aggression. The current review of social aggression and social position has implications for conducting research to identify ecological points of intervention beyond social skills and developing new interventions that target these points.

Because social aggression is positively associated with perpetrators' perceived popularity and social network centrality, social skills training alone may not be sufficient to reduce these behaviors. As suggested by social dominance theory, the rewards of social aggression provide individuals with a strong motivation to engage in these behaviors even if interventionists alter their cognitions about them. Therefore, interventionists must find ways to reduce both opportunities for social aggression and the rewards of these behaviors. Research is needed to determine what aspects of the social setting can be changed to accomplish these aims, but existing research on peer social processes highlights some promising directions.

Neal (2007) argued that certain peer network features create or constrain opportunities to engage in social aggression. Thus, interventions that target these peer network features may be more effective in reducing socially aggressive behaviors. Small, dense social networks, for example, may facilitate intimacy, which has been linked to social aggression among children in the third through sixth grade (Grotperter & Crick, 1996). Modifications to classroom structure, which may include periodic changes to the classroom seating chart or the use of whole-group activities, would encourage the formation of larger, less dense networks. Moreover, measures of network centrality that emphasize "friends of friends" (see Bonacich, 1987), may aid in identifying as potential targets of intervention, those children who are best positioned in the social network to effectively engage in socially aggressive behaviors. For instance, while children with well-connected friends may be ideally situated in the network to efficiently spread rumors, children with poorly connected friends may be ideally positioned to harm them through social exclusion.

In addition to reducing opportunities for social aggression, future interventions should also aim to mitigate the rewards for these behaviors. Some have stressed the importance of addressing peer dynamics that reinforce aggressive behaviors (e.g., Farmer, 2000; Farmer & Cadwallader, 2000). There are tendencies for early adolescents with similar levels of aggression to associate with one another (Espelage, Holt, & Henkel, 2003; Lansford,

Costanzo, Grimes, Putallaz, Miller, & Malone, 2009; Rose, Swenson, & Carlson, 2004b; Salmivalli, Huttenen, & Lagerspetz, 1997). These homophobic associations likely strengthen inclinations (or disinclinations) to engage in socially aggressive behaviors by bolstering social norms and providing rewards. Supporting this notion, Espelage et al. (2003) found that the average level of bullying (including social aggression) in sixth through eighth grade students' peer groups in the fall predicted individual bullying in the spring. Thus, successful interventions need to consider the strong peer norms toward these behaviors, and find ways to reduce them. For example, this may include creating opportunities for children in socially aggressive groups to engage with new peers that do not share aggressive norms, thereby breaking up concentrated pockets of social aggression. Farmer (2000) also suggests avoiding placing socially aggressive children in leadership roles (e.g., team captain) around which such groups may coalesce. Whole school strategies that aim to reduce social aggression at multiple levels may also hold promise for altering peer norms. In the area of bullying, interventions across the world have employed multi-faceted strategies targeting the school (e.g., school conferences to increase staff awareness; whole school policies), classroom (e.g., enforcement of rules against bullying, curricular activities, peer support), and individual (e.g., assertiveness training for victims) (Smith, Morita, Junger-Tas, Olweus, Catalano, & Slee, 1999). Although the impact of these preventive efforts has varied, several have demonstrated promise in reducing self-reported bullying and victimization (including social aggression) among children and adolescents, especially when schools invest high effort in the intervention (see Smith & Ananiadou, 2003; Smith, Ananiadou, & Cowie, 2003 for reviews).

Finally, additional work on bullying among sixth grade students suggests that socially aggressive behaviors play out as a group process with individuals involved in a variety of roles such as bully, victim, reinforcer, and defender (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukianen, 1996). Thus, interventions targeting social aggression should look beyond aggressors and victims to consider the roles of other peers in providing opportunities and rewards for these behaviors. On the one hand, because defenders reduce opportunities for bullies to engage in social aggression by blocking potentially harmful bully-victim interactions, they are ideal candidates for interventions that focus on the structure of peer relations. For example, peer support methods that pair identified defenders with known victims may provide an effective buffer against social aggression. On the other hand, because reinforcers are a source of social rewards (e.g., popularity) for bullies by providing encouragement and social support, they are ideal candidates for social skills-based interventions. Specifically, social skills training may raise reinforcers' awareness of the harmful nature of socially aggressive behaviors for victims and provide them with alternate social problem-solving skills for addressing bullies (Cappella & Weinstein, 2006).

Conclusion

Depending on how social position is operationalized, social aggression can be associated with burning or building bridges to peers. Consistent with social dominance theory, perpetrators of social aggression exhibit privileged positions in the peer hierarchy, including high levels of perceived popularity and advantaged social network positions. However, these behaviors were not without negative consequences for sociometric status, with perpetrators

experiencing more peer rejection and less peer acceptance. As researchers acknowledge the function of social aggression in securing a dominant position in the peer hierarchy and the tradeoffs that these behaviors incur, they stand to gain a better understanding of the motivations behind these behaviors as well as potential methods for preventing and reducing them in the future.

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References

- Adler PA, & Adler P (1995). Dynamics of inclusion and exclusion in preadolescent cliques. *Social Psychology Quarterly*, 58(3), 145–162.
- Archer J & Coyne SM (2005). An integrated review of indirect, relational, and social aggression. *Personality and Social Psychology Review*, 9(3), 212–230. [PubMed: 16083361]
- Bjorkqvist K, Lagerspetz KMJ, Kaukiainen A (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. *Aggressive Behavior*, 18(2), 117–127.
- Bonacich P (1987). Power and centrality: A family of measures. *The American Journal of Sociology*, 92(5), 1170–1182.
- Cairns RB, Cairns BD, Neckerman HJ, Gest SD, & Garipey JL (1988). Social networks and aggressive behavior: Peer support or peer rejection? *Developmental Psychology*, 24(6), 815–823.
- Cappella E, & Weinstein R (2006). The prevention of social aggression among girls. *Social Development*, 15(3), p. 434–462.
- Cillessen AHN & Rose AJ (2005). Understanding popularity in the peer system. *Current Directions in Psychological Science*, 14(2), 102–105.
- Cillessen AHN & Mayeux L (2004). From censure to reinforcement: Developmental changes in the association between aggression and social status. *Child Development*, 75(1), 147–163. [PubMed: 15015681]
- Coie JD, Dodge KA, & Coppotelli H (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, 18, 557–570.
- Craig WM (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences*, 24(1), 123–130.
- Crick NR (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. *Child Development*, 67, 2317–2327. [PubMed: 9022243]
- Crick NR, & Grotpeter JK (1995). Social aggression, gender, and social-psychological adjustment. *Child Development*, 66(3), 710–722. [PubMed: 7789197]
- Crick NR, Nelson DA, Morales JR, Cullerton-Sen C, Casas JF, & Hickman SE (2001). Relational victimization in childhood and adolescence: I hurt you through the grapevine. In Juvonen J & Graham S (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp.196–214). New York: The Guilford Press.
- Crick NR, & Nelson DA (2002). Relational and physical victimization within friendships: Nobody told me there'd be friends like these. *Journal of Abnormal Child Psychology*, 30(6), 599–607. [PubMed: 12481974]
- Delveaux K, & Daniels T (2000). Children's social cognitions: Physically and relationally aggressive strategies and children's goals in peer conflict situations. *Merrill-Palmer Quarterly*, 46(4), 672–692.

- Dijkstra JK, Lindenberg S, & Veenstra R (2008). Beyond the class norm: Bullying behavior of popular adolescents and its relation to peer acceptance and rejection. *Journal of Abnormal Child Psychology*, 36(8), 1289–1299. [PubMed: 18607717]
- Eder D (1985). The cycle of popularity: Interpersonal relations among female adolescents. *Sociology of Education*, 58, 154–165.
- Ellis WE, & Zaratany L (2007). Peer group status as a moderator of group influence on children's deviant, aggressive, and prosocial behavior. *Child Development*, 78(4), 1240–1254. [PubMed: 17650136]
- Espelage DL, Holt MK, & Henkel RR (2003). Examination of peer-group contextual effects on aggression during early adolescence. *Child Development*, 74(1), 205–220. [PubMed: 12625446]
- Farmer TW (2000). The social dynamics of aggressive and disruptive behavior in school: Implications for behavioral consultation. *Journal of Educational and Psychological Consultation*, 11(3/4), 299–321.
- Farmer TW, & Cadwallader TW (2000). Social interactions and peer support for problem behaviors. *Preventing School Failure*, 44(3), 105–109
- Farmer TW, Estell DB, Bishop JL, O'Neal KK, & Cairns BD (2003). Rejected bullies or popular leaders? The social relations of aggressive subtypes of rural African-American early adolescents. *Developmental Psychology*, 39(6), 992–1004. [PubMed: 14584980]
- Fraser MW, Galinsky MJ, Smokowski PR, Day SH, Terzian MA, Rose RA, & Guo S (2005). Social information-processing skills training to promote social competence and prevent aggressive behavior in the third grade. *Journal of Consulting and Clinical Psychology*, 73(6), 1045–1055. [PubMed: 16392978]
- Galen BR, & Underwood MK (1997). A developmental investigation of social aggression among children. *Developmental Psychology*, 33(4), 589–600. [PubMed: 9232374]
- Gest SD, Graham-Bermann SA, & Hartup WW (2001). Peer experience: Common and unique features of number of friendships, social network centrality, and sociometric status. *Social Development*, 10(1), 23–40.
- Grotzinger JK, & Crick NR (1996). Relational aggression, overt aggression, and friendship. *Child Development*, 67, 2328–2338. [PubMed: 9022244]
- Hawley PH (1999). The ontogenesis of social dominance: A strategy-based evolutionary perspective. *Developmental Review*, 19, 97–132.
- Krackhardt D (1987). Cognitive social structures. *Social Networks*, 9, 109–134.
- LaFontana KM, & Cillessen AHN (2002). Children's perceptions of popular and unpopular peers: A multimethod assessment. *Developmental Psychology*, 38(5), 635–647. [PubMed: 12220043]
- Lagerspetz KMJ, Bjorkqvist K, & Peltonen T (1988). Is indirect aggression typical of females? Gender differences in aggressiveness in 11 to 12 year old children. *Aggressive Behavior*, 14, 403–414.
- Landau SF, Bjorkqvist K, Lagerspetz KMJ, Osterman K, & Gideon L (2002). The effect of religiosity and ethnic origin on direct and indirect aggression among males and females: Some Israeli findings. *Aggressive Behavior*, 28(4), 281–298.
- Lansford JE, Costanzo PR, Grimes C, Putallaz M, Miller S, & Malone PS (2009). Social network centrality and leadership status: Links with problem behaviors and tests of gender differences. *Merrill-Palmer Quarterly*, 55(1), 1–25. [PubMed: 19763241]
- Lease AM, Kennedy CA, & Axelrod JL (2002). Children's social constructions of popularity. *Social Development*, 11(1), 87–109.
- Meisinger EB, Blake JJ, Lease AM, Palardy GJ, & Olejnik SF (2007). Variant and invariant predictors of perceived popularity across majority-Black and majority-White classrooms. *Journal of School Psychology*, 45, 21–44.
- Merton DE (1997). The meaning of meanness: Popularity, competition, and conflict among junior high school girls. *Sociology of Education*, 70(3), 175–191.
- Mouttappa M, Valente T, Gallagher P, Rohrbach LA, & Unger JB (2004). Social network predictors of bullying and victimization. *Adolescence*, 39(154), 315–335. [PubMed: 15563041]
- Neal JW (2009). Network ties and mean lies: A relational approach to relational aggression. *Journal of Community Psychology*, 37(6), 737–753.

- Neal JW (2008). Cracking the missing data problem: Applying Krackhardt's cognitive social structures to school-based social network research. *Sociology of Education*, 81, 140–162.
- Neal JW (2007). Why social networks matter: A structural approach to the study of social aggression in middle childhood and adolescence. *Child and Youth Care Forum*, 36(5–6), p. 195–211.
- Nishina A (2004). A theoretical review of bullying: Can it be eliminated? In Sanders CE and Phye GD (Eds.), *Bullying: Implications for the classroom* (pp. 36–56). San Diego, CA: Elsevier Academic Press.
- Parkhurst JT, & Hopmeyer A (1998). Sociometric popularity and peer-perceived popularity: Two distinct dimensions of peer status. *Journal of Early Adolescence*, 18, 125–144.
- Pelligrini AD (2004). Bullying during middle school years. In Sanders CE and Phye GD (Eds.), *Bullying: Implications for the classroom* (pp. 36–56). San Diego, CA: Elsevier Academic Press.
- Pelligrini AD, & Bartini M (2001). Dominance in early adolescent boys: Affiliative and aggressive dimensions and possible functions. *Merrill-Palmer Quarterly*, 47, 142–163.
- Prinstein MJ, & Cillessen AHN (2003). Forms and functions of adolescent peer aggression associated with high levels of peer status. *Merrill-Palmer Quarterly*, 49, 310–342.
- Putallaz M, Grimes CL, Foster KJ, Kupersmidt JB, Coie JD, & Dearing K (2007). Overt and relational aggression and victimization: Multiple perspectives within the school setting. *Journal of School Psychology*, 45, 523–547. [PubMed: 18836518]
- Rose AJ, Swenson LP, & Waller EM (2004a). Overt and relational aggression and perceived popularity: Developmental differences in concurrent and prospective relations. *Developmental Psychology*, 40, 378–387. [PubMed: 15122964]
- Rose AJ, Swenson LP, & Carlson W (2004b). Friendships of aggressive youth: Considering the influences of being disliked and of being perceived as popular. *Journal of Experimental Child Psychology*, 88, 25–45. [PubMed: 15093724]
- Rys GS, & Bear GG (1997). Social aggression and peer relations: Gender and developmental issues. *Merrill-Palmer Quarterly*, 43(1), 87–106.
- Salmivalli C, Huttenen A, & Lagerspetz K (1997). Peer networks and bullying in school. *Scandinavian Journal of Psychology*, 38, 305–312.
- Salmivalli C, Lagerspetz K, Bjorkqvist K, Osterman K, & Kaukiainen A (1996). Bullying as a group process: Participant roles and their relations to social status. *Aggressive Behavior*, 22, 1–15.
- Sentse M, Scholte R, Salmivalli C, & Voeten M (2007). Person-group dissimilarity in bullying and its relation with social status. *Journal of Abnormal Child Psychology*, 35, 1009–1019. [PubMed: 17588201]
- Sidanius J, & Pratto F (1999). *Social dominance*. Cambridge: Cambridge University Press.
- Sidanius J, Pratto F, van Laar C, & Levin S (2004). Social dominance theory: Its agenda and method. *Political Psychology*, 25(6), 845–880.
- Simmons R (2002). *Odd girl out: The hidden culture of aggression in girls*. New York: Harcourt.
- Smith PK, & Ananiadou K (2003). The nature of school bullying and the effectiveness of school-based interventions. *Journal of Applied Psychoanalytic Studies*, 5(2), 189–209.
- Smith PK, Ananiadou K, & Cowie H (2003). Interventions to reduce school bullying. *Canadian Journal of Psychiatry*, 48(9), 591–599. [PubMed: 14631879]
- Smith PK, Morita Y, Junger-Tas J, Olweus D, Catalano R & Slee P (Eds.) (1999). *The nature of school bullying: A cross-national perspective*. London: Routledge.
- Tiet QQ, Wasserman GA, Loeber R, McReynolds SL, & Miller LS (2001). Developmental and sex differences in types of conduct problems. *Journal of Child and Family Studies*, 10(2), 181–197.
- Tomada G, & Schneider BH (1997). Relational aggression, gender, and peer acceptance: Invariance across culture, stability over time, and concordance among informants. *Developmental Psychology*, 33(4), 601–609. [PubMed: 9232375]
- Underwood (2003). *Social aggression among girls*. New York: The Guilford Press.
- Walcott CM, Upton A, Bolen LM, & Brown MB (2008). Associations between peer-perceived status and aggression in young adolescents. *Psychology in the Schools*, 45(6), 550–561.
- Wasserman S, & Faust K (1994). *Social Network Analysis: Methods and Applications*. New York: Cambridge Press.

- Wiseman R (2002). *Queen bees and wannabees: Helping your daughter survive cliques, gossip, boyfriends, and other realities of adolescence*. New York: Crown.
- Vaillancourt T, & Hymel S (2006). Aggression and social status: The moderating roles of sex and peer-valued characteristics. *Aggressive Behavior*, 32, 396–408.
- Xie H, Cairns BD, & Cairns RB (2005). The development of aggressive behaviors among girls: Measurement issues, social functions, and differential trajectories (pp. 105–136). In Pepler DJ, Madsen KC, Webster C, & Levene KS (Eds.), *The development and treatment of girlhood aggression*. New York: Routledge.
- Xie H, Farmer TW, & Cairns BD (2003). Different forms of aggression among inner-city African-American children: Gender, configurations and school social networks. *Journal of School Psychology*, 41(5), 355–375.
- Xie H, Cairns RB, & Cairns BD (2002a). The development of social aggression and physical aggression: A narrative analysis of interpersonal conflicts. *Aggressive Behavior*, 28(5), 341–355.
- Xie H, Swift DJ, Cairns B, & Cairns RB (2002b). Aggressive behaviors in social interaction and developmental adaptation: A narrative analysis of interpersonal conflicts during early adolescence. *Social Development*, 11(2), 205–224.
- Zimmer-Gembeck MJ, Geiger TC, & Crick NR (2005). Relational and physical aggression, prosocial behaviors, and peer relations: Gender moderation and bidirectional associations. *Journal of Early Adolescence*, 25(4), 421–452.