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Moving against and away from the world: The adolescent legacy of peer victimization

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Abstract

Nicki Crick initiated a generative line of theory and research aimed at exploring the implications of exposure to overt and relational aggression for youth development. The present study aimed to continue and expand this research by examining whether early (second grade) and increasing (second–sixth grade) levels of victimization during elementary school contributed to youths' tendencies to move against, away from, or toward the world of peers following the transition to middle school. Youth (*M* age in second grade = 7.96 years, *SD* = 0.35; 298 girls, 338 boys) reported on their exposure to victimization and their social (performance-approach, performance-avoidance, or mastery). Teachers reported on youths' exposure to victimization and their engagement in antisocial, socially helpless, and prosocial behavior. Latent growth curve analyses revealed that early and increasing levels of both overt and relational victimization uniquely contributed to multifinality in adverse developmental outcomes, predicting all three social orientations (high conflictual engagement, high disengagement, and low positive engagement). The pattern of effects was robust across sex and after adjusting for youths' early social motivation. These findings confirm that both forms of victimization leave an enduring legacy on youths' social health in adolescence. Given that profiles of moving against and away from the world can contribute to subsequent psychopathology, understanding and preventing this legacy is pivotal for developing effective intervention programs aimed at minimizing the effects of peer adversity.

Although the study of peer relationships and their effects on psychopathology became popularized in the 1980s, early attention was directed toward the construct of peer rejection (Asher & Coie, 1990). As the adverse consequences of peer rejection became clear, a burgeoning interest emerged in identifying specific behaviors through which negative attitudes such as rejection are conveyed to peers. With these efforts arose a heightened concern about bullying and victimization. Given the predominant focus of the time on physical aggression among peers, victimization typically was conceptualized in terms of acts of overt aggression as reflected in hitting, threats of violence, and the like. However, pioneering work by Nicki Crick and colleagues (Crick & Bigbee, 1998; Crick & Grotpeter, 1995, 1996; Crick & Nelson, 2002) spearheaded an innovative line of research aimed at

uncovering the nature and consequences of relational aggression/victimization, as reflected in acts aimed at threatening dyadic relationships (e.g., social manipulation) or damaging one's social standing (e.g., exclusion or rumor spreading).

Two decades later, solid evidence documents the adverse effects of victimization, implicating it as a potentially traumatic stressor that warrants significant research and practical attention (Graham, 2006). Moreover, research documents multifinality of outcomes (Cicchetti & Rogosch, 1996), reflected in between-individual heterogeneity in the consequences of victimization. Yet many of these efforts involve either concurrent or short-term longitudinal studies, leaving open the question of whether victimization constitutes a long-term risk. Moreover, most research fails to distinguish the static effects of victimization from its dynamic effects over time and across developmental transitions. This study examined whether early (second grade) and dynamic (trajectories across second–sixth grades) indicators of victimization uniquely predict risky outcomes in adolescence (sixth grade). In particular, consistent with prior evidence of multifinality in the outcomes of victimization, we sought to understand the emergence of three social orientations that represent risk or protective factors for psychopathology (Caspi, Elder, & Bem, 1987, 1988): moving against the world (conflictual engagement), moving away from the world (disengagement), and moving toward the world (positive engagement). We also examined whether exposure to victimization contributes to these outcomes beyond early individual differences in children's social motivation.

Victimization and Moving Against the World

Moving against the world was conceptualized as aggressive (e.g., fighting or cruelty) and antisocial (e.g., disobedience or lying) acts that threaten others and defy accepted social norms. Some peer-victimized children may attribute maltreatment to undesirable characteristics of their peers (Perren, Ettekal, & Ladd, 2013; Schwartz et al., 1998; Yeung & Leadbeater, 2007), thereby developing negative peer perceptions (e.g., a sense of mistrust, hostility, or injustice) and feelings of anger (Kochenderfer-Ladd, 2004; Salmivalli, Karhunen, & Lagerspetz, 1996; Troop-Gordon & Ladd, 2005). Being victimized also may instill a defensive stance in children, prompting aggressive efforts to retaliate or regain their social status. Over time, negative peer perceptions, anger, and aggressive tendencies may become consolidated into a hostile attitude toward the world and generalized antisocial behavior.

Supporting the idea that victimization fosters a social orientation characterized by movement *against* the world, victimization predicts subsequent aggression (Lamarche et al., 2007; Ostrov, 2010; Rudolph, Troop-Gordon, Hessel, & Schmidt, 2011), delinquency (Khatri, Kupersmidt, & Patterson, 2000; Rusby, Forrester, Biglan, & Metzler, 2005), conduct problems (Loukas & Pasch, 2013), and general externalizing behavior (Ladd & Troop-Gordon, 2003; van Lier et al., 2012). Only a few studies provide clues about the impact of victimization on antisocial behavior over longer time spans or across developmental stages. In one study, victimization during first–third grades predicted behavior problems in fourth grade after accounting for proximal (fourth grade) victimization (Ladd & Troop-Gordon, 2003). In a follow-up, changes in victimization from fourth to sixth grades predicted sixth-

grade behavior problems (Troop-Gordon & Ladd, 2005). Using a cross-lagged panel design across first–third grades, Leadbeater and Hoglund (2009) found that victimization predicted subsequent physical aggression in boys but not in girls. Using trajectory analyses, Goldbaum, Craig, Pepler, and Connolly (2007) found that early adolescents with increasing (“late onset”) victimization showed increasing aggression over time. Finally, Hanish and Guerra (2002) found that victimization predicted aggression 2 years later after adjusting for its stability. Drawing from theory and prior research, we anticipated that early (second grade) and increasing (second–sixth grade) victimization would predict heightened conflictual engagement (i.e., antisocial behavior, reflected in aggressive and delinquent acts) in sixth grade.

Victimization and Moving Away From the World

Moving away from the world was conceptualized as helpless behaviors that reflect a lack of initiative and persistence in the peer group. Some peer-victimized children may attribute maltreatment to undesirable characteristics of themselves (Graham, Bellmore, & Mize, 2006; Graham & Juvonen, 1998; cf. Perren et al., 2013), thereby developing negative self-perceptions (e.g., a sense of low self-worth, self-competence, or self-efficacy; Cole, Maxwell, Dukewich, & Yosick, 2010; Singh & Bussey, 2011; Troop-Gordon & Ladd, 2005) and feelings of embarrassment (Kochenderfer-Ladd, 2004) and hopelessness (Bonanno & Hymel, 2010). A constant barrage of maltreatment eventually may lead victimized children to withdraw from peers in an effort to avoid future disappointment and harassment. Over time, victimization may undermine children’s social initiative and persistence, causing them to give up easily in the face of social challenges (e.g., making friends or resolving conflicts).

Supporting the idea that victimization fosters a social orientation characterized by movement *away from* the world, victimization is associated concurrently (Crick & Grotpeter, 1996; Pouwels & Cillessen, 2013; Siegel, La Greca, & Harrison, 2009) and prospectively (Loukas & Pasch, 2013; Rudolph et al., 2014; Siegel et al., 2009) with loneliness, social anxiety, withdrawal/isolation, and helplessness. Very few studies use longer term designs to examine patterns of disengagement across several years. Using a cross-lagged panel design, Boivin, Petitclerc, Feng, and Barker (2010) found that victimization predicted social withdrawal across 1-year periods from third to fifth grades. Moreover, children who started out extremely high in victimization became more withdrawn over time, with a slight decrease in sixth grade. Assessing trajectories of social withdrawal across the middle school transition, Oh et al. (2008) found that higher levels of victimization in fifth grade (prior to the transition) and in sixth grade (following the transition) predicted a higher likelihood of showing an increasing trajectory relative to a stable low trajectory from fifth to eighth grades. Drawing from theory and prior research, we anticipated that early (second grade) and increasing (second–sixth grade) victimization would predict heightened disengagement (i.e., social helplessness, reflected in low persistence and initiative) in sixth grade.

Victimization and Moving Toward the World

Moving toward the world was conceptualized as friendly, empathic, and inclusive behaviors that reflect a desire to help peers. Regardless of whether they move against or away from the

peer group, peer-victimized children are less likely to move toward the peer group over time. Victimization conveys a message that children are not welcome members of the peer group, thereby undermining their confidence and the likelihood they will actively seek affiliations within the mainstream peer group. Victimized children are less likely to be friendly and inclusive, perhaps because of resentment about their own maltreatment or because they assume peers would not be interested in affiliating with them. Moreover, victimized children may not have the social capital to initiate empathic and inclusive interactions with peers.

Minimal research examines how victimization influences children's prosocial orientations. One study revealed that bully-victims were rated by teachers as less prosocial than those not involved in bullying or victimization (Perren & Alsaker, 2006). In another study, children who were highly victimized in first grade were decreasingly nominated by peers as prosocial through the third grade (Pouwels & Cillessen, 2013). Drawing from theory and prior research, we anticipated that early (second grade) and increasing (second–sixth grade) victimization would predict less positive engagement (i.e., prosocial behavior, reflected in relational inclusion) in sixth grade.

Developmental Transitions

The adverse effects of victimization may be amplified during the transitions to middle school and adolescence, which require youth to negotiate complex psychological and social challenges (Oh et al., 2008; Roeser & Eccles, 2014; Rudolph, 2014). Youth with a history of victimization enter these transitions with prior risks that may impair their ability to effectively navigate their new social landscape. Specifically, victimized youth often lack peer support systems (Hanish, Ryan, Martin, & Fabes, 2005) and an adequate repertoire of skills (Champion, Vernberg, & Shipman, 2003) for coping with transition-related changes. Moreover, the negative peer or self-perceptions associated with victimization may be intensified by normative adolescent increases in social alienation and self-consciousness (Harter, 1990). As peer groups reorganize into adolescent cliques and crowds (Brown, 1990), victimized youth may find it particularly difficult to find a social niche, potentially causing them to become angry or frustrated and to move against the peer group or to become resigned and hopeless and to move away from the peer group. Thus, to fully understand the consequences of victimization, long-term research needs to follow youth over extended time periods and across key transitions. Accordingly, this study examined how early and recent experiences of victimization uniquely contribute to social health following the middle school transition.

Sex Differences and the Consequences of Overt Versus Relational Victimization

This study also examined sex differences in the effects of victimization. Given girls' tendency to feel afraid and embarrassed in response to peer victimization (Kochenderfer-Ladd, 2004), they may take more personal responsibility, leading them to develop socially helpless behavior. Given boys' tendency to engage in overt forms of aggression (Card, Stucky, Sawalani, & Little, 2008) and antisocial acts (Lahey et al., 2006), they may be more

likely to use these behaviors to defend themselves or reassert their status following victimization. Some studies indicate significant sex differences in the prospective effects of victimization (e.g., Rusby et al., 2005; Snyder et al., 2003), but others indicate similar effects on conflictual engagement (e.g., Ladd & Troop-Gordon, 2003; Rudolph, Troop-Gordon, et al., 2011) and disengagement (e.g., Ladd & Troop-Gordon, 2003). Although a few studies suggest more consistent or enduring effects in boys (Leadbeater & Hoglund, 2009), particularly for externalizing problems (Hanish & Guerra, 2002; Sullivan, Farrell, & Kliewer, 2006), others show stronger or more enduring effects for girls (for withdrawal, Boivin et al., 2010; for externalizing problems, Khatri et al., 2000; Loukas & Pasch, 2013; Pouwels & Cillessen, 2013; Snyder et al., 2003).

Many of these studies examine only overt victimization or collapse across different forms; however, more consistent sex differences may emerge when distinguishing overt and relational victimization. To address the complexity of victimization and maximize the likelihood of identifying sex differences, this study separately examined the consequences of overt and relational victimization. Although a few studies suggest possible sex differences in the effects of these two forms (Siegel et al., 2009; Sullivan et al., 2006), they are highly correlated (Card & Hodges, 2008) and often have similar consequences (Crick & Grotpeter, 1996; Nishina & Juvonen, 2005). In light of past inconsistent findings, we did not formulate specific predictions about possible sex-differentiated consequences of these two forms of victimization.

Disentangling the Effects of Victimization and Social Motivation

Research examining the contribution of victimization to adjustment implicitly assumes a causal model, wherein peer experiences actively foster adaptive or maladaptive outcomes (Rudolph & Asher, 2000). From this perspective, victimization serves as a catalyst for social disruption. However, peer disturbances could merely be an incidental marker of individual risk, such that both exposure to victimization and later maladaptation reflect common underlying pathogenic processes (Rudolph & Asher, 2000). Thus, it is critical to determine whether peer maltreatment predicts adverse outcomes beyond individual differences in children. With regard to this study, some children may be temperamentally inclined to move against or away from the world (Caspi et al., 1987, 1988), leading them both to experience more victimization and to show heightened conflictual engagement or disengagement and less positive engagement.

Specifically, children's social motivation may foster individual differences in their tendency to move toward, against, or away from the world (Erdley, Loomis, Cain, & Dumas-Hines, 1997; Rudolph, Abaied, Flynn, Sugimura, & Agoston, 2011; Ryan & Shim, 2008). Social mastery goals involve developing social competence and learning about relationships (e.g., learning how to be a good friend). Social performance-approach goals involve demonstrating social competence by gaining positive social judgments and prestige (e.g., being viewed as important or having "cool" friends). Social performance-avoidance goals involve demonstrating social competence by avoiding negative social judgments (e.g., avoiding being viewed as foolish or a "loser").

Social mastery oriented children aim to develop positive peer relationships. Their goals involve cooperating and minimizing conflict (Rudolph, Abaied, et al., 2011), making it likely that they approach peers in a prosocial manner, are inclusive in their relationships, and avoid behaviors that would undermine relationships. Social performance-approach oriented children aim to establish their peer status and prestige. Their goals involve controlling peers and pursuing their own self-interests (Rudolph, Abaied, et al., 2011), making it likely that they engage in aggressive and antisocial acts that fail to consider the consequences for their peers. Social performance-avoidance oriented children aim to avoid negative peer judgments. Their goals involve minimizing conflict (Rudolph, Abaied, et al., 2011), making it likely that they will disengage from socially challenging situations and avoid behaviors that make them stand out among peers.

Supporting these predictions, mastery goals are positively associated with prosocial behavior and negatively associated with aggression, whereas performance-approach goals are positively associated with aggression and negatively associated with prosocial behavior (Rodkin, Ryan, Jamison, & Wilson, 2013; Rudolph, Abaied, et al., 2011). Performance-avoidance goals are positively associated with ignoring peer conflict and negatively associated with aggression and retaliating in the face of peer conflict (Rodkin et al., 2013; Rudolph, Abaied, et al., 2011). More generally, approach motivation predicts moving against the world (Gray, 1994; Rothbart, Ellis, & Posner, 2004), whereas avoidance motivation predicts moving away from the world (Coplan et al., 2013; Rubin, Coplan, & Bowker, 2009). Motivational tendencies to move against or away from the world also are associated with peer relationship disturbances, including victimization (Bowker & Raja, 2011; Caspi et al., 1988; Coplan et al., 2013; Gazelle & Ladd, 2003; Troop-Gordon & Asher, 2005; for a review, see Eisenberg, Vaughan, & Hofer, 2009), making it important to consider their role in the observed associations between victimization and social behavior.

Study Overview

Most research documenting adverse consequences of victimization relies on concurrent or short-term designs that focus on static, single informant measures of victimization, fail to distinguish early versus recent experiences, and rarely account for developmental transitions. Prior investigations also have not considered whether individual differences in children account for both their exposure to victimization and their maladaptive outcomes. This study relied on a rigorous analytic approach that (a) used a long-term design and latent growth curve analyses to track the unique consequences of early (second grade) and changing (second–sixth grade) victimization on adolescent outcomes following the middle school transition, (b) separately examined the effects of overt and relational victimization, (c) considered sex differences in the effects of victimization, (d) incorporated multiple developmental outcomes within single models, and (e) disentangled the effects of victimization exposure from those of individual differences in social motivation. We anticipated that early and increasing victimization during childhood would make unique contributions to heightened conflictual engagement (antisocial behavior) and disengagement (social helplessness) and dampened positive engagement (prosocial behavior) in adolescence, even after adjusting for second-grade behavior and social motivation.

Method

Participants

Participants were 636 youth (M age in second grade = 7.96 years, SD = 0.35; 338 girls, 298 boys; 67% White, 33% minority; 35% received a subsidized school lunch) participating in the Social Health and Relationship Experiences Project, a longitudinal study of peer victimization (e.g., Rudolph, Abaied, et al., 2011; Rudolph, Troop-Gordon, et al., 2011). In second grade (Wave 1 [W_1]), parents completed informed consent forms and youth provided oral assent. Of the 724 eligible children, 576 (80%) received consent to participate. Participants and nonparticipants did not significantly differ in sex, $\chi^2(1) = 0.15$, ns ; age, $t(723) = 0.63$, ns ; ethnicity (White vs. minority), $\chi^2(1) = 0.59$, ns ; or school lunch status (full pay vs. subsidized), $\chi^2(1) = 0.35$, ns . In third grade, an additional 60 classmates of the participating youth were recruited, resulting in a total of 636 participants. Follow-up assessments were conducted at annual intervals through the sixth grade (Wave 5 [W_5]). Of the original 636 participants, 548 (86%) had relevant teacher data in the sixth grade. Youth with and without sixth-grade teacher data did not differ in sex, $\chi^2(1) = 0.03$, ns ; age, $t(634) = 1.42$, ns ; ethnicity, $\chi^2(1) = 1.91$, ns ; or school lunch status, $\chi^2(1) = 0.36$, ns . For youth recruited in second grade, those with and without sixth-grade teacher data did not differ in W_1 overt victimization, $t(574) = -0.75$, ns ; relational victimization, $t(574) = -0.16$, ns ; overt aggression, $t(574) = 0.89$, ns ; social helplessness, $t(574) = -1.23$, ns ; prosocial behavior, $t(574) = -0.33$, ns ; performance-approach goals, $t(573) = 0.82$, ns ; performance-avoidance goals, $t(573) = -0.98$, ns ; or mastery goals, $t(573) = -0.15$, ns . For youth recruited in third grade, those with and without sixth-grade teacher data did not significantly differ in W_2 overt victimization, $t(58) = 1.03$, ns ; relational victimization, $t(58) = 1.06$, ns ; overt aggression, $t(58) = 1.07$, ns ; social helplessness, $t(58) = 1.09$, ns ; prosocial behavior $t(58) = -1.45$, ns ; performance-approach goals, $t(573) = 1.11$, ns ; performance-avoidance goals, $t(573) = 0.97$, ns ; or mastery goals, $t(573) = 0.24$, ns . All 636 youth were included in the central analyses (see the Results Section).

Procedures

The procedures for this study were approved by the university's institutional review board. In the winter of each year, questionnaires were administered during two classroom sessions to small groups (3–4 students) in elementary school and larger groups (15–20 students) in middle school. Teachers returned their surveys at school or by mail. Youth received a small gift; teachers received a monetary reimbursement. Each participating elementary school classroom received a monetary honorarium, and middle schools received a schoolwide honorarium.

Measures

Table 1 presents descriptive data and reliability of the measures for girls and boys. All of the measures showed strong internal consistency across waves.

Peer victimization—Each year from second to sixth grade, youth and teachers completed a revised version (Rudolph, Troop-Gordon, et al., 2011) of the Social Experiences Questionnaire (Crick & Grotpeter, 1996) to assess exposure to peer victimization. This

measure assesses overt victimization (being the target of behaviors intended to harm others through physical damage or the threat of such damage; e.g., “How often do you get hit by another kid?”) and relational victimization (being the target of behaviors intended to harm others through manipulation of relationships; e.g., “How often does another kid say they won’t like you unless you do what they want you to do?”). Eleven items were added to the original measure to provide a more comprehensive assessment of victimization, resulting in a 21-item measure. Of the new items, 6 assessed overt victimization (e.g., “How often do you get teased by another kid?”) and 5 assessed relational victimization (e.g., “How often does a friend spread rumors about you because they are mad at you?”). Youth checked a box and teachers provided a rating indicating how often they experienced each type of victimization on a 5-point scale. Scores were computed as the mean of the items within each subscale.

Research suggests that self-reports of victimization provide valid information that corresponds to reports by peers (e.g., Graham & Juvonen, 1998) and parents (Bollmer, Harris, & Milich, 2006). Teacher reports of victimization also have established reliability and validity, and self- and teacher reports of victimization are significantly correlated (Ladd & Kochenderfer-Ladd, 2002). In the present sample, youth and teacher reports were moderately but significantly correlated at all waves (average $r_s = .24$ and $.22$, $p_s < .001$, for overt and relational victimization, respectively). Thus, composite scores were created by averaging the youth and teacher reports of overt and relational victimization. These composite scores provided a more comprehensive picture of victimization by incorporating both child and teacher perspectives, which may provide both overlapping and distinct information about victimization experiences. Research shows that self and teacher reports of victimization are uniquely associated with children’s adjustment and that a multiple-informant composite of victimization is a better predictor of adjustment than mono-informant assessments (Ladd & Kochenderfer-Ladd, 2002).

Overt aggression—When youth were in second grade, teachers completed the overt aggression subscale of the Children’s Social Behavior Scale (Crick, 1996). Teachers rated each of four items (e.g., “This child pushes or shoves peers.”) on a 5-point scale. Scores were computed as the mean of the items. Previous research supports the reliability and validity of this measure and reveals high correspondence with peer reports of aggression (Crick, 1996). Because the measure of antisocial behavior was not administered until sixth grade, this measure was used to adjust for second-grade comparable types of behavior. Supporting this approach, teacher ratings of overt aggression and antisocial behavior in sixth grade were highly correlated, $r(548) = .82$, $p < .001$.

Antisocial behavior—When youth were in sixth grade, teachers completed a measure of antisocial behavior (Nolen-Hoeksema, Stice, Wade, & Bohon, 2007). This 13-item measure, derived from items on the Child Behavior Checklist (Achenbach & Rescorla, 2001), assesses aggressive (e.g., “This child was mean or cruel to others”) and delinquent (e.g., “This child lied or cheated”) behaviors over the past year. Prompts were reworded slightly to use for teacher reports. Teachers rated each item on a 5-point scale. Scores were computed as the mean of the items. Prior research has established the reliability of this measure and

indicates that scores on a self-report version are associated with scores from the full externalizing scale of the Youth Self-Report form of the Child Behavior Checklist (Nolen-Hoeksema et al., 2007).

Social helplessness—When youth were in second and sixth grades, teachers completed the Social Helplessness Questionnaire (Nolen-Hoeksema, Girgus, & Seligman, 1992). This 12-item measure assesses the tendency to show low initiative and persistence in peer relationships (e.g., “This child takes little independent initiative in making friends” or “This child is easily discouraged in his/her attempts to get along with other children”). Teachers rated each item on a 5-point scale. Scores were computed as the mean of the items. Prior research has established the reliability and validity of this measure (Caldwell, Rudolph, Troop-Gordon, & Kim, 2004; Nolen-Hoeksema et al., 1992).

Prosocial behavior—When youth were in second and sixth grades, teachers completed the prosocial behavior subscale of the Children’s Social Behavior Scale (Crick, 1996). Teachers rated each of three items (e.g., “When this child notices that another kid has been left out of an activity or game, s/he invites the kid to join the group”) on a 5-point scale. Scores were computed as the mean of the three items. Research supports the validity of teacher reports of prosocial behavior (Ladd, Herald-Brown, & Andrews, 2009; Ladd & Profilet, 1996); moreover, scores on this measure correspond with peer reports of prosocial behavior (Crick, 1996).

Social goals—When youth were in second grade, they completed a measure of social goals (Rudolph, Abaied, et al., 2011). Items tap mastery goals, which involve developing social competence and learning about relationships (eight items; e.g., “I like to learn new skills for getting along with other kids”); performance-approach goals, which involve demonstrating social competence by gaining positive social judgments (six items; e.g., “My goal is to show other kids how much everyone likes me”); and performance-avoidance goals, which involve demonstrating social competence by avoiding negative social judgments (seven items; e.g., “I try to avoid doing things that make me look bad to other kids”). Children received the prompt: “When I am around other kids ...” and checked a box indicating how true each item was on a 5-point scale (1 = *not at all*, 5 = *very much*). Scores were computed as the mean of the items within each subscale. Factor analysis supports distinct mastery, performance-approach, and performance-avoidance factors; construct validity has been established through associations with other types of social goals and multiple indexes of social adjustment (Rudolph, Abaied, et al., 2011).

Results

Sex differences

A series of *t* tests was conducted to examine sex differences in the variables. These analyses revealed that boys experienced more overt victimization in third grade, $t(600) = 3.14, p < .01$, fourth grade, $t(584) = 5.43, p < .001$, fifth grade, $t(571) = 2.84, p < .01$, and sixth grade, $t(552) = 4.98, p < .001$, whereas girls experienced more relational victimization in second grade, $t(574) = -2.39, p < .05$, third grade, $t(600) = -3.03, p < .01$, fourth grade, $t(584) =$

–1.94, $p = .05$, and fifth grade, $t(571) = -3.49$, $p < .01$. Boys also displayed more second-grade overt aggression, $t(574) = 5.03$, $p < .001$, sixth-grade antisocial behavior, $t(546) = 2.57$, $p < .05$, and sixth-grade social helplessness, $t(546) = 2.99$, $p < .01$, whereas girls displayed more second-grade, $t(574) = -3.00$, $p < .01$, and sixth-grade, $t(546) = -4.39$, $p < .001$, prosocial behavior. Girls and boys did not significantly differ on the other variables included in the analyses.

Correlational data

Table 2 presents intercorrelations among the variables. In both girls and boys, victimization generally was significantly negatively correlated with prosocial behavior and significantly positively correlated with antisocial behavior and social helplessness across waves. Correlations among the three types of behavior were low to moderate, suggesting they are related but independent social orientations. In both girls and boys, second-grade performance-approach goals generally were positively correlated with victimization, although a few associations did not reach significance across waves. In girls, second-grade performance-avoidance goals were positively correlated with second-grade overt and relational victimization. In boys, second-grade performance-avoidance goals were negatively correlated with second-grade relational victimization. Mastery goals generally were not significantly associated with victimization, with the exception that second-grade mastery goals were negatively correlated with sixth-grade relational victimization in boys.

Latent growth curve analyses

A latent growth curve analysis was conducted using Mplus statistical software (Muthén & Muthén, 1998–2007) to examine the unique contributions of early (second grade) victimization and linear change (second–sixth grade) in victimization to sixth-grade antisocial behavior, social helplessness, and prosocial behavior, adjusting for second-grade behavior. This analysis was conducted using full information maximum likelihood estimation (Enders & Bandalos, 2001); thus, parameters were estimated using available data from all of the 636 participating youth.

Modeling overview

Unconditional growth models were tested separately for overt and relational victimization. For each model, two latent variables were created. A latent intercept variable representing initial victimization was estimated by setting indicator paths from the observed second–sixth grade victimization variables to be equal to 1. A latent slope variable representing linear change in victimization was estimated by setting indicator paths from the observed second–sixth grade victimization variables to 0, 1, 2, 3, and 4, respectively. By setting the path from second-grade victimization to the latent slope variable at 0, the intercept could be interpreted as exposure to victimization at the onset of the study (Duncan, Duncan, Strycker, Li, & Alpert, 1999). The unconditional model provided estimates of the means and variances of the latent intercept and slope that were not conditional on other study variables. Next, observed variables representing sixth-grade antisocial behavior, social helplessness, and prosocial behavior were added to the model. Each of these variables was predicted from the latent intercept and slope factors, adjusting for stability paths from second to sixth grade as

well as for second-grade assessments of the other two behaviors (Figures 1 and 2). To account for associations between second-grade victimization and second-grade behavior, covariances between the latent intercept variable and each type of behavior were estimated. Finally, models were reestimated adjusting for the effects of second-grade goals. Paths were estimated from each of the second-grade goals (performance-approach, performance-avoidance, and mastery) to the latent intercept and slope of victimization. Paths were also estimated from each of the second-grade goals to each of the sixth-grade behaviors (antisocial behavior, social helplessness, and prosocial behavior).

To examine potential sex differences in the parameters, multigroup structural equation modeling was employed. All paths and variances were estimated separately for girls and boys. Significant sex differences were identified by sequentially constraining each parameter to be equal across sex. Chi-square difference tests were used to determine whether there was a significant decrease in model fit when the parameter in question was constrained to be equal for girls and boys. Tests for sex differences were conducted for the means and variances of the latent intercept and slope factors, paths between the observed variables, paths between the latent factors and observed variables, and all covariances between variables. Few sex differences emerged. Boys experienced more frequent overt victimization in the second grade ($M = 1.94$) than did girls ($M = 1.82$), $\chi^2(1) = 7.71, p = .006$, and girls showed a greater average decline in overt victimization ($M = -0.07, p < .001$) than did boys ($M = -0.04, p < .001$), $\chi^2(1) = 43.86, p = .05$. Girls experienced more frequent relational victimization in the second grade ($M = 2.03$) than did boys ($M = 1.89$), $\chi^2(1) = 10.46, p = .001$. For girls only, second-grade performance-avoidance goals predicted more frequent overt and relational victimization in the second grade and greater declines in overt and relational victimization over time. All other sex differences reflected differences in the magnitude of associations not the significance or direction of effects. Of greatest importance, no significant sex differences emerged in the key paths of interest from the latent growth parameters (intercept or slope) to sixth-grade behaviors or in the paths from second-grade goals to sixth-grade behaviors. Thus, final analyses were conducted collapsing across sex.

Overt victimization

Unconditional model—The unconditional model for overt victimization fit the data well, $\chi^2(7, N = 636) = 4.26, ns$, comparative fit index (CFI) = 1.00, root mean square error of approximation (RMSEA) = 0.000, standardized root mean square residual (SRMR) = 0.025. The mean growth trajectory for overt victimization was negative ($M = -0.06, p < .001$), indicating a decrease in victimization from second to sixth grade. There was significant variance in the latent intercept ($p < .001$) and in the latent slope ($p < .001$), indicating that there was variability across children in early overt victimization exposure and in trajectories of overt victimization over time.

Conditional model—The conditional model for overt victimization also fit the data well, $\chi^2(28, 636) = 75.61, p < .001$, CFI = 0.97, RMSEA = 0.052, SRMR = 0.031. Figure 1 presents standardized path coefficients. To ease readability of the figure, covariances between second-grade behavior and the latent intercept (described below) are not displayed.

Significant stability was found in antisocial behavior and social helplessness from second to sixth grades. Direct links from second-grade overt aggression and prosocial behavior to sixth-grade social helplessness and from second-grade social helplessness to sixth-grade antisocial behavior were not significant and were removed from the final model. The second-grade assessments of overt aggression, social helplessness, and prosocial behavior were significantly associated in the expected directions with the latent overt victimization intercept (0.54, 0.49, and -0.38 , for second-grade overt aggression, social helplessness, and prosocial behavior, respectively, $ps < .001$). Even after accounting for cross-wave stability in behavior, early and increasing overt victimization significantly predicted more sixth-grade antisocial behavior and social helplessness and less sixth-grade prosocial behavior.

Conditional model adjusting for social goals—The model also fit well after including second-grade performance-approach, performance-avoidance, and mastery goals, $\chi^2(40, 636) = 10.77, p < .001, CFI = 0.96, RMSEA = 0.053, SRMR = 0.041$. Performance-approach goals were associated with higher initial levels of victimization ($0.31, p < .001$), and mastery goals were associated with lower initial levels of victimization ($-0.12, p = .03$). Goals did not predict growth in victimization or sixth-grade antisocial behavior or social helplessness. Performance-approach goals predicted lower levels of sixth-grade prosocial behavior ($-0.12, p = .01$), and mastery goals predicted higher levels of sixth-grade prosocial behavior ($0.13, p = .005$). Moreover, even after adjusting for second-grade goals, the latent intercept ($0.28, 0.45, ps < .001$, and $-0.13, p = .04$) and slope ($0.37, 0.44$, and $-0.28, ps < .001$) of overt victimization uniquely predicted sixth-grade antisocial behavior, social helplessness, and prosocial behavior, respectively.

Relational victimization

Unconditional model—The unconditional model for relational victimization fit the data well, $\chi^2(7, N = 636) = 16.54, p = .02, CFI = 0.99, RMSEA = 0.046, SRMR = 0.022$. The mean growth trajectory for relational victimization was negative ($M = -0.09, p < .001$), indicating a decrease in victimization from second to sixth grade. There was significant variance in the latent intercept ($p < .001$) and in the latent slope ($p < .001$), indicating that there was variability across children in early relational victimization exposure and in trajectories of relational victimization over time.

Conditional model—The conditional model for relational victimization also fit the data well, $\chi^2(28, 636) = 85.98, p < .001, CFI = 0.96, RMSEA = 0.057, SRMR = 0.036$. Figure 2 presents standardized path coefficients. Again, to ease readability of the figure, covariances between second-grade behavior and the latent intercept (described below) are not displayed. Significant stability was found in antisocial behavior and social helplessness from second to sixth grades. Direct links from second-grade overt aggression and prosocial behavior to sixth-grade social helplessness and from second-grade social helplessness to sixth-grade antisocial behavior were not significant and were removed from the final model. The second-grade assessments of overt aggression, social helplessness, and prosocial behavior were significantly associated in the expected directions with the latent relational victimization intercept ($0.41, 0.51$, and -0.30 , for second-grade overt aggression, social helplessness, and prosocial behavior, respectively, $ps < .001$). Even after accounting for

cross-wave stability in behavior, early and increasing relational victimization significantly predicted more sixth-grade antisocial behavior and social helplessness and less sixth-grade prosocial behavior.

Conditional model adjusting for social goals—The model also fit well after including second-grade performance-approach, performance-avoidance, and mastery goals, $\chi^2(40, 636) = 122.17, p < .001, CFI = 0.95, RMSEA = 0.057, SRMR = 0.041$. Performance-approach goals were associated with higher initial levels of victimization ($0.27, p < .001$). Goals did not predict growth in victimization or sixth-grade antisocial behavior or social helplessness. Performance-approach goals predicted lower levels of sixth-grade prosocial behavior ($-0.10, p = .03$), and mastery goals predicted higher levels of sixth-grade prosocial behavior ($0.13, p = .005$). Moreover, even after adjusting for second-grade goals, the latent intercept ($0.30, 0.37, \text{ and } -0.19, ps < .002$) and slope ($0.34, 0.53, \text{ and } -0.24, ps < .001$) of relational victimization uniquely predicted sixth-grade antisocial behavior, social helplessness, and prosocial behavior, respectively.

Discussion

Peer victimization is a common stressor that has the potential to set youth upon unhealthy developmental pathways. Past research documenting the adverse consequences of victimization has been limited in temporal scope and reveals little about how victimization shapes adjustment across key developmental transitions. Moreover, it has failed to consider whether maladaptive outcomes following victimization are incidental to underlying individual risks. Therefore, it remains unclear whether early victimization has lasting consequences beyond the influence of more proximal experiences or children's early individual differences. The present study provided robust evidence for the enduring effects of victimization on multiple adolescent risky outcomes even after accounting for the contribution of their early social motivation.

Victimization and adolescent social health

Both early and increasing victimization predicted heightened antisocial behavior and social helplessness as well as dampened prosocial behavior in sixth grade, following the transition to middle school. It is notable that these effects emerged in the context of a rigorous longitudinal design that considered the unique influence of initial levels and growth in victimization over time and adjusted for earlier and alternate forms of adjustment. The long-term effect of peer victimization across developmental periods has received scant attention. These findings provide evidence that the risk posed by victimization experienced as early as second grade can last through early adolescence, despite evidence of a normative decline in peer victimization during the middle childhood years. Moreover, this enduring risk was unique from that explained by subsequent variability in within-individual increases in peer victimization over time. Thus, early victimization that intensifies across the middle childhood years may have a cumulative effect, resulting in substantial impairment in adolescents' ability to appropriately engage with their social environment.

Peer-victimized youth who take personal responsibility for their maltreatment (Graham & Juvonen, 1998) may lose their sense of control over peer relationships (Singh & Bussey,

2011), develop feelings of helplessness about changing their social situation, and thus surrender in their efforts to assimilate into the mainstream peer group. In contrast, peer-victimized youth who blame peers for their maltreatment (Perren et al., 2013) may become mistrusting and angry (Kochenderfer-Ladd, 2004; Troop-Gordon & Ladd, 2005), engaging in aggressive acts in an effort to retaliate or to reestablish their status in the peer group. This defensive and resentful interpersonal stance may generalize over time, resulting in antisocial acts that defy social norms. It is, of course, possible that some youth adopt negative views of both themselves and their peers following victimization. Given evidence suggesting that different combinations of self and peer views promote distinct social orientations (Salmivalli, Ojanen, Haanpää, & Peets, 2005), future work should include person-centered analyses that consider possible co-occurrence of multiple risky outcomes among victimized youth.

Reinforcing Nicki Crick's (Crick & Bigbee, 1998; Crick & Grotpeter, 1995, 1996; Crick & Nelson, 2002) emphasis on understanding the damage inflicted by multiple forms of aggression, both overt and relational victimization forecast risky outcomes in early adolescence. Of note, boys and girls were equally susceptible to these risks. Although we thought it possible that males and females, respectively, would show distinct patterns of moving against versus away from the world following victimization, the emergence of relevant sex-differentiated pathways of development typically occurs during midadolescence (Hankin & Abramson, 2001; Lahey et al., 2006), a little beyond the sixth-grade assessment. It may be that sex differences in the consequences of victimization strengthen at later stages of development. In addition, these sex differences may be reflected in alternate developmental outcomes, such as engagement in relational forms of aggression (Rudolph, Troop-Gordon, et al., 2011).

Disentangling the effects of victimization and social motivation

Guided by an effort to distinguish causal versus incidental models of peer relationship disturbances (Rudolph & Asher, 2000), this study addressed a critical confound in prior research on the consequences of victimization. Specifically, we investigated whether risky outcomes following victimization could be explained by early individual differences in social motivation. A growing body of research (Rodkin et al., 2013; Rudolph, Abaied, et al., 2011; Ryan & Shim, 2008) establishes that children differ in the goals they set within their peer relationships. Given evidence that children's motivation to move toward, against, or away from the world contributes to their peer relationships (Bowker & Raja, 2011; Caspi et al., 1988; Coplan et al., 2013; Troop-Gordon & Asher, 2005; for a review, see Eisenberg et al., 2009) as well as their social and mental health (Booth-LaForce & Oxford, 2008; Caspi et al., 1987, 1988; Gazelle & Rudolph, 2004), a pivotal question concerns whether these motivations drive the observed associations between victimization and subsequent maladaptation. A supplemental set of analyses revealed that the effects of victimization were robust even after adjusting for early social goals (mastery, performance-approach, and performance-avoidance). Of course, the nonexperimental nature of our study design precludes strong conclusions of causality, but these findings do establish that the contributions of victimization to risky social outcomes in adolescence are not accounted for by preexisting individual differences in social motivation.

Implications of social health for psychopathology

Risky social outcomes following victimization, in turn, likely launch adolescents onto a pathway toward more severe forms of psychopathology. The adolescent transition represents a stage during which trajectories of risk or resilience may crystallize into persistent and engrained patterns of adaptation. Thus, emerging profiles of social health during this time may develop into intransigent forms of psychopathology. Moreover, moving against or away from, rather than toward, conventional peer groups during adolescence could force victimized youth to seek deviant peer affiliations (Dishion, Veronneau, & Myers, 2010; Rudolph et al., 2014), with their own adverse long-term consequences, including depression (Fergusson, Wanner, Vitaro, Horwood, & Swain-Campbell, 2003), violence, and substance use (Dishion & Skaggs, 2000).

Peer-victimized youth who move against the world may develop a consistent pattern of conflictual engagement that evolves into diagnosable forms of externalizing psychopathology over time. When victimized, youth may engage in both proactive aggression, aimed at reestablishing their status or dominance in the peer group, and reactive aggression, driven by a desire to retaliate against maltreating peers. Both forms of aggression can progress into delinquency, violence, and substance use (Brendgen, Vitaro, Tremblay, & Lavoie, 2001; Vitaro, Gendreau, Tremblay, & Oligny, 1998) through a variety of pathways (e.g., peer rejection or deviant peer affiliations; Fite, Colder, Lochman, & Wells, 2007). Thus, victimization may foster aggression and less severe antisocial acts during early adolescence, which consolidate into more serious externalizing psychopathology during later adolescence and adulthood.

Peer-victimized youth who move away from the world (and fail to move toward the world) may develop a consistent pattern of high disengagement and low positive engagement that evolves into depressive disorders over time. Both social disengagement (e.g., social withdrawal/avoidance or helplessness; Rubin et al., 2009; Rudolph, 2009) and low social engagement (Forbes & Dahl, 2012) predict heightened subsequent depression. Moreover, one study showed that social hopelessness (a cognitive counterpart to helpless behavior, indexed by beliefs about one's inability to alter social outcomes) mediates the concurrent association between victimization and suicidal ideation (Bonnano & Hymel, 2010). Thus, victimization may foster high levels of social helplessness and low levels of prosocial behavior during early adolescence, which consolidate into more serious depressive psychopathology during later adolescence and adulthood.

Future directions

This research clearly establishes multifinality (Cicchetti & Rogosch, 1996) in the pathways following victimization, such that youth move both against and away from the world, but it does not address the question of which youth develop which social profile. Although we examined whether victimization contributes to risky outcomes beyond the effects of social motivation, it also is possible that victimization *interacts* with social motivation to determine the precise expression of maladaptation. Following victimization, youth with a strong performance-approach motivation may disregard social norms and the potential consequences of their actions to pursue their own self-interest. These youth may become

frustrated and angry because victimization challenges their social prestige or reputation, resulting in aggressive and antisocial behavior. In contrast, following victimization, youth with a strong performance-avoidance motivation may inhibit social advances and disengage from peers to avoid aversive social encounters. These youth may become embarrassed and anxious because victimization provides them with the explicit negative feedback they aim to avoid, resulting in social helplessness. Consistent with these ideas, preliminary research suggests that victimization predicts disengagement (depressive symptoms) in youth (specifically girls) with a strong social avoidance motivation but predicts conflictual engagement (overt aggression) in youth (specifically boys) with a strong social approach motivation (Llewellyn & Rudolph, 2014). Of note, youth with strong mastery goals may be protected from the adverse effects of victimization because they are less concerned with peer status or approval. Clarifying the determinants of specific pathways of risk following victimization is critical for the accurate identification of at-risk youth and the development of interventions tailored to specific vulnerabilities of victimized youth.

Future research also needs to elucidate the processes underlying the long-term consequences of peer victimization. As a form of social adversity, victimization may tax biological stress-response systems so as to create more dysregulated responses to stress later in life. Chronic victimization may create a high allostatic load, threatening youths' ability to effectively regulate their responses to social challenges (Calhoun et al., 2014). Exposure to victimization also may sensitize neural systems involved in responses to social exclusion (so-called social pain networks), which in turn are linked to psychopathology (Masten et al., 2011). Because adolescence is a time of heightened emotional and biological stress reactivity (Gunnar, Wewerka, Frenn, Long, & Griggs, 2009; Ladouceur, 2012) and exquisite sensitivity to social rewards (e.g., status or dominance) and punishments (e.g., negative evaluation or rejection; Somerville, 2013; Stroud et al., 2009), tracking the effects of peer victimization through mid- and later adolescence will be key to understanding its insidious legacy.

Conclusions

Nicki Crick titled one of her earliest articles encouraging the field to take seriously both overt and relational forms of aggression "How do I hurt thee? Let me count the ways" (Crick, Bigbee, & Howes, 1996). This early admonition about the potential damage inflicted by relational as well as overt aggression has been well justified by almost two decades of research. Building on this robust knowledge base, the present study demonstrates that early and increasing exposure to both forms of victimization can be hurtful, creating a long-term legacy of social health difficulties through adolescence with ensuing implications for the development of psychopathology. We can only hope that Nicki Crick's legacy will be to have set the field firmly on a path toward understanding and preventing exposure to these types of victimization as well as their pernicious effects on youth development.

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References

- Achenbach, TM.; Rescorla, LA. Manual for ASEBA school-age forms & profiles. University of Vermont, Research Center for Children, Youth, & Families; Burlington, VT: 2001.
- Asher, SR.; Coie, JD. Peer rejection in childhood. Cambridge University Press; New York: 1990.
- Boivin M, Petittlerc A, Feng B, Barker ED. The developmental trajectories of peer victimization in middle to late childhood and the changing nature of their behavioral consequences. *Merrill-Palmer Quarterly*. 2010; 56:231–260.
- Bollmer JM, Harris MJ, Milich R. Reactions to bullying and victimization: Narratives, physiological responses, and personality. *Journal of Research in Personality*. 2006; 40:803–828.
- Bonanno RA, Hymel S. Beyond hurt feelings: Investigating why some victims are at greater risk for suicide ideation. *Merrill-Palmer Quarterly*. 2010; 56:420–440.
- Booth-LaForce C, Oxford M. Trajectories of social withdrawal from Grades 1 to 6: Prediction from early parenting, attachment, and temperament. *Developmental Psychology*. 2008; 44:1298–1313. [PubMed: 18793064]
- Bowker JC, Raja R. Social withdrawal subtypes during early adolescence in India. *Journal of Abnormal Child Psychology*. 2011; 39:201–212. [PubMed: 20922475]
- Brendgen M, Vitaro F, Tremblay RE, Lavoie F. Reactive and proactive aggression: Predictions to physical violence in different contexts and moderating effects of parental monitoring and caregiving behavior. *Journal of Abnormal Child Psychology*. 2001; 29:293–304. [PubMed: 11523835]
- Brown, BB. Peer groups and peer cultures. In: Feldman, SS.; Elliott, GR., editors. *At the threshold: The developing adolescent*. Harvard University Press; Cambridge, MA: 1990. p. 171-196.
- Caldwell MS, Rudolph KD, Troop-Gordon W, Kim D. Reciprocal influences among relational self-views, social disengagement, and peer stress during early adolescence. *Child Development*. 2004; 75:1140–1154. [PubMed: 15260869]
- Calhoun CD, Helms SW, Heilbron N, Rudolph KD, Hastings PD, Prinstein MJ. Relational victimization, negative friendship quality, and adolescents' hypothalamic-pituitary-adrenal axis responses to an in vivo social stressor. *Development and Psychopathology*. 2014; 26:605–618. [this issue]. [PubMed: 25047287]
- Card NA, Hodges EVE. Peer victimization among school-children: Correlations, causes, consequences, and considerations in assessment and intervention. *School Psychology Quarterly*. 2008; 23:451–461.
- Card NA, Stucky BD, Sawalani GM, Little TD. Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development*. 2008; 79:1185–1229. [PubMed: 18826521]
- Caspi A, Elder GH, Bem DJ. Moving against the world: Life-course patterns of explosive children. *Developmental Psychology*. 1987; 24:824–831.
- Caspi A, Elder GH, Bem DJ. Moving away from the world: Life-course patterns of shy children. *Developmental Psychology*. 1988; 23:308–313.
- Champion K, Vernberg E, Shipman K. Nonbullying victims of bullies: Aggression, social skills, and friendship characteristics. *Journal of Applied Developmental Psychology*. 2003; 24:535–551.
- Cicchetti D, Rogosch FA. Equifinality and multifinality in developmental psychopathology. *Development and Psychopathology*. 1996; 8:597–600.
- Cole DA, Maxwell MA, Dukewich TL, Yosick R. Targeted peer victimization and the construction of positive and negative self-cognitions: Connections to depressive symptoms in children. *Journal of Clinical Child and Adolescent Psychology*. 2010; 39:421–435. [PubMed: 20419582]
- Coplan RJ, Rose-Krasor L, Weeks M, Kingsbury A, Kingsbury M, Bullock A. Alone is a crowd: Social motivations, social withdrawal, and socioemotional functioning in later childhood. *Developmental Psychology*. 2013; 49:861–875. [PubMed: 22686178]

- Crick NR. The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. *Child Development*. 1996; 67:2317–2327. [PubMed: 9022243]
- Crick NR, Bigbee MA. Relational and overt forms of peer victimization: A multiinformant approach. *Journal of Consulting and Clinical Psychology*. 1998; 66:337–347. [PubMed: 9583337]
- Crick NR, Bigbee MA, Howes C. Gender differences in children's normative beliefs about aggression: How do I hurt thee? Let me count the ways. *Child Development*. 1996; 67:1003–1014. [PubMed: 8706506]
- Crick NR, Grotpeter JK. Relational aggression, gender, and social-psychological adjustment. *Child Development*. 1995; 66:710–722. [PubMed: 7789197]
- Crick NR, Grotpeter JK. Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology*. 1996; 8:367–380.
- Crick NR, Nelson DA. Relational and physical victimization within friendships: Nobody told me there'd be friends like these. *Journal of Abnormal Child Psychology*. 2002; 30:599–607. [PubMed: 12481974]
- Dishion TJ, Skaggs M. An ecological analysis of monthly “bursts” in adolescent substance use. *Applied Developmental Science*. 2000; 4:89–97.
- Dishion TJ, Veronneau M, Myers MW. Cascading peer dynamics underlying the progression from problem behavior to violence in early to late adolescence. *Development and Psychopathology*. 2010; 22:603–619. [PubMed: 20576182]
- Duncan, TE.; Duncan, SC.; Strycker, L.; Li, F.; Alpert, A. An introduction to latent variable growth curve modeling: Concepts, issues, and applications. Erlbaum; Mahwah, NJ: 1999.
- Eisenberg, N.; Vaughan, J.; Hofer, C. Temperament, self-regulation, and peer social competence. In: Rubin, KH.; Bukowski, W.; Laursen, B., editors. *Handbook of peer interactions, relationships, and groups*. Guilford Press; New York: 2009. p. 473-489.
- Enders CK, Bandalos DL. The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling*. 2001; 8:430–457.
- Erdley CA, Loomis CC, Cain KM, Dumas-Hines F. Relations among children's social goals, implicit personality theories, and responses to social failure. *Developmental Psychology*. 1997; 33:263–272. [PubMed: 9147835]
- Fergusson DM, Wanner B, Vitaro F, Horwood LJ, Swain-Campbell N. Deviant peer affiliations and depression: Confounding or causation? *Journal of Abnormal Child Psychology*. 2003; 31:605–618. [PubMed: 14658741]
- Fite PJ, Colder CR, Lochman JE, Wells KC. Pathways from proactive and reactive aggression to substance use. *Psychology of Addictive Behaviors*. 2007; 21:355–364. [PubMed: 17874886]
- Forbes EE, Dahl RE. Research review: Altered reward function in adolescent depression: What, when, and how? *Journal of Child Psychology and Psychiatry*. 2012; 53:3–15. [PubMed: 22117893]
- Gazelle H, Ladd GW. Anxious solitude and peer exclusion: A diathesis-stress model of internalizing trajectories in childhood. *Child Development*. 2003; 74:257–278. [PubMed: 12625449]
- Gazelle H, Rudolph KD. Moving toward and away from the world: Social approach and avoidance trajectories of anxious solitary youth. *Child Development*. 2004; 75:829–849. [PubMed: 15144489]
- Goldbaum, S.; Craig, WM.; Pepler, D.; Connolly, J. *Developmental trajectories of victimization: Identifying risk and protective factors*. Haworth Press; New York: 2007.
- Graham S. Peer victimization in school: Exploring the ethnic context. *Current Directions in Psychological Science*. 2006; 15:317–321.
- Graham S, Bellmore AD, Mize J. Peer victimization, aggression, and their co-occurrence in middle school: Pathways to adjustment problems. *Journal of Abnormal Child Psychology*. 2006; 34:363–378. [PubMed: 16648999]
- Graham S, Juvonen J. Self-blame and peer victimization in middle school: An attributional analysis. *Developmental Psychology*. 1998; 34:587–599. [PubMed: 9597367]
- Gray, JA. Three fundamental emotion systems. In: Ekman, P.; Davidson, RJ., editors. *The nature of emotion: Fundamental questions*. Oxford University Press; New York: 1994. p. 243-247.

- Gunnar MR, Wewerka S, Frenn K, Long JD, Griggs C. Developmental changes in HPA activity over the transition to adolescence: Normative changes and associations with puberty. *Development and Psychopathology*. 2009; 21:69–85. [PubMed: 19144223]
- Hanish LD, Guerra NG. A longitudinal analysis of patterns of adjustment following peer victimization. *Development and Psychopathology*. 2002; 14:69–89. [PubMed: 11893095]
- Hanish LD, Ryan P, Martin CL, Fabes RA. The social context of young children's peer victimization. *Social Development*. 2005; 14:2–19. [PubMed: 16493454]
- Hankin BL, Abramson LY. Development of gender differences in depression: An elaborated cognitive vulnerability-transactional stress theory. *Psychological Bulletin*. 2001; 127:773–796. [PubMed: 11726071]
- Harter, S. Processes underlying adolescent self-concept formation. In: Montemayor, R.; Adams, GR.; Gullotta, TP., editors. *From childhood to adolescence: A transitional period?*. Sage; Thousand Oaks, CA: 1990. p. 205-239.
- Khatri P, Kupersmidt JB, Patterson C. Aggression and peer victimization as predictors of self-reported behavioral and emotional adjustment. *Aggressive Behavior*. 2000; 26:345–358.
- Kochenderfer-Ladd B. Peer victimization: The role of emotions in adaptive and maladaptive coping. *Social Development*. 2004; 13:329–349.
- Ladd GW, Herald-Brown SL, Andrews RK. The child behavior scale (CBS) revisited: A longitudinal evaluation of CBS subscales with children, preadolescents, and adolescents. *Psychological Assessment*. 2009; 21:325–329. [PubMed: 19719345]
- Ladd GW, Kochenderfer-Ladd BJ. Identifying victims of peer aggression from early to middle childhood: Analysis of cross-informant data for concordance, estimation of relational adjustment, prevalence of victimization, and characteristics of identified victims. *Psychological Assessment*. 2002; 14:74–96. [PubMed: 11911051]
- Ladd GW, Profilet SM. The Child Behavior Scale: A teacher-report measure of young children's aggressive, withdrawn, and prosocial behaviors. *Developmental Psychology*. 1996; 32:1008–1024.
- Ladd GW, Troop-Gordon W. The role of chronic peer difficulties in the development of children's psychological adjustment problems. *Child Development*. 2003; 74:1344–1367. [PubMed: 14552402]
- Ladouceur CD. Neural systems supporting cognitive-affective interactions in adolescence: The role of puberty and implications for affective disorders. *Frontiers in Integrative Neuroscience*. 2012; 31 doi: 10.3389/fnint.2012.00065.
- Lahey BB, Van Hulle CA, Waldman ID, Rodgers JL, D'Onofrio BM, Pedlow S, et al. Testing descriptive hypotheses regarding sex differences in the development of conduct problems and delinquency. *Journal of Abnormal Child Psychology*. 2006; 34:737–755. [PubMed: 17033935]
- Lamarche V, Brendgen M, Boivin M, Vitaro F, Dionne G, Perusse D. Do friends' characteristics moderate the prospective links between peer victimization and reactive and proactive aggression? *Journal of Abnormal Child Psychology*. 2007; 35:665–680. [PubMed: 17503177]
- Leadbeater BJ, Hoglund WLG. The effects of peer victimization and physical aggression on changes in internalizing from first to third grade. *Child Development*. 2009; 80:843–859. [PubMed: 19489907]
- Llewellyn, N.; Rudolph, KD. Individual and sex differences in the consequences of peer victimization: Moderation by approach and avoidance motivation. 2014. Manuscript submitted for publication
- Loukas A, Pasch KE. Does school connectedness buffer the impact of peer victimization on early adolescents' subsequent adjustment problems? *Journal of Early Adolescence*. 2013; 33:245–266.
- Masten CL, Eisenberger NI, Borofsky LA, McNealy K, Pfeifer JH, Dapretto M. Subgenual anterior cingulate responses to peer rejection: A marker of adolescents' risk for depression. *Development and Psychopathology*. 2011; 23:283–292. [PubMed: 21262054]
- Muthén, LK.; Muthén, BO. *Mplus user's guide*. Author; Los Angeles, CA: 1998–2007.
- Nishina A, Juvonen J. Daily reports of witnessing and experiencing peer harassment in middle school. *Child Development*. 2005; 76:435–450. [PubMed: 15784092]
- Nolen-Hoeksema S, Girgus JS, Seligman ME. Predictors and consequences of childhood depressive symptoms: A 5-year longitudinal study. *Journal of Abnormal Psychology*. 1992; 101:405–422. [PubMed: 1500598]

- Nolen-Hoeksema S, Stice E, Wade E, Bohon C. Reciprocal relations between rumination and bulimic, substance abuse, and depressive symptoms in adolescent females. *Journal of Abnormal Psychology*. 2007; 116:198–207. [PubMed: 17324030]
- Oh W, Rubin KH, Bowker JC, Booth-LaForce C, Rose-Krasnor L, Laursen B. Trajectories of social withdrawal from middle childhood to early adolescence. *Journal of Abnormal Child Psychology*. 2008; 36:553–566. [PubMed: 18193479]
- Ostrov JM. Prospective associations between peer victimization and aggression. *Child Development*. 2010; 81:1670–1677. [PubMed: 21077855]
- Perren S, Alsaker FD. Social behavior and peer relationships of victims, bully-victims, and bullies in kindergarten. *Journal of Child Psychology and Psychiatry*. 2006; 47:45–57. [PubMed: 16405640]
- Perren S, Etekel I, Ladd G. The impact of peer victimization on later maladjustment: Mediating and moderating effects of hostile and self-blaming attributions. *Journal of Child Psychology and Psychiatry*. 2013; 54:46–55. [PubMed: 23057732]
- Pouwels JL, Cillessen AHN. Correlates and outcomes associated with aggression and victimization among elementary-school children in a low-income urban context. *Journal of Youth and Adolescence*. 2013; 42:190–205. [PubMed: 23196376]
- Rodkin PC, Ryan AM, Jamison R, Wilson T. Social goals, social behavior, and social status in middle childhood. *Developmental Psychology*. 2013; 49:1139–1150. [PubMed: 22822934]
- Roeser, RW.; Eccles, JS. Schooling and the mental health of children and adolescents in the United States. In: Lewis, M.; Rudolph, KD., editors. *Handbook of developmental psychopathology*. 3rd ed. Plenum Press; New York: 2014. p. 163-184.
- Rothbart, MK.; Ellis, LK.; Posner, MI. Temperament and self-regulation. In: Baumeister, RF.; Vohs, KD., editors. *Handbook of self-regulation: Research, theory, and applications*. Guilford Press; New York: 2004. p. 357-370.
- Rubin KH, Coplan RJ, Bowker JC. Social withdrawal in childhood. *Annual Review of Psychology*. 2009; 60:141–171.
- Rudolph, KD. The interpersonal context of adolescent depression. In: Nolen-Hoeksema, S.; Hilt, LM., editors. *Handbook of depression in adolescents*. Routledge; New York: 2009. p. 377-418.
- Rudolph, KD. Puberty as a developmental context of risk for psychopathology. In: Lewis, M.; Rudolph, KD., editors. *Handbook of developmental psychopathology*. 3rd ed. Plenum Press; New York: 2014. p. 331-354.
- Rudolph KD, Abaied JL, Flynn M, Sugimura N, Agoston AM. Developing relationships, being cool, and not looking like a loser: Social goal orientation predicts children's responses to peer aggression. *Child Development*. 2011; 82:1518–1530.
- Rudolph, KD.; Asher, SR. Adaptation and maladaptation in the peer system: Developmental processes and outcomes. In: Sameroff, AJ.; Lewis, M.; Miller, SM., editors. *Handbook of developmental psychopathology*. second ed. Kluwer; Dordrecht: 2000. p. 157-175.
- Rudolph KD, Lansford JE, Agoston AM, Sugimura N, Schwartz D, Dodge KA, et al. Peer victimization and social alienation: Predicting deviant peer affiliation in middle school. *Child Development*. 2014; 85:124–139. [PubMed: 23621796]
- Rudolph KD, Troop-Gordon W, Hessel ET, Schmidt JD. A latent growth curve analysis of early and increasing peer victimization as predictors of mental health across elementary school. *Journal of Clinical Child and Adolescent Psychology*. 2011; 40:111–122. [PubMed: 21229448]
- Rusby JC, Forrester KK, Biglan A, Metzler CW. Relationships between peer harassment and adolescent problem behaviors. *Journal of Early Adolescence*. 2005; 25:453–477.
- Ryan AM, Shim SS. An exploration of young adolescents' social achievement goals and social adjustment in middle school. *Journal of Educational Psychology*. 2008; 100:672–687.
- Salmivalli C, Karhunen J, Lagerspetz KMJ. How do the victims respond to bullying? *Aggressive Behavior*. 1996; 22:99–109.
- Salmivalli C, Ojanen T, Haanpää J, Peets K. I'm OK but you're not" and other peer-relational schemas: Explaining individual differences in children's social goals. *Developmental Psychology*. 2005; 41:363–375. [PubMed: 15769192]

- Schwartz D, Dodge KA, Coie JD, Hubbard JA, Cillessen AHN, Lemerise EA, et al. Social-cognitive and behavioral correlates of aggression and victimization in boys' play groups. *Journal of Abnormal Child Psychology*. 1998; 26:431–440. [PubMed: 9915650]
- Siegel RS, La Greca AM, Harrison HM. Peer victimization and social anxiety in adolescents: Prospective and reciprocal relationships. *Journal of Youth and Adolescence*. 2009; 38:1096–1109. [PubMed: 19636774]
- Singh P, Bussey K. Peer victimization and psychological maladjustment: The mediating role of coping self-efficacy. *Journal of Research on Adolescence*. 2011; 21:420–433.
- Snyder J, Brooker M, Patrick MR, Snyder A, Schrepferman L, Stoolmiller M. Observed peer victimization during early elementary school: Continuity, growth, and relation to risk for child antisocial and depressive behavior. *Child Development*. 2003; 74:1881–1898. [PubMed: 14669902]
- Somerville LH. The teenage brain: Sensitivity to social evaluation. *Current Directions in Psychological Science*. 2013; 22:121–127. [PubMed: 24761055]
- Stroud LR, Foster E, Papandonatos GD, Handwerker K, Granger DA, Kivlighan KT, et al. Stress response and the adolescent transition: Performance versus peer rejection stress. *Development and Psychopathology*. 2009; 21:47–68. [PubMed: 19144222]
- Sullivan TN, Farrell AD, Kliewer W. Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Development and Psychopathology*. 2006; 18:119–137. [PubMed: 16478555]
- Troop-Gordon W, Asher SR. Modifications in children's goals when encountering obstacles to conflict resolution. *Child Development*. 2005; 76:568–582. [PubMed: 15892779]
- Troop-Gordon W, Ladd GW. Trajectories of peer victimization and perceptions of the self and schoolmates: Precursors to internalizing and externalizing problems. *Child Development*. 2005; 76:1072–1091. [PubMed: 16150003]
- van Lier PAC, Vitaro F, Barker ED, Brendgen M, Tremblay RE, Boivin M. Peer victimization, poor academic achievement, and the link between childhood externalizing and internalizing problems. *Child Development*. 2012; 83:1775–1788. [PubMed: 22716904]
- Vitaro F, Gendreau PL, Tremblay RE, Oligny P. Reactive and proactive aggression differentially predict later conduct problems. *Journal of Child Psychology and Psychiatry*. 1998; 39:377–385. [PubMed: 9670093]
- Yeung RS, Leadbeater BJ. Does hostile attributional bias for relational provocations mediate the short-term association between relational victimization and aggression in preadolescence? *Journal of Youth and Adolescence*. 2007; 36:973–983.

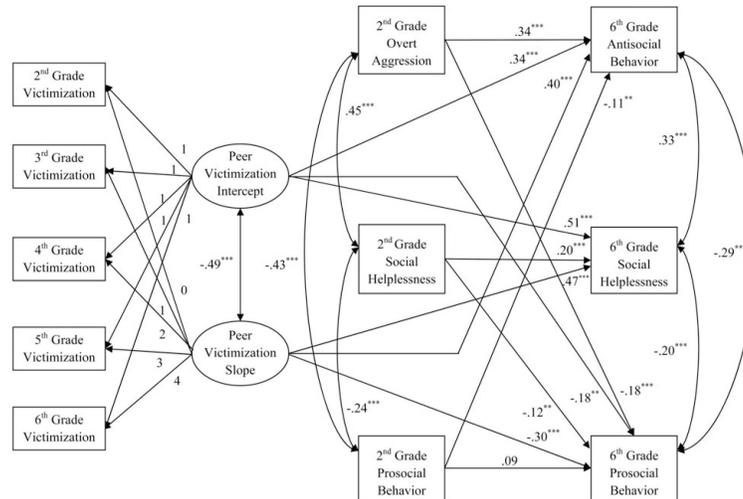


Figure 1. Latent growth curve analysis of the contribution of initial overt victimization (second grade) and trajectories of overt victimization (second to sixth grades) to sixth-grade antisocial behavior, prosocial behavior, and social helplessness. Not shown are covariances between second-grade behavior and the intercept and slope of the overt victimization trajectories (see text). Not shown also are significant error covariances between second- and third-grade, second- and fourth-grade, and third- and fourth-grade victimization. ** $p < .01$. *** $p < .001$.

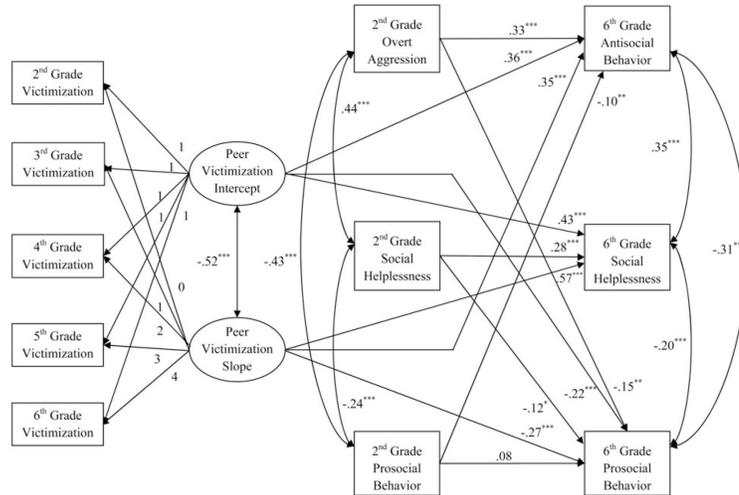


Figure 2. Latent growth curve analysis of the contribution of initial relational victimization (second grade) and trajectories of relational victimization (second to sixth grades) to sixth-grade antisocial behavior, prosocial behavior, and social helplessness. Not shown are covariances between second-grade behavior and the intercept and slope of the relational victimization trajectories (see text). Not shown also are significant error covariances between second- and third-grade, second- and fourth-grade, and third- and fourth-grade victimization. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 1

Descriptive statistics

Measure	Girls			Boys		
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α
Overt victimization						
Second grade	1.85	0.55	0.88	1.93	0.56	0.87
Third grade	1.75 ^a	0.51	0.90	1.89 ^a	0.58	0.91
Fourth grade	1.65 ^b	0.48	0.90	1.89 ^b	0.60	0.92
Fifth grade	1.66 ^a	0.50	0.91	1.78 ^a	0.51	0.90
Sixth grade	1.56 ^b	0.46	0.90	1.76 ^b	0.49	0.90
Relational victimization						
Second grade	1.98 ^c	0.59	0.88	1.87 ^c	0.55	0.86
Third grade	1.95 ^a	0.60	0.91	1.81 ^a	0.56	0.90
Fourth grade	1.85 ^d	0.57	0.90	1.76 ^d	0.56	0.90
Fifth grade	1.80 ^a	0.59	0.92	1.63 ^a	0.51	0.91
Sixth grade	1.60	0.53	0.92	1.58	0.47	0.89
Second grade overt aggression	1.31 ^b	0.77	0.96	1.68 ^b	1.02	0.96
Sixth grade antisocial behavior	1.26 ^c	0.58	0.96	1.39 ^c	0.58	0.94
Social helplessness						
Second grade	1.67	0.53	0.86	1.71	0.60	0.87
Sixth grade	1.40 ^a	0.54	0.90	1.54 ^a	0.59	0.89
Prosocial behavior						
Second grade	3.14 ^a	0.95	0.84	2.90 ^a	0.98	0.85
Sixth grade	3.28 ^b	0.98	0.83	2.92 ^b	0.92	0.82
Second grade goals						
Performance-approach	2.74	1.13	0.80	2.80	1.14	0.80
Performance-avoidance	3.46	1.10	0.81	3.35	1.17	0.81
Mastery	4.01	0.79	0.79	3.91	0.90	0.82

^aMeans differ at $p < .01$.

^bMeans differ at $p < .001$.

^cMeans differ at $p < .05$.

^dMeans differ at $p = .05$.

Table 2

Intercorrelations of study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. Grade 2																				
OV	—	.48***	.30***	.42***	.30***	.76***	.44***	.32***	.45***	.31***	.37***	.24***	.36***	.23***	-.30***	-.06	.27***	.19***	.107	
2. Grade 3																				
OV	.41***	—	.51***	.50***	.36***	.38***	.81***	.42***	.41***	.36***	.27***	.30***	.23***	.29***	-.21***	-.19**	.18**	.06	-.00	
3. Grade 4																				
OV	.40***	.59***	—	.58***	.41***	.29***	.47***	.77***	.47***	.41***	.23***	.28***	.22***	.25***	-.20***	-.22***	.25***	.04	.02	
4. Grade 5																				
OV	.42***	.43***	.54***	—	.57***	.30***	.47***	.43***	.84***	.49***	.23***	.27***	.27***	.30***	-.18**	-.22***	.18**	.04	.03	
5. Grade 6																				
OV	.35***	.47***	.53***	.53***	—	.25***	.30***	.29***	.48***	.82***	.26***	.47***	.22***	.51***	-.15*	-.32***	.16**	-.03	.04	
6. Grade 2																				
RV	.79***	.36***	.33***	.38***	.33***	—	.48***	.40***	.42***	.33***	.27***	.22***	.41***	.19**	-.27***	-.14*	.22***	.18**	.107	
7. Grade 3																				
RV	.43***	.84***	.55***	.41***	.49***	.45***	—	.48***	.45***	.38***	.26***	.23***	.19**	.19**	-.22***	-.24***	.18**	.05	.04	
8. Grade 4																				
RV	.43***	.54***	.82***	.53***	.48***	.40***	.57***	—	.45***	.40***	.18**	.22***	.21***	.14*	-.17**	-.27***	.23***	.05	.08	
9. Grade 5																				
RV	.38***	.38***	.52***	.85***	.45***	.40***	.41***	.58***	—	.52***	.20**	.27***	.27***	.30***	-.21***	-.18**	.16**	.08	.117	
10. Grade 6																				
RV	.32***	.39***	.52***	.49***	.81***	.33***	.47***	.51***	.48***	—	.23***	.40***	.16*	.48***	-.13*	-.34***	.17**	.03	.08	
11. Grade 2																				
OA	.51***	.25***	.32***	.25***	.25***	.46***	.36***	.30***	.22**	.23***	—	.47***	.37***	.22***	-.36***	-.29***	.25***	-.06	-.05	
12. Grade 6																				
ASB	.32***	.30***	.34***	.20**	.44***	.33***	.38***	.32***	.14*	.41***	.46***	—	.37***	.51***	-.33***	-.48***	.22***	.03	.00	
13. Grade 2																				
SH	.43***	.26***	.35***	.33***	.23***	.45***	.34***	.36***	.33***	.25***	.51***	.23***	—	.31***	-.19**	-.29***	.16**	.06	-.02	

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
14. Grade 6																			
SH	.32***	.34***	.39***	.34***	.46***	.29***	.36***	.39***	.34***	.48***	.22***	.51***	.42***	—	-.18**	-.36***	.19**	-.07	.03
15. Grade 2																			
PSB	-.23***	-.28***	-.31***	-.27***	-.16*	-.20**	-.32***	-.28***	-.19**	-.14*	-.48***	-.32***	-.28***	-.20**	—	.24***	-.21***	.02	.15*
16. Grade 6																			
PSB	-.17*	-.20**	-.30***	-.18**	-.19***	-.14*	-.27***	-.34***	-.15*	-.19**	-.22**	-.41***	-.22**	-.36***	.17*	—	-.19**	.04	.06
17. Grade 2																			
P-Ap	.19**	.09	.11 [†]	.14*	.22**	.21**	.13*	.10	.19**	.19***	.21**	.20**	.10 [†]	.10	-.14*	-.13 [†]	—	.18**	.23***
18. Grade 2																			
P-Av	-.01	-.12 [†]	-.09	.04	-.03	.02	-.18**	-.08	.03	-.08	-.16**	-.15*	-.11 [†]	-.08	.09	.06	.21***	—	.33***
19. Grade 2																			
MG	-.07	-.08	-.11 [†]	-.05	-.08	-.01	-.06	-.10	-.05	-.15*	-.13*	-.14*	-.19**	-.19**	.04	.20**	.23***	.40***	—

Note: Correlations for females appear above the diagonal; correlations for males appear below the diagonal. OV, Overt victimization; RV, relational victimization; OA, overt aggression; ASB, antisocial behavior; SH, social helplessness; PSB, prosocial behavior; P-Ap, performance-approach goal; P-Av, performance-avoidance goal; MG, mastery goal.

[†] $p < .10$.
 * $p < .05$.
 ** $p < .01$.
 *** $p < .001$.