University of Tennessee, Knoxville
Trace: Tennessee Research and Creative Exchange

University of Tennessee Honors Thesis Projects | University of Tennessee Honors Program

5-2015

Social and Emotional Adjustment Outcomes for Bullies and Victims

Aimee Rovane
University of Tennessee - Knoxville, aimkrova@vols.utk.edu

Follow this and additional works at: https://trace.tennessee.edu/utk_chanhonoproj

Part of the Clinical Psychology Commons, and the School Psychology Commons

Recommended Citation

Rovane, Aimee, "Social and Emotional Adjustment Outcomes for Bullies and Victims" (2015). *University of Tennessee Honors Thesis Projects.*
https://trace.tennessee.edu/utk_chanhonoproj/1834

This Dissertation/Thesis is brought to you for free and open access by the University of Tennessee Honors Program at Trace: Tennessee Research and Creative Exchange. It has been accepted for inclusion in University of Tennessee Honors Thesis Projects by an authorized administrator of Trace: Tennessee Research and Creative Exchange. For more information, please contact trace@utk.edu.

Social and Emotional Adjustment Outcomes for Bullies and Victims

Aimee Rovane

University of Tennessee

Abstract

Bullying and peer victimization is associated with social and emotional dysfunction. The present study examined the independent and unique contribution of bullying and peer victimization to the prediction of social preference and loneliness using a longitudinal design. Also examined was whether the longitudinal association between victimization and social preference or loneliness was conditional on children's victimization experiences. Participants were 377 children in 2nd-4th grade. Data was collected at three time points across two academic years (fall of year 1, spring of year 1, fall of year 2). Peer report measures were used to assess bullying, peer victimization, social preference. Loneliness was assessed through self- and peer-report. As expected, loneliness and social preference were relatively stable within and between school years. Analyses revealed that peer victimization at time 1 significantly predicted both self- and peer-reported loneliness at time 2, and the effect remained when bullying was included in the model. In addition peer victimization at time 2 was negatively associated with social preference at time 3. It was also found that bullying at time 1 emerged as a unique predictor of peer-reported loneliness at time 2, over and above the effect of peer victimization. Bullying did not moderate the relation between peer victimization and loneliness or social preference. The current findings provide some support for the notion that peer victimization and bullying are longitudinally associated with loneliness and social preference, but the degree may depend on the timing of measurement and the report source. Implications of these findings for future research and prevention are discussed.

Keywords: peer victimization, bullying, peer rejection, social preference, loneliness

Introduction

Bullying is a well-documented phenomenon among school-aged children (Solbergn & Olweus, 2003) and has received considerable attention by educators and researchers in recent years. *Bullying* refers to the repeated perpetration of aggressive behavior that conveys harmful intent, produces harmful effects, and is sanctioned (often implicitly) by peer groups (Craig & Pepler, 1997; Rodkin & Hodges, 2003). Bully-victim dyads are characterized by a power imbalance favoring the bully, but this imbalance often extends beyond the dyad to include bystanders, supporters, and others who witness but typically fail to intervene in the face of peer harassment (Salmivalli, 2010; Salmivalli & Voeten, 2004). In the current study, we use the term bullying to refer to the perpetration of aggressive behavior and the term peer victimization to refer to children who are victims of bullying perpetration. Prevalence rates of peer victimization vary depending on the definition, method of assessment, and age of the child (Ladd & Kochenderfer-Ladd, 2002; Nicolaides, Toda, & Smith, 2002; Snell, MacKenzie, & Frey, 2002), but estimates suggest that approximately 10-15% of elementary school students and 5-10% of middle or junior high school students are chronically bullied (Goldbaum, Craig, Pepler, & Connolly, 2008; Ladd & Kochenderfer-Ladd, 2002; Olweus, 1997; Solbergn & Olweus, 2003).

Aggressive children and chronically bullied children are at risk for a host of negative adjustment outcomes (Barchia & Bussey, 2010; Buhs, 2005; Card & Little, 2006; Goldbaum et al., 2008; Hawker & Boulton, 2000; Sentse, Kretschmer, & Salmivalli, 2015). Correlates of childhood aggression include depression, emotional dysregulation, victimization, poor peer relations, academic failure, adolescent delinquency, unemployment, adolescent and adult anti-social behavior, and later criminality (Card & Little, 2006; Sentse et al., 2015). Researchers have

also found that children who experience peer victimization are at risk for negative intrapersonal and interpersonal outcomes, including depression, low self-esteem, loneliness, anxiety, and social withdrawal, and submissiveness (Barchia & Bussey, 2010; Goldbaum et al., 2008; Hawker & Boulton, 2000; Sentse et al., 2015). Peer victimization has also been shown to mediate the association between peer rejection and later adjustment outcomes (Buhs & Ladd, 2001) and that the relations among victimization, popularity, and peer rejection are reciprocal overtime (Sentse et al., 2015).

Peer Victimization and Social Risk

The school context provides socialization opportunities for children, (Rutter, Maughan, Mortimore, Ouston, & Smith, 1979), serving as context for both positive and negative peer relationship experiences, including peer victimization (Hanish, Kochenderfer-Ladd, Fabes, Martin, & Denning, 2004). Victimized children, compared to non-victims, tend to have smaller peer networks, fewer friendships, and are more likely to be rejected by peers (Card & Hodges, 2007; Hodges, Malone, & Perry, 1997; Salmivalli, Huttunen, & Lagerspetz, 1997). In fact, victims of bullying actually have the smallest peer networks, relative to children experiencing other forms of peer adversity (Goldbaum et al., 2008). Childhood victimization also predicts later behavior adjustment and adult disturbance (Parker & Asher, 1993). Although researchers have consistently found associations between peer victimization and adverse peer experiences (e.g. peer rejection), there are a limited number of studies that have investigated these associations using a longitudinal design or that have considered peer rejection as a consequence of prior peer victimization. There are several notable exceptions. Ladd and Troop-Gordon (2003) found a bi-directional prospective association between peer victimization and peer rejection; peer victimization predicted later peer rejection and peer rejection was reciprocally related to

subsequent peer victimization. Hodges and Perry (1999) reported a similar finding; victimization was both an antecedent and consequence of peer rejection. It is possible that rejected children lack protection from peers in the face of bullying confrontation which makes them easy targets and vulnerable to future victimization experiences. In turn, children's victimization experiences may shape their future perceptions of their peer group, which may have implications for establishing and maintaining prosocial peer relationships. Indeed, Salmivalli and Isaacs (2005) showed that negative peer perceptions are correlated with peer victimization and peer rejection. Overtime, children scoring higher on victimization tended to view their peers as more hostile, untrustworthy, and unsupportive. As a result, they are likely to exhibit submissive and withdrawn behavior, which makes them easy targets for aggression. Veenstra, Lindenberg, Munniksma, and Dijkstra (2010) found that bullies are likely to choose victims who are already rejected by peers, so as to avoid the loss of affection from peers. Consistent with this finding is research from Ostrov (2008) who found that peer rejection mediated the relation between aggression and victimization, suggesting that bullies view rejected peers as easy targets. Thus, it follows that victimization could be both cause and consequence of peer rejection.

Peer Victimization and Emotional Risk

Loneliness is often defined as the perceived deficiency in relationships and resulting emotions of "sadness, emptiness, or longing" (Asher & Paquette, 2003). It is estimated that at least 10% of elementary aged students feel lonely all or some of the time, and feeling lonely places children at risk for poor adjustment outcomes (Asher, Hymel, & Renshaw, 1984). In young adults and adolescents, chronic loneliness is associated with school dropout, depression, alcoholism, and medical problems (Asher & Paquette, 2003).. Researchers have identified several factors that influence loneliness in children, some of which include peer acceptance or

rejection, overt victimization, having friends, and friendship quality (Asher & Paquette, 2003). Much research has shown that loneliness is correlated with low group acceptance and rejection in children, and children of lower social status report higher levels of loneliness (Asher et al., 1984; Crick & Ladd, 1993; Ladd, 1999; Ostrov & Godleski, 2013; Parker & Asher, 1993). Compared to their peers, rejected children report higher levels of loneliness and are more likely to attribute relationship failures to external causes (Crick & Ladd, 1993). These findings hold true in various contexts, including the classroom, lunchroom, playground, or physical education classes, and across all developmental stages in childhood (Asher & Paquette, 2003). Research has also shown that peer victimization is associated with loneliness in children (Goldbaum et al., 2008; Hawker & Boulton, 2000; Ostrov & Godleski, 2013). For example, Crick and Bigbee (1998) found a concurrent association between relational victimization and loneliness in middle childhood, which holds even after controlling for other social problems like aggression. Likewise, Ostrov and Godleski (2013) found that loneliness may exacerbate peer victimization in the same way that peer rejection does, in that lonely children might also be easy targets for aggression. Being liked by peers protects children from victimization, because peers offer children the resources to deal with the psychological and social effects of victimization and rejection (Barchia & Bussey, 2010; Goldbaum et al., 2008; Kawabata, Tseng, & Crick, 2014; Newcomb, Bukowski, & Pattee, 1993; Pellegrini, Bartini, & Brooks, 1999). Therefore, victimization may predict loneliness because children without friends or who are lower on peer acceptance may lack the social support to endure peer harassment situations (Ostrov & Godleski, 2013).

Child Aggression and Social Risk

Child aggression has been linked with early-emerging social difficulties, including low peer acceptance and peer rejection (Ladd & Burgess, 1999; Sentse et al., 2015). However,

research examining the relation between aggression and social adjustment is mixed. For example, some researchers have found that rejected, aggressive children experience greater increases in social preferences over time compared to nonaggressive-rejected peers (Gifford-Smitha & Brownell, 2003; Veenstra et al., 2010). Moreover, the relation between aggression and acceptance or rejection appears to depend, in part, on the function of the aggressive behavior. Researchers often distinguish between proactive and reactive aggression (Card & Little, 2006). Proactive aggression is a goal-seeking behavior, whereas reactive aggression is an emotionally dysregulated or impulsive response to a stimulus (Card & Little, 2006). There is an emerging body of research suggesting reactive aggression is a stronger predictor of peer rejection/acceptance than proactive aggression (Card & Little, 2006). However, the general consensus is that aggressive children often have problematic peer relationships and aggressive behavior is viewed less favorably by peers with age (Coie, Dodge, Terry, & Wright, 1991). For example, researchers routinely find the relationships of aggressive children to be of lower quality, more coercive, and characterized by high levels of deviant behavior (Coie & Kupersmidt, 1983; Dishion, Andrews, & Crosby, 1995; Dodge, 1983; Snyder, Wixson, Talapatra, & Roach, 2008).

Child Aggression and Emotional Risk

Few studies have examined the association between childhood aggression and loneliness, but there have been exceptions. Ostrov & Godleski (2013) have shown that aggression and future victimization are partially mediated by loneliness. It was suggested that this may be in part due to relational aggressors being rejected by peers and unable to form early, high-quality friendships, leading to loneliness in later development (Ostrov & Godleski, 2013). Soenens, Vansteenkiste, Goossens, Duriez, and Niemiec (2008) found that relationally aggressive

adolescents who are rejected by peers experience feelings of loneliness. These researchers presume that relational aggression produces negative feelings, such as jealousy and resentment, which taint peer relationships and produce feelings of loneliness.

The Present Study

Although much has been learned about the phenomenon of bullying and victimization, there are gaps in the literature. There have been studies showing associations between bullying and victimization and children's social status and peer relations (Sentse et al., 2015). However, few studies have considered whether bullying and victimization make unique contributions to the prediction of peer acceptance or investigated these relations using a longitudinal design. Moreover, the link between bullying and peer victimization and children's experience of loneliness is understudied. The current study considers whether peer victimization and bullying is longitudinally associated with children's social preference, a measure of peer acceptance, and loneliness. Also examined is whether children's score on bullying moderates the association between peer victimization and social preference or loneliness. Research has shown that children who bully and experience peer victimization are more at risk for prolonged involvement in bullying interactions than children who are only bullies or victims (Kumpulainen, Rasanen, & Henttonen, 1999). Compared to their peers, these children are more lonely, dissatisfied, friendless, disliked, victimized, and likely to have maladaptive teacher-child relationships (Ladd & Burgess, 1999). Importantly, bully-victims have an increased risk for internalizing and externalizing disorders and the most severe rejection among peers (Kochenderfer & Ladd, 1997).

In the current study, I make several predictions. First, I hypothesize that peer victimization and bullying will emerge as negative predictors of social preference, but that the effect will be stronger for peer victimization than for bullying. Second, I hypothesize that peer

victimization, but not bullying, will positively predict children's score on loneliness overtime. Finally, I hypothesize that the association between peer victimization and social preference and loneliness will be conditional on children's bullying score, such that the effect will be stronger for children with higher scores on bullying.

Method

Participants

Data were collected as part of a randomized controlled trial testing the efficacy of a school-based mentoring program for aggressive children. Students were recruited to participate in the current study if at least one student in their class was eligible and agreed to participate in the intervention trial. Second, third, and fourth grade students from 25 classrooms across eight elementary schools participated in the study. Parents of children from eligible classrooms consented to have their children participate in the study, and an average of 68% of students from each eligible class participated in the study.

A total of 377 children participated in the current study. Of these children, 55 were nominated by teachers as aggressive (met a behavioral description) and met the following criteria: a) a *T* score of 60 or above on the Aggressive Behavior subscale of the Teacher Report Form of the Child Behavior Checklist (Achenbach, 1991a) or (b) a *T* score of 60 or above on the Aggressive Behavior subscale of the Parent Report Form of the Child Behavioral Checklist (Achenbach, 1991b). Analyses were based on the 28 children in the active mentoring intervention, 28 students in the waitlist control condition, and 322 classroom peers. Participants' ages ranged from 6 to 10 years old, and 43.7% of the sample was male. About 70% of participants' parents identified their child as White Non-Hispanic; the remainder identified as a members of a specific racial or ethnic minority (12.5%) or bi-ethnic or bi-racial (16.5%).

Regarding socioeconomic status, 45.5% of families reported receiving free or reduced lunch, and reported annual household incomes are available in Table 1.

Measures

Bullying and peer victimization. Peer reports of bullying and peer victimization were derived from a peer nomination inventory (Dodge & Coie, 1987). Peers were asked to nominate up to three classmates who "bully other children by hitting, pushing, threatening, or teasing them" and who "bully other children by gossiping about them, telling lies, or leaving them out of activities". Peers were also asked to nominate up to three classmates who are "hit, pushed, threatened, or teased by other children," and who are "gossiped about or left out of activities". Children's nominations were summed and standardized within classroom. The correlation between the two bullying items at time 1 and time 2 were .586 ($p < .001$) and .370 ($p < .001$), respectively. The correlation between the peer victimization items at time 1 and time 2 was .146 ($p = .01$) and .286 ($p < .001$), respectively.

Peer acceptance and rejection. Children were asked to nominate three classmates that they "liked the most" and three classmates that they "liked the least". Like most and like least nomination scores were standardized within classroom. Social preference scores were computed by subtracting standardized like least nominations from standardized like most nominations.

Loneliness. Participants completed 6 items from the Loneliness and Social Dissatisfaction Questionnaire (LSDQ; Asher, Hymel, & Renshaw, 1984) to assess for subjective feelings of

insufficient social relationships. Individuals indicated to what degree each item described how they feel on a five-point Likert scale (from “always true” to “not true at all”). The full LSDQ consists of 16 content items, including 6 reverse-coded items. In the current study, 6 non-reverse coded items representing loneliness and social dissatisfaction were used due to time constraints. Items at each time point were averaged and used for analysis, and possible scores ranged from 0 to 5, with higher scores indicating greater feelings of loneliness. These 6 LSDQ items were selected due to their higher factor loadings on the construct of loneliness (item-to-total score correlations: 0.63-0.73; Asher et al., 1984).

The LSDQ has been found to have high internal consistency (Cronbach’s alpha = .90) and internal reliability (Spearman-Brown reliability coefficient = .91; Guttman split-half reliability coefficient = .91; Asher et al., 1984). Previous research using this 6-item form of the LSDQ with preadolescents found high internal consistency (Cronbach’s alpha = .87; Wilcox & Vernberg, 2012). Additionally, previous research using this short form of the LSDQ found that preadolescent self-report of loneliness was significantly associated with parental rating of social withdrawal, anxiety, and depression (Wilcox & Vernberg, 2012), providing evidence of convergent validity for this short form of the LSDQ. For the current study, internal consistence was .85 and .86 at time 1 and time 2, respectively.

Procedures

The University Institutional Review Board approved this project, and written parental consent and child assent were obtained for all participating children. Peer victimization, bullying, and social preference were collected in the early fall (September/October) and in the late spring (April/May) of the children’s second-, third- and fourth-grade year. Children completed self- and

peer-report measures in class groups overseen by trained research assistants. For the peer nomination items, children used a numerical roster and items were read aloud; children nominated classmates by circling the number corresponding to their name. To minimize discussion about ratings, children were spaced, instructed to keep answers covered, and allowed to work on distracter activities (e.g., mazes) between sets of questions.

Results

Data Analysis Plan

Hierarchical linear regression analyses examining the independent and unique contribution of bullying and peer victimization to the prediction of loneliness and social preference were conducted in SPSS version 22. Three two-step regression models were run (see Tables 3-11) for each social adjustment outcome at each time point. The first step of each model controlled for time scores on the dependent variable, age, gender, ethnicity, income level, and whether or not the child was participating in an intervention trial (i.e. Lunch Buddy Mentoring). In the second step, bullying, peer victimization, or bullying and peer victimization was added to the analyses depending on whether the analysis was addressing the independent or unique effect of bullying and peer victimization on the dependent variable (DV); in each table, model 1 measured the independent effect of bullying, model 2 examined the independent effect of peer victimization, and model 3 addressed the unique effect of bullying and peer victimization. In the final step of the analysis, for models examining the unique effects of bullying and peer victimization, the interaction between peer victimization and bullying was included to examine whether the effect of peer victimization on social adjustment was conditional on the degree to which children were perceived as engaging in bullying. The interaction between bullying and

peer victimization did not predict social preference or self- or peer-reported loneliness and was therefore removed from the final models. In addition, the age, gender, ethnicity, and income level were not significantly related to any DV and were thus also pruned from the final models.

Preliminary Analysis

Mean scores, standard deviations, and sample size for age, bullying, peer victimization, loneliness, and social preference are reported in Table 1. Table 2 reports the correlations among primary study variables. Correlations between self-reported loneliness and peer-reported loneliness at different time points were significantly ($p < .01$) positively related and ranged from .16 (Time 1 [T1] self-reported loneliness and T1 peer-reported loneliness) to .22 (Time 2 [T2] self-reported loneliness and T2 peer-reported loneliness). Social preference was significantly ($p < .01$) negatively associated with self- and peer- reported loneliness and ranged from -.46 (T2 peer-reported loneliness and T2 social preference) to -.16 (T1 self-reported loneliness and T1 social preference), such that higher scores on loneliness were associated with lower scores on peer acceptance. Correlations between bullying and self- and peer- reported loneliness were all positive, with the exception of T1 bullying and T2 peer-reported loneliness ($r = -.02$; $p > .05$), such that children who scored higher on bullying were also lonelier. Correlations between bullying and social preference were significantly ($p < .01$) negatively correlated and ranged from -.52 (Time 3 [T3] bullying and T3 social preference), to -.31 (T1 bullying and T3 social preference; T3 bullying and T3 social preference), such that children who scored higher on bullying scored lower on peer acceptance. Victimization was significantly positively correlated with self- and peer- reported loneliness and ranged from .16 ($p < .01$; T2 peer-reported loneliness and T2 victimization) to .64 ($p < .01$; T2 victimization with T2 peer-reported loneliness), with

the exceptions of T1 victimization with T1 self-reported loneliness (r = .08; p >.05). Thus, children scoring higher on peer victimization were also more likely to be lonely.

Primary Analysis

Regression analyses revealed that T1 peer victimization had an independent (β =.11, p = .02) and a unique effect (β = .14, p = .01) on T2 self-reported loneliness, such that children who scored higher on peer victimization reported higher levels of loneliness. In addition, bullying and peer victimization at T1 emerged as significant unique predictors of peer-reported loneliness at Time 2 (β = -.17, p = .02 and β = .18, p = .02, respectively), such that children who scored higher on bullying or peer victimization were lonelier over time. Bullying and peer victimization at T2, controlling for T1 scores, did not have independent or unique effects on self- or peer-reported loneliness at T3 (See Table 8). In addition, bullying and peer victimization scores at T1 did not have independent or unique effects on T3 self- or peer-reported loneliness. Bullying and victimization at T1 did not emerge as independent or unique predictors of social preference at T3 (See Table 9). However, peer victimization at T2 emerged as a significant independent and unique predictor of social preference at T3 (See Table 10; β = -.11; p = .04, and β = -.11; p = .04, respectively), such that children with higher scores on peer victimization scored lower on peer acceptance overtime. Bullying and victimization at T1 did not have significant independent or unique effects on social preference at T3.

Discussion

Available evidence suggests that children who are bullies or experience peer victimization are at risk for negative social adjustment outcomes (Barchia & Bussey, 2010; Buhs, 2005; Card & Little, 2006; Goldbaum et al., 2008; Hawker & Boulton, 2000; Sentse et al., 2015). This study had several goals. First, we examined whether bullying and peer victimization had independent effects on loneliness and social preference overtime. Next, tested whether bullying or peer victimization would emerge as unique predictors of loneliness and social preferences when examined simultaneously in models predicting loneliness and social preference. Finally, we examined whether the effect of social preference on loneliness or social preference was conditional on children's bullying behavior.

Peer Victimization and Social and Emotional Adjustment

Findings provided partial support for hypotheses. We found that peer victimization at time 1 emerged as an independent and unique predictor of self- and peer-reported loneliness measured at time 2. Children scoring higher on victimization were lonelier and this finding held even when controlling for the degree to which children were perceived as bullying. These findings are consistent with prior research that shows a positive relation between peer victimization and loneliness (Goldbaum et al., 2008; Hawker & Boulton, 2000; Ostrov & Godleski, 2013) and adds to the more meager body of research establishing longitudinal links between peer victimization and subsequent loneliness. We also found that peer victimization at time 2, but not bullying, had an independent and unique effect on social preference at time 3. Similar to findings reported in previous investigations (Crick & Ladd, 1993; Gifford-Smitha & Brownell, 2003; Hodges & Perry, 1999; Ostrov, 2008; Salmivalli & Isaacs, 2005), children who experienced higher levels of peer victimization were less accepted by their peers overtime.

Interestingly, the current findings suggest that the effect of children's peer victimization experiences on their level of peer acceptance extended beyond a single academic year. Indeed, children's victimization scores in the spring of an academic year predicted their level of victimization the following fall semester, when children were in a new classroom and to some extent with different peers.

Bullying and Social and Emotional Adjustment

We found some evidence that children who were identified as engaging in bullying behavior by their peers experienced impaired social adjustment, but this finding was limited to peer-reported loneliness. Children who scored higher on bullying at time 1 were viewed as lonelier at time 2, controlling for their time 1 loneliness score. The evidence linking bullying to loneliness is somewhat mixed (Bovin et al., 1989, Bohnert et al., 2003, Chen et al., 2004, Rubin et al., 1993). Prior research suggests that aggressive children overestimate their social competency and social acceptance (Hymel et al. 1993), and this tendency may explain the lack of relation between bullying and self-reported loneliness. We also found no evidence that bullying was an independent or unique predictor of social preference. Research suggests that many children who are identified as bullies engage in proactive or instrumental aggression and links between this form of aggression and peer acceptance are more tenuous than between reactive aggression and peer acceptance (Card & Little, 2006). However, it is important to note that it is unclear whether children identified by peers as engaging in bullying in the current study were nominated because of proactive or reactive aggressive behavior repeatedly directed at peers. I found no evidence that the effect of children's victimization score on loneliness or social preference was conditional on bullying.

Strengths and Limitations

This study had several strengths that are worth noting. Data was collected using a longitudinal design in a relatively large sample of children at three time points across 1 year (fall spring, fall), thus strengthening our ability to discern predictive relations. We also used multiple sources for assessment. In particular, loneliness was assessed using self- and peer-report measures, which allowed us to examine the extent to which our findings generalized beyond a single report source. There are also several limitations that are worth noting. Our findings do not allow for causal inferences about the effect of peer victimization or bullying; nor do our findings reveal specific mechanisms by which peer victimization or bullying lead to loneliness or peer acceptance. It is also possible that a different pattern of findings might have emerged had I identified high-risk groups of "pure" bullies, victims, and bully-victims or subtype children based on the form or function of aggressive display. However, we lacked the sample size necessary to make these classifications. On the other hand, we did examine the interaction between victimization and bullying and found no relation to loneliness or victimization. Still, it would be important for future research to elucidate the relation between different subtypes of victimization and bullying and children's social preference and loneliness over time.

Implications

This study has shown that peer victimization is related to loneliness and social preference overtime, which adds support to the notion that peer victims remain lonely and are less socially preferred from classroom to classroom. This supports the idea that peer victimization (Sentse et al., 2015) and its consequences are stable; thus, early prevention programs may best combat peer victimization. In addition, the results indicate that peer victimization might be most correlated with social preference during the transition into the next grade. Thus, there may be a mechanism

during grade transitions by which victims are more vulnerable to peer rejection. Parents and educators can use this information to address peer issues at the beginning of the school year.

Conclusion

In conclusion, my findings provide some support for the notion that bullying and victimization affect social and emotional adjustment across time. Our study revealed that victims were likely to experience low peer acceptance after transitioning to the next grade. I also found that children perceived as bullies and victims were more lonely overtime. It is also important to note that loneliness and social preference were relatively stable within a school year and between school years, suggesting changing social adjustment might be challenging. Further research should examine subtypes of victims and bullies and appreciate the extent to which forms of victimization and forms and functions of aggression have differential implications for peer acceptance and loneliness.

Author's Note

This research was supported by a Ruth L. Kirschstein Nation Research Service Award (F32HD066833) granted to Dr. L. Christian Elledge. I want to thank the Lawrence Public School Districts and its students, families, and faculty, for their cooperation and participation in this project. I would also like to thank Marisa Whitley for tirelessly helping me with the analysis and results. In addition, I want to thank my thesis advisor, Dr. Chris Elledge for taking this project on with me and helping me complete my first empirical research paper.

References

Asher, S. R., Hymel, S., & Renshaw, P. D. (1984). Loneliness in Children. *Child Development, 55*(4), 1456. doi: 10.1111/1467-8624.ep7303017

Asher, S. R., & Paquette, J. A. (2003). Loneliness and peer relations in childhood. *Current Directions in Psychological Science (Wiley-Blackwell), 12*(3), 75-78. doi: 10.1111/1467-8721.01233

Barchia, K., & Bussey, K. (2010). The psychological impact of peer victimization: Exploring social-cognitive mediators of depression. *Journal of Adolescence, 33*, 615-623.

Buhs, E. S. (2005). Peer rejection, negative peer treatment, and school adjustment: Self-concept and classroom engagement as mediating processes. *Journal of School Psychology, 43*, 407-424.

Buhs, E. S., & Ladd, G. W. (2001). Peer Rejection as an Antecedent of Young Children's School Adjustment: An Examination of Mediating Processes. *Developmental Psychology, 37*(4), 550-560.

Card, N. A., & Hodges, E. V. E. (2007). Victimization Within Mutually Antipathetic Peer Relationships. *Social Development, 16*(3), 479-496.

Card, N. A., & Little, T. D. (2006). Proactive and reactive aggression in childhood and adolescence: A meta-analysis of differential relations with psychosocial adjustment. *International Journal of Behavioral Development, 30*(5), 466-480.

Coie, J. D., Dodge, K. A., Terry, R., & Wright, V. (1991). The role of aggression in peer relations: An analysis of aggression episodes in boys' play groups. *Child Development, 62*(4), 812-826. doi: http://dx.doi.org/10.2307/1131179

Coie, J. D., & Kupersmidt, J. B. (1983). A behavioral analysis of emerging social status in boys' groups. *Child Development, 54*(6), 1400-1416. doi: http://dx.doi.org/10.2307/1129803

Craig, W. M., & Pepler, D. J. (1997). Observations of bullying and victimization in the school yard. *Canadian Journal of School Psychology, 13*(2), 41-59.

Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: A multiinformant approach. *Journal of Consulting and Clinical Psychology, 66*(2), 337-347. doi: http://dx.doi.org/10.1037/0022-006X.66.2.337

Crick, N. R., & Ladd, G. W. (1993). Developmental Psychology. *Children's Perceptions of Their Peer Experiences: Attributions, Loneliness, Social Anxiety, and Social Avoidance, 29*(2), 244-254.

Dishion, T. J., Andrews, D. W., & Crosby, L. (1995). Antisocial boys and their friends in early adolescence: Relationship characteristics, quality, and interactional process. *Child Development, 66*(1), 139-151. doi: http://dx.doi.org/10.2307/1131196

Dodge, K. A. (1983). Behavioral antecedents of peer social status. *Child Development, 54*(6), 1386-1399. doi: http://dx.doi.org/10.2307/1129802

Gifford-Smitha, M. E., & Brownell, C. A. (2003). Childhood peer relationships: social acceptance, friendships, and peer networks. *Journal of School Psychology, 41*, 235–284.

Goldbaum, S., Craig, W. M., Pepler, D., & Connolly, J. (2008). Developmental trajectories of victimization. *Journal of Applied School Psychology, 19*(2), 139-156.

Hanish, L. D., Kochenderfer-Ladd, B., Fabes, R. A., Martin, C. L., & Denning, D. (2004). Bullying among young children: The influence of peers and teachers. *Bullying in American Schools: A Social-Ecological Perspective on Prevention and Intervention.* (pp. 141-159): Lawrence Erlbaum Associates Publishers, Mahwah, NJ.

Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry, 41*(4), 441-455.

Hodges, E. V. E., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimization in the peer group. *Developmental Psychology, 33*(6), 1032-1039. doi: http://dx.doi.org/10.1037/0012-1649.33.6.1032

Hodges, E. V. E., & Perry, D. G. (1999). Personal and interpersonal antecedents and consequences of victimization by peers. *Journal of Personality and Social Psychology, 76*(4), 677-685. doi: http://dx.doi.org/10.1037/0022-3514.76.4.677

Hymel, S., Bowker, A., and Woody, E. (1993). Aggressive versus withdrawn popular children: variations in peer and self-perceptions in multiple domains. *Child Development 64*, 879–96.

Kawabata, Y., Tseng, W.-L., & Crick, N. R. (2014). Adaptive, maladaptive, mediational, and bidirectional processes of relational and physical aggression, relational and physical victimization, and peer liking. *Aggressive Behavior, 40*(3), 273-287. doi: 10.1002/ab.21517

Kochenderfer, B. J., & Ladd, G. W. (1997). Victimized children's responses to peers' aggression: Behaviors associated with reduced versus continued victimization. *Development and Psychopathology, 9*, 59-73.

Kumpulainen, K., Rasanen, E., & Henttonen, I. (1999). Children Involved in Bullying: Psychological Disturbance and the Persistence of the Involvement. *Child Abuse & Neglect, 23*(12), 1253-1262.

Ladd, G. W. (1999). Peer relationships and social competence during early and middle childhood. *Annual Reveiwed Psychology, 50*, 333-359.

Ladd, G. W., & Burgess, K. B. (1999). Charting the relationship trajectories of aggressive, withdrawn, and aggressive/withdrawn children during early grade school. *Child Development, 70*(4), 910-929.

Ladd, G. W., & Kochenderfer-Ladd, B. (2002). Identifying victims of peer aggression from early to middle childhood: Analysis of cross-informant data for concordance, estimation of relational adjustment, prevalence of cictimization, and characteristics of identified victims. *Psychological Assessment, 14*(1), 74-96.

Ladd, G. W., & Troop-Gordon, W. (2003). The role of chronic peer difficulties in the development of children's psychological adjustment problems. *Child Development, 74*(5), 1344-1367. doi: 10.1111/1467-8624.00611

Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin, 113*(1), 99-128.

Nicolaides, S., Toda, Y., & Smith, P. K. (2002). Knowledge and attitudes about school bullying in trainee teachers. *British Journal of Educational Psychology, 72*(1), 105-118. doi: http://dx.doi.org/10.1348/000709902158793

Olweus, D. (1997). Bully/victim problems in school: Facts and intervention. *European Journal of Psychology of Education, 12*(4), 495-510.

Ostrov, J. M. (2008). Forms of aggression and peer victimization during early childhood: A short-term longitudinal study. *Journal of Abnormal Child Psychology, 36*(3), 311-322. doi: 10.1007/s10802-007-9179-3

Ostrov, J. M., & Godleski, S. A. (2013). Relational aggression, victimization, and adjustment during middle childhood. *Development and Psychopathology, 25*, 801-815.

Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29*(4), 611-621. doi: http://dx.doi.org/10.1037/0012-1649.29.4.611

Pellegrini, A. D., Bartini, M., & Brooks, F. (1999). School bullies, victims, and aggressive victims: Factors relating to group affiliation and victimization in early adolescence. *Journal of Educational Psychology, 91*(2), 216-224.

Rodkin, P. C., & Hodges, E. V. E. (2003). Bullies and victims in the peer ecology: Four questions for psychologists and school professionals. *School Psychology Review, 32*(3), 384-400.

Rutter, M., Maughan, B., Mortimore, P., Ouston, J., & Smith, A. (1979). *Fifteen thousand hours: Secondary schools and their effects on children.* Cambridge, MA: Harvard University Press.

Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior, 15*(2), 112-120. doi: http://dx.doi.org/10.1016/j.avb.2009.08.007

Salmivalli, C., Huttunen, A., & Lagerspetz, K. M. J. (1997). Peer networks and bullying in schools. *Scandinavian Journal of Psychology, 38*(4), 305-312. doi: http://dx.doi.org/10.1111/1467-9450.00040

Salmivalli, C., & Isaacs, J. (2005). Prospective relations among victimization, rejection, friendlessness, and children's self- and peer-perceptions. *Child Development, 76*(6), 1161-1171. doi: 10.1111/j.1467-8624.2005.00842.x

Salmivalli, C., & Voeten, M. (2004). Connections between attitudes, group norms, and behaviour in bullying situations. *International Journal of Behavioral Development, 28*(3), 246-258. doi: http://dx.doi.org/10.1080/01650250344000488

Sentse, M., Kretschmer, T., & Salmivalli, C. (2015). The Longitudinal interplay between bullying, victimization, and social status: Age-related and gender differences. *Social Development*. doi: 10.1111/sode.12115

Snell, J. L., MacKenzie, E. P., & Frey, K. S. (2002). Bullying prevention in elementary schools: The importance of adult leadership, peer group support, and student social-emotional skills. *Interventions for academic and behavior problems II: Preventive and remedial approaches.* (pp. 351-372): National Association of School Psychologists, Washington, DC.

Snyder, P. A., Wixson, C. S., Talapatra, D., & Roach, A. T. (2008). Assessment in early childhood: Instruction-focused strategies to support response-to-intervention frameworks. *Assessment for Effective Intervention, 34*(1), 25-34. doi: http://dx.doi.org/10.1177/1534508408314112

Soenens, B., Vansteenkiste, M., Goossens, L., Duriez, B., & Niemiec, C. P. (2008). The intervening tole of relational aggression between psychological control and friendship quality. *Social Development, 17*(3), 661-681. doi: 10.1111/j.1467-9507.2007.00454.x

Solbergn, M. E., & Olweus, D. (2003). Prevalence estimation of school bullying with the Olweus bully/victim questionnaire. *Aggressive Behavior, 29*, 239-268.

Veenstra, R., Lindenberg, S., Munniksma, A., & Dijkstra, J. K. (2010). The complex relation between bullying, victimization, acceptance, and rejection: Giving special attention to

status, affection, and sex differences. *Child Development, 81*(2), 480-486. doi: 10.1111/j.1467-8624.2009.01411.x

Table 1. Mean and Standard Deviation of Age and Primary Study Variables

	M			*SD*			*N*		
Age	8.40			1.13			336		
	Time 1			Time 2			Time 3		
	M	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*
Self-Reported Loneliness	.93	.92	326	.93	.90	324	.86	.86	346
Peer-Reported Loneliness	.70	1.30	347	.80	1.64	342	1.24	1.92	377
Social Preference	.73	3.01	347	.70	3.31	342	.60	3.23	377
Bullying	2.12	2.93	347	2.53	3.51	342	2.53	3.46	377
Victimization	1.88	2.04	347	2.53	2.76	342	2.33	3.09	377

Note. Mean scores for Bullying and Victimization represent the sum of raw nomination scores

Table 2. Correlation of Primary Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. T1 SRL	—														
2. T2 SRL	.49**	—													
3. T3 SRL	.44**	.59**	—												
4. T1 PRL	.16**	.25**	.19*	—											
5. T2 PRL	.17**	.24**	.24**	.49**	—										
6. T3 PRL	.22**	.17**	.20**	.46**	.63**	—									
7. T1 SP	-.16**	-.11	-.21**	-.36**	-.31**	-.34**	—								
8. T2 SP	-.19**	-.21**	-.28**	-.35**	-.46**	-.36**	.61**	—							
9. T3 SP	-.18**	-.14*	-.21**	-.38**	-.36**	-.40**	.54**	.62**	—						
10. T1 Bullying	.06	.04	.12	.02	-.02	.00	-.50**	-.39**	-.31**	—					
11. T2 Bullying	.12*	.14*	.09	.02	.07	.08	-.37**	-.54**	-.46**	.53**	—				
12. T3 Bullying	.02	.02	.00	.04	.03	.06	-.31**	-.42**	-.52**	.45**	.64**	—			
13. T1 Victimization	.08**	.18**	.17*	.34**	.25**	.20**	-.46**	-.34**	-.35**	.43**	.26**	.19**	—		
14. T2 Victimization	.16**	.17**	.20**	.39**	.64**	.44**	-.32**	-.41**	-.39**	.03	.19**	.16*	.22**	—	
15. T3 Victimization	.25**	.20**	.27**	.50**	.57**	.64**	-.27**	-.40**	-.36**	-.02	.06	.04	.30**	.50**	—

Note. T = time; SRL = Self-Reported Loneliness; PRL = Peer-Reported Loneliness; SP = Social Preference
*p < .05; **p < .01

Table 3. Regression Predicting Self-Reported Loneliness at Time 2

Variable	*B*	*SE*	*β*	*t*	ΔR^2
Bullying at time 1 predicting self-reported loneliness at time 2					
Model 1:					
Step 1:					.24
Intervention	.12	.13	.05	.93	
T1 Self-Reported Loneliness	.48**	.05	.49	9.61	
Step 2:					.00
Intervention	.13	.14	.05	.92	
T1 SRL	.48**	.05	.49	9.59	
T1 Bullying	-.01	.05	-.01	-.18	
Victimization at time 1 predicting self-reported loneliness at time 2					
Model 2:					
Step 1:					.24
Intervention	.12	.13	.05	.93	
T1 SRL	.48**	.05	.49	9.61	
Step 2:					.01
Intervention	.04	.13	.02	.30	
T1 SRL	.47**	.05	.48	9.44	
T1 Victimization	.11*	.05	.12	2.33	
Bullying and victimization at time 1 predicting self-reported loneliness at time 2					
Model 3:					
Step 1:					.24
Intervention	.12	.13	.05	.93	
T1 SRL	.48**	.05	.49	9.61	
Step 2:					.02
Intervention	.09	.14	.04	.66	
T1 SRL	.47**	.05	.48	9.45	
T1 Bullying	-.06	.06	-.07	-1.14	
T1 Victimization	.14*	.05	.15	2.59	

Note. *p < .05; **p < .01.

Table 4. Regression Predicting Self-reported Loneliness at Time 3

Variable	*B*	*SE*	*β*	*t*	*ΔR*^{2}
Bullying at time 2 predicting self-reported loneliness at time 3					
Model 1:					
Step 1:					.41
Intervention	.09	.13	.04	.69	
T1 Self-Reported Loneliness	.26**	.06	.26	4.34	
T2 Self-Reported Loneliness	.50**	.06	.48	8.07	
Step 2:					.00
Intervention	.10	.14	.04	.70	
T1 SRL	.26**	.06	.26	4.33	
T2 SRL	.50**	.06	.48	8.05	
T2 Bullying	-.01	.05	-.01	-.17	
Victimization at time 2 predicting self-reported loneliness at time 3					
Model 2:					
Step 1:					.42
Intervention	.09	.13	.04	.72	
T1 SRL	.26**	.06	.26	4.43	
T2 SRL	.50**	.06	.48	8.25	
Step 2:					.01
Intervention	.04	.13	.02	.28	
T1 SRL	.25**	.06	.26	4.29	
T2 SRL	.50**	.06	.48	8.21	
T2 Victimization	.10	.05	.10	1.84	
Bullying and victimization at time 2 predicting self-reported loneliness at time 3					
Model 3:					
Step 1:					.41
Intervention	.09	.13	.04	.70	
T1 SRL	.26**	.06	.26	4.34	
T2 SRL	.50**	.06	.48	8.07	
Step 2:					.01
Intervention	.05	.14	.02	.38	
T1 SRL	.25**	.06	.25	4.18	
T2 SRL	.50**	.06	.48	8.03	
T2 Bullying	-.03	.05	-.03	-.46	
T2 Victimization	.11	.06	.12	1.93	

Note. *p < .05; **p < .01.

Table 5. Regression Predicting Self-Reported Loneliness From Time 1-Time 3

Variable	*B*	*SE*	*β*	*t*	*ΔR*^{2}
Bullying at time 1 predicting self-reported loneliness at time 3					
Model 1:					
Step 1:					.41
Intervention	.10	.14	.04	.70	
T1 Self-Reported Loneliness	.26**	.06	.26	4.33	
T2 Self-Reported Loneliness	.50**	.06	.48	8.05	
T2 Bullying	-.01	.05	-.01	-.17	
Step 2:					.00
Intervention	.05	.15	.02	.35	
T1 SRL	.26**	.06	.26	4.34	
T2 SRL	.50**	.06	.49	8.13	
T1 Bullying	.09	.06	.09	1.42	
T2 Bullying	-.05	.06	-.05	-.77	
Victimization at time 1 predicting self-reported loneliness at time 3					
Model 2:					
Step 1:					.43
Intervention	.04	.13	.02	.28	
T1 SRL	.25**	.06	.25	4.29	
T2 SRL	.50**	.06	.48	8.21	
T2 Victimization	.10	.05	.10	1.84	
Step 2:					.01
Intervention	-.02	.14	-.01	-.17	
T1 SRL	.25**	.06	.25	4.26	
T2 SRL	.49**	.06	.48	8.15	
T1 Victimization	.09	.05	.09	1.61	
T2 Victimization	.08	.05	.09	1.52	
Bullying and victimization at time 1 predicting self-reported loneliness at time 3					
Model 3:					
Step 1:					.42
Intervention	.05	.14	.02	.38	
T1 SRL	.25**	.06	.25	4.18	
T2 SRL	.50**	.06	.48	8.03	
T2 Victimization	.11	.06	.11	1.93	
T2 Bullying	-.03	.05	-.03	-.46	
Step 2:					.01
Intervention	-.03	.15	-.01	-.17	
T1 SRL	.25**	.60	.25	4.16	
T2 SRL	.49**	.06	.48	8.05	
T1 Bullying	.08	.07	.08	1.10	
T2 Bullying	-.07	.06	-.08	-1.20	
T1 Victimization	.06	.06	.07	1.03	
T2 Victimization	.12	.06	.11	1.95	

Note. *p < .05; **p < .01.

Table 6. Regression Predicting Peer-Reported Loneliness at Time 2

Variable	*B*	*SE*	*β*	*t*	*ΔR²*
Bullying at time 1 predicting peer-reported loneliness at time 2					
Model 1:					
Step 1:					.27
Intervention	.08	.16	.03	.47	
T1 Peer-Reported Loneliness	.51**	.06	.52	8.86	
Step 2:					.01
Intervention	.19	.18	.07	1.07	
T1 PRL	.51**	.06	.52	8.85	
T1 Bullying	-.10	.06	-.10	-1.51	
Victimization at time 1 predicting peer-reported loneliness at time 2					
Model 2:					
Step 1:					.27
Intervention	.08	.16	.03	.47	
T1 PRL	.51**	.06	.52	8.86	
Step 2:					.01
Intervention	-.01	.17	-.00	-.03	
T1 PRL	.50**	.06	.48	7.70	
T1 Victimization	.10	.07	.10	1.54	
Bullying and victimization at time 1 predicting peer-reported loneliness at time 2					
Model 3:					
Step 1:					.27
Intervention	.08	.16	.03	.47	
T1 PRL	.51**	.06	.52	8.86	
Step 2:					.03
Intervention	.14	.18	.05	.78	
T1 PRL	.45**	.06	.45	7.15	
T1 Bullying	-.17*	.07	-.17	-2.44	
T1 Victimization	.18*	.07	.18	2.46	

Note. *p < .05; **p < .01.

Table 7. Regression Predicting Peer-Reported Loneliness at Time 3

	B	*SE*	*β*	*t*	ΔR^2
Bullying at time 2 predicting peer-reported loneliness at time 3					
Model 1:					
Step 1:					.45
Intervention	.01	.15	.01	.08	
T1 Peer-Reported Loneliness	.25**	.07	.26	3.67	
T2 Peer-Reported Loneliness	.46**	.07	.49	6.77	
Step 2:					.00
Intervention	.05	.17	.02	.30	
T1 PRL	.25**	.07	.27	3.68	
T2 PRL	.45**	.07	.48	6.69	
T2 Bullying	-.04	.06	-.04	-.60	
Victimization at time 2 predicting peer-reported loneliness at time 3					
Model 2:					
Step 1:					.45
Intervention	.01	.15	.01	.08	
T1 PRL	.25**	.07	.26	3.67	
T2 PRL	.46**	.07	.49	6.77	
Step 2:					.03
Intervention	.00	.15	.00	.01	
T1 PRL	.24**	.07	.26	3.55	
T2 PRL	.41**	.08	.44	4.99	
T2 Victimization	.07	.08	.08	.94	
Bullying and victimization at time 2 predicting peer-reported loneliness at time 3					
Model 3:					
Step 1:					.45
Intervention	.01	.15	.01	.08	
T1 PRL	.25**	.07	.26	3.67	
T2 PRL	.46**	.07	.49	6.77	
Step 2:					.85
Intervention	.06	.17	.02	.35	
T1 PRL	.24**	.07	.26	3.55	
T2 PRL	.40**	.09	.42	4.66	
T2 Bullying	-.06	.06	-.06	-.90	.37
T2 Victimization	.09	.08	.10	1.15	

Note. *p < .05; **p < .01.

Table 8. Regression Predicting Peer-Reported Loneliness Time 1- Time 3

	B	*SE*	*β*	*t*	ΔR^2
Bullying at time 1 predicting peer-reported loneliness at time 3					
Model 1:					
Step 1:					.45
Intervention	.05	.17	.02	.30	
T1 Peer-Reported Loneliness	.25**	.07	.27	3.68	
T2 Peer-Reported Loneliness	.45**	.07	.48	6.69	
T2 Bullying	-.04	.06	-.04	-.60	
Step 2:					.00
Intervention	.02	.17	.01	.14	
T1 PRL	.25**	.07	.26	3.66	
T2 PRL	.46**	.07	.49	6.71	
T1 Bullying	.04	.07	.05	.62	
T2 Bullying	-.05	.07	-.06	-.81	
Victimization at time 1 predicting peer-reported loneliness at time 3					
Model 2:					
Step 1:					.45
Intervention	.00	.15	.00	.01	
T1 PRL	.24**	.07	.26	3.55	
T2 PRL	.41**	.08	.44	4.99	
T2 Victimization	.07	.08	.08	.94	
Step 2:					.00
Intervention	.00	.17	.00	.01	
T1 PRL	.24**	.07	.26	3.46	
T2 PRL	.41**	.08	.44	4.97	
T1 Victimization	E	.06	.00	.00	
T2 Victimization	.07	.08	.08	.93	
Bullying and victimization at time 1 predicting peer-reported loneliness at time 3					
Model 3:					
Step 1:					.46
Intervention	.06	.17	.02	.35	
T1 PRL	.24**	.07	.26	3.55	
T2 PRL	.40**	.09	.42	4.66	
T2 Bullying	-.06	.06	-.06	-.90	
T2 Victimization	.09	.08	.10	1.15	
Step 2:					.43
Intervention	.03	.18	.01	.17	
T1 PRL	.24**	.07	.26	3.43	
T2 PRL	.40**	.09	.42	4.62	
T1 Bullying	.05	.08	.05	.65	
T2 Bullying	-.08	.07	-.08	-1.10	
T1 Victimization	-.01	.08	-.01	-.08	
T2 Victimization	.10	.08	.10	1.19	

Note. *p < .05; **p < .01.

Table 9. Regression Predicting Social Preference at Time 2

Variable	*B*	*SE*	*β*	*t*	*ΔR²*
Bullying at time 1 predicting social preference at time 2					
Model 1:					
Step 1:					.41
Intervention	-.36**	.12	-.14	-3.10	
T1 Social Preference	.58**	.04	.58	13.16	
Step 2:					.00
Intervention	-.31**	.13	-.12	-2.46	
T1 SP	.55**	.05	.56	11.27	
T1 Bullying	-.07	.05	-.07	-1.30	
Victimization at time 1 predicting social preference at time 2					
Model 2:					
Step 1:					.41
Intervention	-.36**	.12	-.14	-3.10	
T1 SP	.58**	.04	.58	13.16	
Step 2:					.00
Intervention	-.35**	.12	-.13	-2.91	
T1 SP	.56**	.05	.56	11.48	
T1 Victimization	-.05	.05	-.05	-1.00	
Bullying and victimization at time 1 predicting social preference at time 2					
Model 3					
Step 1:					.41
Intervention	-.36**	.12	-.14	-3.10	
T1 SP	.58**	.04	.58	13.16	
Step 2:					.00
Intervention	-.30**	.13	-.11	-2.40	
T1 SP	.54**	.05	.54	10.44	
T1 Bullying	-.06	.05	-.06	-1.11	
T1 Victimization	-.04	.05	-.04	-.71	

Note. *p < .05; **p < .01.

Table 10. Regression Predicting Social Preference at Time 3

Variable	*B*	*SE*	*β*	*t*	*ΔR²*
Bullying at time 2 predicting social preference at time 3					
Model 1:					
Step 1:					.45
Intervention	-.43**	.13	-.17	-3.17	
T1 Social Preference	.26**	.07	.26	4.08	
T2 Social Preference	.38**	.06	.39	6.02	
Step 2:					.00
Intervention	-.39**	.14	-.16	-2.83	
T1 SP	.26**	.07	.26	4.04	
T2 SP	.35**	.07	.36	5.01	
T2 Bullying	-.06	.06	-.06	-.91	
Victimization at time 2 predicting social preference at time 3					
Model 2:					
Step 1:					.45
Intervention	-.45**	.13	-.18	-3.37	
T1 SP	.26**	.06	.25	3.99	
T2 SP	.38**	.06	.39	6.00	
Step 2:					.01
Intervention	-.43**	.13	-.17	-3.23	
T1 SP	.25**	.06	.24	3.83	
T2 SP	.34**	.06	.35	5.27	
T2 Victimization	-.11*	.05	-.11	-2.10	
Bullying and victimization at time 2 predicting social preference at time 3					
Model 3:					
Step 1:					.45
Intervention	-.43**	.13	-.17	-3.17	
T1 Social Preference	.26**	.07	.26	4.08	
T2 Social Preference	.38**	.06	.39	6.02	
Step 2:					.01
Intervention	-.37**	.14	-.15	-2.68	
T1 SP	.25**	.06	.25	3.90	
T2 SP	.31**	.07	.32	4.34	
T2 Bullying	-.06	.06	-.06	-2.06	
T2 Victimization	-.11*	.05	-.11	-.98	

Note. *p < .05; **p < .01.

Table 11. Regression Predicting Social Preference From Time 1- Time 3

	B	*SE*	*β*	*t*	ΔR^2
Bullying at time 1 predicting social preference at time 3					
Model 1:					
Step 1:					.46
Intervention	-.39**	.14	-.16	-2.83	
T1 SP	.26**	.07	.26	4.04	
T2 SP	.35**	.07	.36	5.01	
T2 Bullying	-.06	.06	-.06	-.91	
Step 2:					.01
Intervention	-.44**	.14	-.18	-3.11	
T1 SP	.30**	.07	.30	4.35	
T2 SP	.34	.07	.35	4.84	
T1 Bulling	.10	.06	.10	1.57	
T2 Bullying	-.10	.07	-.10	-1.42	
Victimization at time 1 predicting social preference at time 3					
Model 2:					
Step 1:					.46
Intervention	-.43**	.13	-.17	-3.23	
T1 SP	.25**	.06	.24	3.83	
T2 SP	.34**	.06	.35	5.27	
T2 Victimization	-.11	.05	-.11	-2.10	
Step 2:					.00
Intervention	-.41**	.14	-.16	-3.05	
T1 SP	.23**	.07	.23	3.44	
T2 SP	.34**	.07	.35	5.21	
T1 Victimization	-.04	.06	-.04	-.76	
T2 Victimization	-.11	.05	-.11	-2.05	
Bullying and victimization at time 1 predicting social preference at time 3					
Model 3					
Step 1					.47
Intervention	-.37**	.14	-.15	-2.68	
T1 SP	.25**	.06	.25	3.90	
T2 SP	.31**	.07	.32	4.34	
T2 Bullying	-.06**	.06	-.06	-.98	
T2 Victimization	-.11**	.05	-.11	-2.06	
Step 2					.01
Intervention	-.40**	.14	-.16	-2.80	
T1 SP	.27**	.07	.26	3.77	
T2 SP	.30**	.07	.32	4.23	
T1 Bullying	.10	.07	.10	1.39	
T2 Bullying	-.09	.07	-.09	-1.36	
T1 Victimization	-.06	.06	-.06	-1.06	
T2 Victimization	-.09	.06	-.09	-1.60	

Note. *p < .05; **p < .01.