Coping with School Bullying: An Examination of Longitudinal Effects of Coping on Peer Victimization and Adjustment

by

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ABSTRACT

Despite some prevailing attitudes that bullying is normal, relatively innocuous behavior, it has recently been recognized as a serious problem in schools worldwide. Victimized students are more likely to evidence poor academic and semi-academic outcomes, experience social difficulties, and drop out of school in comparison to their non-victimized peers. Although anti-bullying programs have proliferated during the last decade, those aimed at helping children cope with bullying often suffer from a lack of basic research on the effectiveness of children's responses to bullying. The focus of this study was to delineate the ways in which elementary school-aged children typically cope with peer victimization, then to examine which strategies reduce future risk for harassment and associated adjustment problems to inform prevention and intervention program development.

A cohort-sequential design was used to examine the effectiveness of children's strategies for coping with peer victimization. The sample included 317 children (157 boys; 49.5% Caucasian, 50.5% Hispanic; *M* age =10 years 5 months at T1) who were surveyed in the Fall and Spring of two academic years.

Confirmatory factory analysis was used to validate the factor structure of the coping measure used and internal reliability was verified. Comparison of means indicated differences in children's coping based upon sex and age. For example, girls tend to cope more emotionally and cognitively, while boys are more behavioral in their coping.

Regression results indicated that a number of specific relationships were present between coping, victimization, loneliness, and anxiety. For example, support seeking behavior was effective at decreasing victimization for younger children (fourth graders) who experienced high initial victimization. In contrast, revenge seeking behavior was predictive of increased victimization for both girls and highly victimized students. Problem solving was effective at reducing adjustment problems over time for younger students and, although results for older students were non-significant, it appears to be a promising strategy due to a lack of association with negative future outcomes. Results highlight the importance of identifying influential characteristics of individual children in order for prevention and intervention programs to successfully decrease the incidence and adverse impact of bullying behavior.

Dedicated to my two favorite people, my husband and son.

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CHAPTER 1

Introduction

Despite some prevailing attitudes that bullying is normal, relatively innocuous behavior, it has recently been recognized as a serious problem in schools worldwide. Victimized students are more likely to evidence poor academic progress, develop negative attitudes toward school, and drop out of school in comparison to their non-victimized peers (Buhs, Ladd, & Herald, 2006; Juvonen, Nishina, & Graham, 2000; Schwartz, Gorman, Nakamoto, & Tobin, 2005). Moreover, developmental and educational psychologists have demonstrated that school bullying is especially detrimental to children's psychosocial development (see Juvonen & Graham, 2001), such that children who are bullied are at risk for a host of internalizing problems, including depression, anxiety, and loneliness, as well as other forms of maladjustment (Boulton & Underwood, 1992; Craig, 1998; Hanish & Guerra, 2002; Kochenderfer & Ladd, 1996a, 1996b; Kochenderfer-Ladd & Wardrop, 2001; Olweus, 1991, 1993). In addition, bullying may ultimately affect individuals' adult socioemotional competence, as research has found relations between childhood peer harassment and difficulties with romantic relationship and workplace bullying (Juvonen & Graham, 2001).

Although anti-bullying programs have proliferated during the last decade (Community Matters, 2005; Hazelden Foundation, 2008; Right Reason Technologies, 2008), the theoretical and empirical bases for such interventions are not always clear. Furthermore, the content and efficacy of such programs are

often suspect due to a lack of research in this area (Merrell, Gueldner, Ross, & Isava, 2008). For example, there are a number of small-scale programs that are quite narrow in scope, such as using a single class or school assembly period to talk to students about bullying and offering tips on how to deal (i.e., cope) with bullies. Although such programs likely raise awareness about peer victimization, most have yet to be empirically evaluated (see Espelage & Swearer, 2004). Only a few of the dozen or so large-scale programs currently implemented (i.e., those that address the school-wide incidence of bullying, work with students, parents, teachers, and administrators, and are carried out over a period of months or years) have been thoroughly investigated (Zins, Elias, & Maher, 2007); those that have been evaluated evidence varying levels of success (Espelage & Swearer, 2004; Merrell et al., 2008; Zins et al., 2007). Thus, it is clear that both small and large scale intervention programs aimed at helping children cope with bullying suffer from a lack of basic research on the effectiveness of children's responses to bullying.

Although these programs bring necessary attention to the problem of peer victimization in U.S. schools, they do not sufficiently address the unique experiences of individual students, including the antecedents and outcomes of the coping strategies that children are both formally instructed and informally encouraged to use in response to bullying. It is generally assumed that all children have the requisite temperament, social skills and personal resources to cope effectively with bullying. While some children may have these skills and resources (Goldbaum, Craig, Pepler, & Connolly, 2003; Hodges, Boivin, Vitaro,

& Bukowski, 1999; Paul & Cillessen, 2003), basic research also shows that this is not always the case and points out that there are many individual and environmental factors that are involved in the emergence and effects of peer victimization (Kliewer, Fearnow, & Walton, 1998; Kochenderfer-Ladd & Ladd, in press; Wadsworth & Berger, 2005). In other words, while potentially improving outcomes for some children, prevention and intervention policies and programs tend to lack specificity in understanding those children who are most impacted by bullying.

To address this gap in the literature, the focus of this study is delineating the ways in which elementary school-aged children typically cope with peer victimization and then examining which strategies are effective at reducing future risk for harassment and associated adjustment problems. Coping strategies used in response to bullying have received increasing attention over the past decade; however, when coping has been studied, findings are usually descriptive and cross-sectional in nature (e.g., Kristensen & Smith, 2003; Smith, Shu, & Madsen, 2001; Terranova, 2007), both of which are significant limitations given the pervasive and persistent nature of peer victimization; however, some exceptions do exist. For example, researchers have shown that the strategies children use to cope with victimization are related to individual characteristics of the child, such as sex, emotional reaction (Kochenderfer-Ladd, 2004), and the intensity or frequency of a child's victimization experiences (Kochenderfer-Ladd & Skinner, 2002; Visconti & Troop-Gordon, 2010). Nevertheless, basic questions regarding children's coping with peer harassment have not yet been fully addressed, such as

whether boys and girls differ in their strategy use or if children's strategies change over time (i.e., as they mature). It is also not clear if the outcomes associated with specific strategies differ for boys or girls or at different age periods. This study utilized a cohort-sequential, longitudinal design to address these issues.

CHAPTER 2

Review of the Literature

While definitions of bullying vary somewhat, common characteristics include intention, frequency, and an imbalance of power. For example, Olweus (1993) and others (e.g., Nansel et al., 2001) argue that (a) bullying is aggressive behavior intended to disturb or cause harm to another person, (b) it occurs repeatedly over an extended period of time, and (c) the aggressor is typically more powerful than the victim (i.e., physically, psychologically, or both). More recent definitions of bullying have expanded from focusing mainly on physical and verbal attacks to also include indirect, relational, and social forms of aggression, as well as social exclusion (Smith, 2004). Examples of the wide range of bullying behaviors include hitting or teasing (physical and verbal, respectively), using an intermediary to bully another child (indirect), negatively affecting another child's peer relationships (relational), damaging another child's self-worth (social), and preventing a child from joining a peer group (social exclusion). These behaviors are seen at varying incidence levels across different age groups, sexes, and cultures (Chen, French, & Schneider, 2006; Smith et al., 2001).

It has proven difficult, if not impossible, to determine an exact prevalence rate for peer victimization (Espelage & Swearer, 2003; Zins et al., 2007) as estimates of occurence range widely, from 5 to 80% (Boulton & Underwood, 1992; Graham, 2006; Zins et al., 2007). Although prevalence estimates vary dramatically, some researchers posit that approximately 10 to 20% of children are the target of peer aggression (Olweus, 1991; Smith et al., 2001). This considerable

variance in reported prevalence stems from differences in age groups studied, methods for assessing victimization (e.g., self- vs. peer-report), the type of bullying behavior being studied, varying definitions for bullying, and so forth (Zins et al., 2007). Despite an inability to estimate prevalence with much accuracy, researchers do tend to find that bullying is more common among younger children than older ones (Olweus, 1991), that boys and girls use different forms of aggression to victimize others (Crick & Grotpeter, 1995; Owens, Slee, & Shute, 2001), and that children with certain characteristics (e.g., cry easily, display high anxiety, or antagonize others) are at greater risk for victimization than others (Hodges & Perry, 1999). Moreover, while researchers have found that the *prevalence* of victimization seems to decrease over time (Olweus, 1991; Smith, Madsen, & Moody, 1999; Smith et al., 2001), its *stability* increases (Kochenderfer-Ladd & Wardrop, 2001). In other words, although fewer children may be bullied at older ages, those who are victimized both have a history of victimization and are more likely to continue being targeted.

It is currently unclear why some children become targets of victimization, and remain so, while others do not. While many possibilities exist, the premise of the current study is that some children do not respond effectively to peer harassment and are therefore vulnerable to further victimization. For example, certain response strategies, such as seeking revenge, have been associated with continued peer harassement (Mahady Wilton, & Craig, 2000); however, this premise has not been thoroughly studied, and research is still needed to further our understanding of children's coping with peer victimization (Hunter & Borg,

2006). Thus, a primary aim of this investigation was to identify effective strategies and examine whether persistently victimized children exhibit ineffective coping, in contrast to their non-victimized classmates.

Past research has focused on identifying possible risk and protective factors in the emergence and stability of peer victimization with the goal of reducing these types of experiences. For example, researchers have examined individual characteristics of children that might serve as risk and protective factors, such as having an anxious or provocative nature or having strong friendships or a high level of social acceptance, respectively (Davidson & Demaray, 2007; Fox & Boulton, 2006; Hanish, Eisenberg, Fabes, Spinrad, Ryan, & Smith, 2004; Hanish, Ryan, Martin, & Fabes, 2005; Hodges & Perry, 1999; Hodges et al., 1999; Pelligrini, Bartini, & Brooks, 1999). Unfortunately, while such factors are markedly influential in children's bullying experiences, they are not necessarily the ones that are most malleable or easily changed.

In contrast to these more deeply ingrained factors, the ways in which children respond to victimization, such as seeking help from an adult or friend, seeking revenge, or crying, may be more easily influenced. In addition, affecting change in this area may have a more tangible result, in that children who modify their coping strategies (i.e., switch from using ineffective strategies to effective ones) may feel empowered and their victimization may decrease, potentially causing a subsequent improvement in their adjustment outcomes. Thus, the goal of this study was to investigate the effectiveness of specific forms of coping for children dealing with bullies in elementary school. Specifically, five critical issues

related to children's coping strategies in response to bullying were examined, including (a) sex differences in the types of coping children employ, (b) age or grade differences in the types of coping strategies children use, (c) coping differences based upon children's ethnicity, (d) identification of strategies associated with reduced risk for future victimization, and (e) identification of strategies associated with decreased risk for subsequent adjustment problems.

As mentioned previously, while the prevalence of victimization tends to decrease as children age (Olweus, 1991; Smith et al., 1999; Smith et al., 2001), some children are chronically victimized for several years (Kochenderfer-Ladd & Wardrop, 2001; Pepler, Jiang, Craig, & Connolly, 2008; Sweeting, Young, West, & Der, 2006). Moreover, variation in peer victimization also exists across the sexes, such that boys tend to be at slightly greater risk for peer abuse than girls (Smith et al., 2001) and boys and girls tend to direct different forms of aggression (e.g., physical, relational) toward their victims (Crick & Grotpeter, 1995; Owens et al., 2001). These differences suggest that boys and girls experience victimization differently and may therefore develop different patterns of coping.

Age Differences in Coping

Despite the dearth of studies that have focused on coping specifically with peer victimization, a few key studies in this area have provided a preliminary understanding of children's coping behavior at various age levels. Although specific findings vary, results related to differences in age suggest that the use of social support seeking, problem solving, and passive coping strategies tend to decrease as children age, while the use of distancing/ignoring tends to increase

(Kochenderfer & Ladd, 1997; Kochenderfer-Ladd, 2004; Kochenderfer-Ladd & Skinner, 2002; Smith et al., 2001). Moreover, Kochenderfer and Ladd (1997) found that kindergarteners (aged 5 to 6 years) frequently reported using such strategies as "telling the teacher," "having a friend help," "walking away," and "fighting back" (p. 67). Children in this age group also reported that they infrequently responded by "crying" or "giving something up" (p. 67). Moreover, some age differences have been detected among elementary school children, such that younger children (aged 5 to 8 years) tended to seek social support from adults or friends and tried to use conflict resolution strategies more often than older children (aged 9 to 11 years; Kochenderfer-Ladd, 2004).

In a sample of 9- to 10-year-old children, Kochenderfer-Ladd and Skinner (2002) found that children reported seeking social support (e.g., get help from a peer or family member) more than any other strategy. Children also reported using problem solving strategies (e.g., think about what to do or say) fairly often, employed distancing (e.g., pretend nothing happened) or internalizing (e.g., feel worried) strategies infrequently, and used externalizing-type strategies (e.g., hitting something) least often. Smith and colleagues (2001) surveyed an older sample of children (aged 10 to 14 years) and found that 10 to 11 year olds tended to exhibit passive strategies, such as crying or running away, and tended to ask an adult for help more often than 12 to 14 year olds, who instead reported ignoring the bully most often.

Similarly, Hunter, Boyle, and Warden (2004) found that, among students aged 9 to 14 years, younger children were more likely than older children to tell

someone what happened (specific age ranges for these groups were not provided by the researchers). Camodeca and Goossens (2005) found that seventh grade students were more likely than 8th graders to prefer acting nonchalant in response to bullying, while eighth graders were more likely to retaliate than their younger peers. Finally, Kanetsuna, Smith, and Morita (2006) found variation in adolescents' recommended responses to bullying, such that 12- to 15-year-old students in both England and Japan recommended that their peers "seek help" (p. 575) most often for dealing with physical bullying, verbal bullying, and rumor-spreading, while students suggested to "take direct action against bullies" (p. 575) when dealing with being ignored or socially excluded.

A few of the aforementioned studies also examined the effectiveness (i.e., success in reducing future victimization) of specific coping strategies for different age groups. For example, Kochenderfer and Ladd (1997) found that, among kindergarteners (aged 5 to 6 years), boys who fought back were more likely to experience continued high levels of victimization four to six months later, while boys who sought help from a friend were less likely to report continued high levels of victimization at follow-up. In addition, Kochenderfer-Ladd (2004) found that cognitive distancing (e.g., pretending it never happened) was predictive of increased victimization for elementary school children (aged 5 to 11 years) over an academic year. Similarly, Shelley and Craig (2010) found that avoidant coping, such as cognitive distancing, was predictive of increased victimization for children. They also found that seeking revenge or social support was associated

with increased victimization for boys; in contrast, social support seeking was predictive of reduced victimization for girls.

Sex Differences in Coping

Although extensive research has not been conducted on sex differences in children's coping, a wide body of research has demonstrated the impact of sex, and more specifically sex-specific socialization, on children's play and peer group norms. For example, girls are more likely to act prosocial (Crick & Grotpeter, 1995; Chung & Asher, 1996) and boys assertive or aggressive (Rose & Asher, 1999). In addition, girls tend to prefer dyadic relationships, while boys have a tendency toward peer interaction in large group settings (Fabes, Martin, & Hanish, 2003; Ladd 1983). These overall sex differences are likely to impact the development and socialization of coping responses, particularly because children tend to interact in sex-segregate situations (Rose & Rudolph, 2006) and strive for peer-normative behavior (Chang, 2004; Henry et al., 2000).

Results from several studies on coping with peer victimization indicate some consistency in findings for sex differences in children's coping (see Kochenderfer-Ladd, 2004). Researchers frequently find that boys report fighting back more often than girls (Kochenderfer & Ladd, 1997; Kochenderfer-Ladd & Skinner, 2002; Salmivalli, Karhuenen, & Lagerspetz, 1996; Smith et al., 2001; Visconti & Troop-Gordon, 2010), as well as that girls cope passively (e.g., cry or walk away) more often than boys (Kochenderfer & Ladd, 1997; Salmivalli et al., 1996; Smith et al., 2001). In addition, girls are more likely than boys to seek social support by asking an adult or friend for help (Smith et al., 2001; Visconti &

Troop-Gordon, 2010), and girls are more likely than boys to utilize conflict resolution strategies in response to peer victimization (Kochenderfer-Ladd, 2004; Camodeca & Goossens, 2005). In sum, boys tend to react to peer victimization more physically, while girls tend to cope with a greater focus on emotions, relationships, and conflict resolution.

Furthermore, some studies have focused on the effectiveness of these coping strategies with specific regard for sex differences. For example, although Kochenderfer and Ladd (1997) expected "fighting back" to be associated with reduced victimization for kindergarten boys, it was instead related to continued victimization over a one-year period. In addition, Kochenderfer and Ladd (1997) found that kindergarten boys who reported asking a friend for help in the Fall were less likely to report victimization in the Spring. Unfortunately, this strategy is less common among older boys (aged 12 to 14 years) than older girls (Smith et al., 2001) and therefore may be considered gender-atypical behavior and difficult to encourage among older boys.

Additional support can be drawn from Kochenderfer-Ladd and Skinner's (2002) work with children aged 9 to 10 years. In this sample, victimized boys who reported social support seeking behavior were more likely to be nominated as disliked by their peers, while victimized girls who utilized this strategy were less likely to be rated as having social problems by their teachers. Therefore, social support seeking behavior may evidence varying effectiveness based upon both sex and age of the child. Further, victimized boys who reported using distancing coping frequently were rated "about as well liked as nonvictimized boys who

coped in this manner" (Kochenderfer-Ladd & Skinner, 2002, p. 276), suggesting that distancing may be an effective strategy for this particular group. Quite the opposite result was found for girls in this study; those who reported using distancing to cope with peer victimization were rated by their teachers as displaying more social problems than those who did not use this strategy.

Research by Visconti and Troop-Gordon (2010) suggests that the outcomes associated with children's coping in response to peer victimization may be moderated both by children's sex as well as the extent to which they are harassed by their peers. Specifically, results indicate that while seeking support from friends was predictive of decreased bullying over time for infrequently victimized children, particularly girls, this strategy may be linked to increased harassment for children who are highly victimized. Sex and level of victimization were similarly found to moderate the outcomes associated with children's use of passive coping, such as walking away.

Ethnic Differences in Coping

Research on peer relations, particularly victimization and peer status, has traditionally been conducted using participants who are predominantly white (Hanish & Guerra, 2000) or has not considered ethnicity beyond the level of the individual (Graham, 2006). The few research studies that have taken ethnicity into account have not found significant ethnicity-related differences in children's frequency of victimization (e.g., Moran, Smith, Thompson, & Whitnery, 1993; Siann, Callaghan, Glissov, Lockhart, & Rawson, 1994), but they also suffered from methodological limitations that inhibited their ability to fully explore the

influence of ethnicity. Thus, the need for a focus on the role of ethnicity in peer victimization experiences, particularly responses to victimization, remains. This study used an exploratory approach to investigate whether children's coping strategy use, peer victimization experiences, and adjustment varied as a function of ethnicity.

Level of Peer Victimization

As stated previously, although many children experience occasional victimization during childhood, a small group is persistently harassed throughout childhood and extending into adolescence (Olweus, 1991; Smith et al., 2001). Although all victimized children are at risk of poor outcomes, those children who experience continued victimization are likely to experience greater difficulty and increased deleterious outcomes (Buhs et al., 2006; Kochenderfer & Ladd, 1996; Kochenderfer-Ladd & Wardrop, 2001; Ladd & Troop-Gordon, 2003). Finally, there is some preliminary evidence to indicate that the effectiveness of coping strategies may be moderated by the frequency to which children are harassed by their peers (Kochenderfer-Ladd & Skinner, 2002; Visconti & Troop-Gordon, 2010). Specifically, results indicated that while seeking support from friends was predictive of decreased bullying over time for infrequently victimized children, particularly girls, this strategy may be linked to increased harassment for children who are highly victimized. Sex and level of victimization were similarly found to moderate the outcomes associated with children's use of passive coping, such as walking away. The current study will contribute to this gap in the literature by exploring the influence of level of victimization on coping strategy effectiveness.

Theoretical Framework

The approach-avoidance coping framework (Roth & Cohen, 1986; Ebata & Moos, 1991) was used to guide the formulation of hypotheses and interpretation of findings for this study. Within this framework, approach coping strategies are used to control a situation by managing a stressor through action. In contrast, avoidance strategies seek to reduce stress, prevent anxiety, or both, by evading the stressor through distancing oneself physically, emotionally, or cognitively. Although individuals tend to prefer one type of coping over the other (i.e., people tend to be approachers or avoiders), they invariably utilize strategies from both categories or vacillate between the two modes of coping as needed (Carver, Scheier, & Weintraub, 1989; Roth & Cohen, 1986).

Although prior research has suggested that children tend to prefer specific strategies at certain ages, such as younger children utilizing social support seeking strategies more often (Kochenderfer-Ladd & Skinner, 2002) or older children utilizing ignoring strategies more often (Smith et al., 2001), it remains unclear whether children exhibit strong tendencies toward approach or avoidance strategies at different ages. Thus, it is important to utilize the approach-avoidance paradigm in further work to determine its utility with children of various age groups. Causey and Dubow's (1992) work represents one of the first attempts to address whether the structure is appropriate for use with children; they utilized the approach-avoidance paradigm as the basis of their coping scale, which was developed using a sample of fourth through sixth grade students.

Causey and Dubow (1992) developed the Self-Report Coping Scale (SRCS) based on Roth and Cohen's (1986) approach-avoidance framework. The SRCS was designed to assess the effectiveness of specific coping strategies in the context of dealing with stress at school. Their work focused on five factors: seeking social support, problem solving, distancing, internalizing, and externalizing.

In later work, Kochenderfer-Ladd and Skinner (2002) modified Causey and Dubow's (1992) measure in various ways including distinguishing between adults and friends as sources of social support and adapting items to focus more broadly on externalizing strategies (e.g., the tendency to get mad) and to be more specific about how children would react to the aggressor (e.g., get back at the mean kid). Also, because research has suggested that nonchalance may be an effective strategy for reducing risk for victimization (Camodeca & Goossens, 2005), the distancing scale was modified to reflect this emphasis (e.g., tell the mean kids they don't care). Finally, to avoid confusing internalizing coping (e.g., blaming oneself) with self-blaming attributions (i.e., a cognitive response rather than a strategy) and internalizing problems (i.e., feeling lonely or depressed), some of Causey and Dubow's internalizing items were modified to reflect being unable to cope, such as being overwhelmed to the point of immobilization (e.g., get so upset they can't talk to anyone or not know what to do). Thus, this study utilized this adapted measure to tap six distinct strategies: (a) seeking adult assistance, (b) seeking friend assistance, (c) revenge, (d) nonchalance, (e) problem solving, and (f) immobilization.

Mullen and Suls's (1982) meta-analysis suggested that avoidance strategies demonstrated the most success when examining immediate outcomes, while approach strategies evidenced the highest effectiveness for long-term outcomes. Thus, this work incorporated data gathered over multiple academic years to investigate the short- and long-term effectiveness of different coping strategies in reducing risk for further victimization and future adjustment problems.

Study Description and Hypotheses

Although researchers have attempted to identify consistent patterns of coping among children of different ages, so far such patterns have yet to be found. Therefore, it was important to first consider whether children are in fact using the various strategies outlined previously and if their coping styles are stable, or if they change, over time. This study extended the work of Causey and Dubow (1992) and Kochenderfer-Ladd (2004) by further examining the psychometric properties of the modified coping measure in a sample of third through sixth grade children. Specifically, in addition to examining the internal consistency of the scales over time, confirmatory factor analysis was used to evaluate a measurement model in which six distinct forms of coping were specified. Then, group mean comparisons of children's coping behavior, victimization, loneliness, and anxiety provided insight into the patterns of coping exhibited by children of different ages (third through sixth grades) and sexes, as well as their psychosocial experiences at school. Regression analyses were used to determine the effectiveness of specific coping strategies by assessing the predictive values of

sex, ethnicity, and frequency of victimization in determining later victimization and adjustment. Tests of simple slopes were used to decompose results of the regression analyses in order to examine moderation effects of children's coping strategies.

Variation in how children cope. Preliminary evidence suggested that children respond to questions about how they cope with victimization experiences with a fair degree of consistency, suggesting that they do conceptualize coping in similar ways at different ages (Polasky & Kochenderfer-Ladd, 2008); however, it is important to consider the importance of age and sex differences in examining how children cope. Based upon prior research in the field, it is expected that older children will report ignoring bullies more often than their younger peers, older children will be less likely to be immobilized by victimization and to discuss their experiences with adults than younger children, boys will fight back more than girls, and girls will report seeking social support more than boys.

Effectiveness of coping strategies. Research on the approach-avoidance paradigm suggests that approach strategies are typically associated with better outcomes, and therefore are often regarded as more effective, than avoidance strategies (Aldwin, 1994; although exceptions have been noted, see Parker & Endler, 1996). Thus, consistent with the argument that approach strategies are typically more effective at resolving stressful situations (Aldwin, 1994), it was hypothesized that approach strategies, such as problem solving and involving teachers and friends, would be associated with reduced risk for victimization over time; however, approach strategies can be either positive or negative in nature,

such as getting help from an adult versus fighting back (see Juvonen & Graham, 2001). For example, the negative approach strategy of seeking revenge may actually exacerbate victimization if it goes beyond assertiveness and standing up for oneself. Thus, seeking revenge was expected to increase risk for victimization. In regards to avoidance strategies, the use of avoidant coping (e.g., crying, running away) is common in childhood and tends to increase with age (Smith et al., 2001). Therefore, although passive coping strategies such as being emotionally immobilized and ignoring may not be effective for young children, their continued use over time may well be, and older children may report decreased victimization following their use. In addition, if successful, avoidance strategies may reduce the emotional distress associated with peer harassment, resulting in decreased loneliness or anxiety.

Moderation effects. Whether or not a coping strategy affects children's victimization and adjustment may depend on the social norms and expectations for children based on sex, age, ethnicity, initial vulnerability to peer victimization, and initial adjustment (i.e., loneliness and anxiety). Although some empirical attention has been given to each of these potential moderators, this proposition has not been thoroughly studied, and research is still needed to further our understanding of children's coping with peer victimization (Hunter & Borg, 2006). Thus, for this work, in addition to addressing the hypotheses outlined above, it was also of interest to explore what factors may moderate the effectiveness of children's strategies, particularly sex, age, ethnicity, initial victimization, and initial adjustment.

CHAPTER 3

Methods

Participants

Participating children were recruited from four public elementary schools that were selected because they were ethnically and socio-economically representative of the southwestern United States. They served primarily low-to-middle income families, as indicated by the percentage of students who received free lunches (26%, 56%, 79% and 95% for the four schools). The sample was ethnically representative of the surrounding area: 44.8% Latino(a), 44% White, and 11.2% other ethnic and racial groups.

Data for this study come from the third and fourth years of a four-year project. Specifically, data were collected on 357 children (172 boys; 185 girls) at four time points: twice in year three (Y3; referred to here as Time 1 and Time 2) and twice in year four (Y4; Time 3 and Time 4). Thus, at Time 1 and 2, the two cohorts of children were in third grade (177 children; *M* age = 9 years 4 months at T1) and fifth grade (180 children; *M* age = 11 years 5 months at T1). At the Time 3 and 4 follow ups, they were in fourth and sixth grades, respectively. This age group was of interest because research indicates that while peer victimization is common throughout childhood, a significant rise in prevalence typically occurs during the transition between childhood and adolescence (Nansel et al., 2001; Pelligrini & Long, 2002), as well as increases in stability and is targeted on a smaller number of children (Browning, Cohen, & Warman, 2003; Perry, Hodges, & Egan, 2001).

Finally, children of "other ethnic and racial groups" were excluded from analysis due to their low frequency within the overall sample ($N = 40$; less than 15%). This decision was made to allow clearer interpretation of any ethnic group differences that might emerge. The resultant sample size was 317 children (49.5% Caucasian, 50.5% Hispanic; 157 boys).

Procedures

Due to the prevalence of Spanish-speaking families, bilingual (English/Spanish) parental consent forms were sent home with over 500 children enrolled at the participating schools. Approximately 56 percent of students returned their forms indicating parental permission to participate. Child measures were written in both Spanish and English; bilingual graduate students were available to assist children who felt more comfortable reading and conversing in Spanish.

Before administering the questionnaires at each time point, children were provided with an overview of the project and informed that (a) their participation was voluntary, (b) there would be no adverse consequence if they chose not to participate, and (c) their responses would be kept confidential. Trained interviewers conducted group-administration of measures with students in their classroom or in a quiet place in the school, such as the library or school cafeteria (as designated by school administrators); group administrations took about 60 minutes. Children were given instructions by the interviewers before commencing the questionnaires. When necessary (e.g., when children required more individualized attention due to having a slow pace of reading or having behavioral

problems), questionnaires were administered to students individually or in small groups (3 to 5 students). At each assessment period, children were given education-related gifts for their participation, such as pencils, folders, water bottles, and backpacks.

Measures

Coping. Children rated the frequency with which they would use specific coping strategies in response to peer victimization at school by responding to the "*What I Would Do*" (WIWD; Kochenderfer-Ladd, 2004; Kochenderfer-Ladd & Pelletier, 2008) questionnaire using a four-point scale from 1.00 (*never*) to 4.00 (*a lot)*. This measure was designed to tap six coping strategies: (a) seeking adult assistance (six items; e.g., tell a parent what happened); (b) seeking friend assistance (four items; e.g., ask a friend what I should do); (c) seeking revenge (five items; e.g., get even with the kid); (d) nonchalance (three or four items (one item was excluded at T1); e.g., tell yourself it didn't matter); (e) problem-solving (four items; e.g., figure out why it happened); and (f) immobilization (three items; e.g., become so upset I wouldn't know what to do).

Items for each scale were averaged to create a score for a child's use of each coping strategy. As the psychometric properties of this instrument over time were of interest in this study, more information will be provided in the Results section (reliability alphas, means, and standard deviations are reported in Table 1; see Tables 2 and 3 for means broken down by sex and ethnicity).

Peer victimization. The *"Way Kids Are"* (WKA) questionnaire, an adapted element of the *Multi-Source Peer Victimization Inventory* (MSPVI; Ladd

& Kochenderfer-Ladd, 2002), was used to obtain children's self-reports of the frequency with which they were picked on by their peers. Children used a 4-point scale ranging from 1.00 (*never*) to 4.00 (*a lot*) to indicate how often they experienced each of four different types of victimization: (a) general (i.e., picked on or teased); (b) physical (i.e., hit or pushed); (c) verbal (i.e., called names or other hurtful things); and (d) relational (i.e., said mean things, or lies, about).

Scores were created by averaging across the four items. The scales evidenced adequate internal consistency across time, with alpha values ranging from .79 to .85 (see Table 1 for reliability alphas, means, and standard deviations; see Tables 2 and 3 for means broken down by sex and ethnicity).

Adjustment outcomes. Children completed the "*About Me*" questionnaire, an adaptation of Kochenderfer-Ladd's (2004) School Experiences Questinnaire (SEQ), which drew from Cassidy and Asher's (1992) Loneliness and Social Dissatisfaction Questionnaire (LDSQ), Achenbach's (1991) *Child Behavior Checklist*, and Ladd and Profilet's (1996) *Child Behavior Scale*, to provide information on their emotional and psychological adjustment. Specifically, loneliness and anxiety were assessed via self-reports using the same four point scale, ranging from 1.00 (*never*) to 4.00 (*a lot*). Four items tapped loneliness (e.g., "were you lonely" and "feel left out") and four tapped anxiety (e.g., "did you worry" or "were you scared" in school).

Scores were created by averaging items for each scale. Both scales evidenced adequate internal consistency across the four time points, with alpha values ranging from .46 to .72 for anxiety and from .74 to .81 for loneliness (see

Table 1 for reliability alphas, means, and standard deviations; see Tables 2 and 3 for means broken down by sex and ethnicity).

CHAPTER 4

Results

Due to the longitudinal nature of the study and the student mobility rates at some of the participating schools, one focus of preliminary analysis was the presence of data missing at random. In addition, because the coping scale used in this work was an adaptation, the factor structure and psychometric properties of the WIWD coping scale were also addressed before directing attention to the hypotheses related to use of coping strategies, stability or change in coping over time, and effectiveness of specific coping strategies.

Estimating Missing Data via Multiple Imputation

Missing data were estimated using a multiple imputation procedure. To determine the amount of missingness in the longitudinal data set, data from all four years (i.e., eight time points) were examined. Although data had been collected twice each year (Fall and Spring), only Spring data were used to determine degree of missingness, as children who were missing in the Fall of the academic year would still be missing in the Spring. Then, data were imputed for children who were missing at only one or two time points (i.e., 50% or more of the child's data were present). Imputations were conducted using NORM 2.03 (Schafer, 2000), a multiple imputation program that estimates multivariate data $n > 1$ times. Based upon efficiency guidelines set forth by Rubin (1987) and Schafer (1999), a data set with approximately 30% missing data requires $n = 5$ imputations to achieve 94% efficiency. Thus, because the prevalence of missing data ranged from 19.5% to 28.1%, this was deemed an appropriate (i.e.,

conservative) number of imputations. Therefore, five data sets were generated using NORM and averaged at the item level to establish a complete data set for analysis.

Confirmatory Factor Analysis and Subscale Reliability

To assess the psychometric properties of the coping scale and the consistency of the factor structure of children's coping over time, confirmatory factor analysis (CFA) was conducted using MPlus 3.01 (Muthén & Muthén, 2004). Specifically, data collected at each time point (T1, T2, T3, and T4; the Fall and Spring of Years 3 and 4 of the project, respectively) were used to evaluate the coping measurement model. Thus, the model shown in Figure 1 was tested for the sample at each of the four time points. As the items from the measure are ordered categorical variables, a robust method of analysis was applied, namely maximum likelihood estimator with robust standard errors (MLR). The models were deemed adequate if the values of the fit indices approached or exceeded Hu and Bentler's (1999) recommendations for good fit: Confirmatory Fit Index (CFI) ≥ .95 (although .95 is optimal, a value ≥ .90 was considered indicative of good fit), Root Mean Square Error of Approximation (RMSEA) ≤ .06, and Standardized Root Mean Residual (SRMR) ≤ .08.

Results indicated a good fit to the data at each time point, CFI values ranged from .93 to .95; RMSEA values ranged from .04 to .06; and SRMR values ranged from .05 to .08 (see Table 4). Items, factor loadings, and error covariances are shown in Figure 1 for T1, T2, T3, and T4, respectively. Reliability analysis was conducted for each of the resultant coping subscales (see Table 5 for

reliability alphas by grade level and time point). Despite occasional low reliabilities ($\alpha < .60$) for the nonchalance, problem solving, and immobilized scales, the subscales evidenced moderate to high reliability overall (remaining α values ranged from .63 to .77).

Correlations

Due to the significant number of correlational relationships included within the study, correlational analysis was broken into three types: 1) construct stability; 2) intercorrelations among the coping subscales; and 3) the concurrent and predictive relationships among variables.

Stability of constructs. Correlations were computed to examine the degree of stability in children's coping, peer victimization, and adjustment across successive semesters. As shown in Table 6, the greatest stability was found within each year (i.e., Fall to Spring) for each construct, with only two exceptions; namely for nonchalance and immobilized coping from Fall to Spring of third and fifth grades. Moreover, although the magnitudes of the coefficients across grades were slightly lower for the nonchalance and immobilized coping subscales, stability was clearly evidenced.

Intercorrelations. The six coping subscales were correlated with each other at each time point. Consistency was seen in the patterns of correlations for some, but not all, of the relationships among the coping subscales across time.

The relationship between Adult Assistance and Friend Assistance was consistently positive, ranging from .32 to .63 ($p < .01$; see Table 7), however magnitude decreased as children aged (i.e., from T1 to T4). In contrast, the

relationships between Adult Assistance and Revenge and Friend Assistance and Revenge were both consistently negative. These correlations also varied in magnitude, ranging from -.31 to -.52 ($p < .01$) for Adult Assistance and Revenge and from -.19 to -.48 ($p < .01$) for Friend Assistance and Revenge. Similar to the relationship between Adult and Friend Assistance, the relationships between these two strategies and Revenge Seeking decreased in magnitude over time. Both Adult Assistance and Friend Assistance were consistently positive correlated with Problem Solving, with values ranging from .44 to .58 ($p < .01$). Problem Solving was also consistently negatively correlated with Revenge Seeking, $r = -.20$ to -.31 ($p < .01$). Finally, the last consistent pattern was seen for the relationship between Immobilization and Nonchalance, which varied in magnitude from .14 to .26 ($p < .01$).

Less consistency was seen for the remainder of the concurrent intercorrelations. Results between Nonchalance and both Adult and Friend Assistance were positive at Time 1 and Time 3, but were negative or non-significant at T2 and T4. Results between Nonchalance and Problem Solving were somewhat similar; these two strategies were significantly positively correlated at T1, T3, and T4, but not at T2. Results between Nonchalance and Revenge Seeking displayed an interesting pattern. That is, these two strategies were significantly negatively correlated at T1, significantly positively correlated at T2, and the relationships at T3 and T4 were non-significant. Immobilization was the least consistent strategy. Both Adult Assistance and Friend Assistance were correlated with Immobilization in a pattern of that was significant and positive at

T1, significant and negative at T2, significant and positive at T3, and non-significant at T4. Revenge Seeking was negatively correlated with Immobilization at T1, positively correlated at T2, then results were non-significant at T3 and T4. Finally, Immobilization was positively correlated with Problem Solving at T1, negatively correlated at T2, and non-significant at T3 and T4.

Concurrent and predictive relationships. To examine the relationships between children's coping, peer victimization, and adjustment, three sets of correlations were computed. First, these relationships were examined concurrently in the Fall of each grade level (see Table 8). Then, the relationships were examined predictively, such that Fall coping was correlated with Spring victimization (see Table 9). Last, the predictive correlations were re-computed to investigate sex differences in the relationships (see Table 10).

Fall concurrent correlations. Relationships between seeking support from adults and friends were negatively correlated with victimization and adjustment, but the magnitude and valence of these relationships changed as children aged (see Table 8). For the most part, seeking support from an adult or friend was associated with lower levels of concurrent victimization, loneliness, and anxiety at grade three (the relationship between anxiety and friend support seeking was non-significant). Unfortunately, these relationships did not evidence significance for the other three grade levels, with the exception of a significant negative correlation between friend support seeking and loneliness in fall of sixth grade.

Revenge displayed an interesting relationship with victimization and adjustment; significant positive relationships were present only at grades three and five. At grades four and six, the correlations were both non-significant and of relatively low magnitude.

The relationship between nonchalance and concurrent victimization was inconsistent, evidencing significant correlations of low magnitude in grades five and six, with almost no relationship present in grades three and four. Results were slightly different for adjustment. The concurrent relationship between nonchalance and loneliness was significant and negative in grade three, as well as significant and positive in grade six. The relationship between nonchalance and concurrent anxiety was also significant and positive in grade six. No other significant effects were noted for nonchalance.

Problem solving evidenced significant negative correlation with victimization in grade three, but did not otherwise evidence a strong relationship with victimization at any other grade level. Further, no significant relationships were found between problem solving and concurrent adjustment.

For the most part, the immobilized subscale evidenced correlations of increasing magnitude as children aged. That is, the relationships between immobilized coping and victimization and adjustment were of very low magnitude at grade three, while the correlations for grades four through six were consistently positive and generally were of increasing magnitude (a slight decrease was present from grade four to five, for all three constructs, but the values increased again from grade five to six). Somewhat similar to the results

seen with revenge, results for anxiety indicated differences across the two years of data collection. All correlations were significant and positive; the correlations for third and fifth grades (Y3 data collection) were smaller in magnitude than those for fourth and sixth grades (Y4 data collection).

Predictive correlations. Patterns for the predictive correlations were somewhat similar to the patterns noted in the concurrent correlations; specifically, differences were noted between third grade and all other grades, as well as between the two years of data collection (see Table 9). Also similar to the concurrent patterns, the two types of support seeking evidenced very similar sets of correlations. Use of support seeking coping, from an adult or friend, in the Fall of grade three was significantly negatively correlated with victimization and adjustment at Spring follow-up. In general, these relationships decreased in magnitude and significance for the older grades; however, seeking assistance from an adult in the Fall of fifth grade was associated with lower levels of Spring loneliness. In addition, use of friend assistance in the Fall of grade five was associated with lower levels of victimization, loneliness, and anxiety in the Spring. No significant relationships were evidenced for sixth graders for coping via support seeking.

Predictive correlations for revenge seeking also exhibited similar patterning to the concurrent correlations. Fall use of revenge seeking was associated with higher levels of victimization, loneliness, and anxiety for third and fifth graders. All other relationships were non-significant.

Nonchalance was again similar in its patterns; Fall use of nonchalance was associated with lower levels of Spring victimization, loneliness, and anxiety in third and fifth grades. Unfortunately, the magnitude of these effects was smaller for fifth graders than for third graders.

Use of problem solving in the Fall was associated with lower levels of Spring victimization for third and fifth grader and lower levels of both loneliness and anxiety for third graders. No significant results were found for sixth graders.

Among the predictive correlations, immobilization exhibited the strongest consistency in magnitude. Fall use of this strategy was significantly negatively correlated with Spring victimization and loneliness for third graders, as well as significantly positively correlated with Spring anxiety for third graders. In addition, immobilization was significantly positively correlated with both loneliness and anxiety at fourth and sixth grades.

Relationships between seeking support from adults and friends were generally negatively correlated with victimization, loneliness, and anxiety, but these findings were of greater significance and magnitude for girls than for boys (e.g., for the relationship between adult assistance and victimization for grade three, the values are -.55 versus -.50, respectively; see Table 10). In addition, older boys evidenced only one significant predictive correlation, that seeking friend support in Fall was associated with higher levels of Spring loneliness in fifth grade. In contrast, older girls' predictive relations were generally similar to those seen from the third grade girls. Specifically, support seeking was significantly negatively associated with victimization for both fifth and sixth

grade girls, as well as significantly positively correlated with later levels of loneliness and anxiety for fifth grade girls. No significant relationships were found for fourth grade girls.

In third and fifth grades, both sexes indicated a positive correlation between Fall use of revenge seeking and Spring victimization, loneliness, and anxiety, with girls again displaying a stronger pattern than boys (e.g, .82 versus .59 for victimization, respectively, at third grade). In addition, use of revenge seeking by fourth grade girls was also associated with higher levels of victimization at Spring follow-up. No significant results were found for fourth grade boys or sixth grade children of both sexes.

The relationships for nonchalance were stronger for third grade boys than third grade girls across victimization, loneliness, and anxiety (e.g., -.44 versus -.30, respectively, for victimization at third grade). In addition, Fall use of nonchalance was not significantly correlated with Spring victimization for fifth grade boys, but it was significant for girls. For both sexes, use of nonchalance coping was associated with lower levels of Spring loneliness in fifth grade; however, this effect was of greater magnitude for girls (i.e., -.31 versus -.24).

Victimization was negatively correlated with problem solving in third and fifth grades for girls, but not boys. The only other significant relationship between problem solving and victimization was found for fifth grade girls; Fall problem solving was associated with lower levels of Spring victimization. Fall use of problem solving was associated with lower levels of Spring loneliness for third

graders of both sexes, as well as was significantly negatively correlated with loneliness for fifth grade girls and anxiety for third grade girls.

Surprisingly, immobilization was not significantly associated with victimization, loneliness, and anxiety for third grade boys, nor for fifth grade boys or girls. For third grade girls, Fall use of immobilization was significantly negatively correlated with Spring victimization but not with Spring loneliness or anxiety. Fourth and sixth grade boys and girls displayed the opposite, such that immobilization was significantly positively correlated with victimization, loneliness, and anxiety (with the exception of the relationship between Fall immobilization use and Spring anxiety for sixth grade girls). In addition, these relationships displayed increasing magnitude as children aged.

Mean Group Comparisons

Multivariate analyses of variance (MANOVAs) and repeated-measures MANOVAs were used to determine if children's use of coping strategies varied as a function of children's sex and age (i.e., grade level). Four 2 (sex) × 2 (ethnicity) MANOVAs (one for each grade level) were conducted to examine if victimization, loneliness, and anxiety differed as a function of sex and ethnicity. MANOVA results revealed main effects for sex at third grade for both loneliness ($F(3, 151) = 4.29$, $p < .05$) and anxiety ($F(3, 151) = 4.10$, $p < .05$), at fourth grade for loneliness ($F(3, 151) = 4.63$, $p < .05$), and at sixth grade for anxiety ($F(3, 154) = 5.10$, $p < .05$), but no main effects for ethnicity, nor were the sex × ethnicity interactions statistically significant. Thus, Table 11 shows only the means broken down separately by grade and sex.

Means scores for victimization did not differ significantly for boys and girls; however, sex differences were found for loneliness and anxiety such that boys and girls differed in their experiences at various grade levels. In particular, boys and girls reported significantly different levels of loneliness at grades three (*M*s = 1.78 and 2.04, respectively, $p < .05$) and four (*M*s = 1.58 and 1.84, respectively, $p < .05$). In addition, the youngest and oldest students of different sexes reported significantly different levels of anxiety. Third and sixth grade boys reported significantly less anxiety (*M*s = 1.69 and 1.40, respectively) than girls (*M*s = 1.90 and 1.59, respectively, *p*s < .05)

To examine use of specific coping strategies, multiple repeated-measures MANOVAs (RM-MANOVAs) were used to examine whether children reported using some coping strategies more than others and if differences could be attributed to either sex or grade. Initially, four RM-MANOVAs were conducted using children's coping scores at the beginning (Fall) of each grade (third, fourth, fifth, and sixth) and sex was examined as the between-subjects factor. At each grade, the coping strategies were entered in ascending order from least to most often used by that age group (see Table 12). Then repeated contrasts were calculated for each adjoining pair to test for mean differences in the frequency of each strategy usage; arrows in Table 12 denote statistically significant contrasts.

For each RM-MANOVA, mean differences (*p*s < .01) in children's coping were revealed: third grade $F(5, 151) = 36.97$, Wilks's $\lambda = .45$; fourth grade $F(5, 151) = 45.37$, Wilks's $\lambda = .40$; fifth grade $F(5, 154) = 32.05$, Wilks's $\lambda = .49$; and sixth grade $F(5, 154) = 33.28$, Wilks's $\lambda = .48$. In addition, coping by sex

interactions were detected for all four grades. Because interactions suggested that some of the main effects were qualified, RM-MANOVAs were re-calculated separately by sex as well as by grade. Findings from the analyses breaking down the interaction effects are discussed following a brief overview of the main effects findings.

Results revealed that seeking assistance from a friend or adult and problem solving were consistently the most frequently used strategies by all age groups (see Table 12). Moreover, the arrows in Table 12 indicating a significant contrast between nonchalance and the next most frequently utilized mean indicate that these three strategies were reported to a significantly greater extent than the other three strategies among third through fifth graders. Although the contrast between adult support seeking and nonchalance was non-significant for sixth graders, the mean values still indicate the preference for support seeking and problem solving strategies among children of this age group.

Re-ordering of the coping scales by ascending means and significant contrast tests revealed subtle shifts among the use of support seeking and problem solving strategies over time. For example, notable shifts occur for seeking adult and friend assistance and use of problem solving. In third grade, adult seeking is the most frequently reported, but in fourth and fifth grade children begin to try to problem solve on their own to a greater extent than seek help from either an adult or a friend. Finally, by grade six, not only is adult assistance less frequently used than either having a friend help or problem solving, but friend assistance has become the most often used strategy.

In contrast, being immobilized and seeking revenge were always the least frequently reported strategies. Moreover, as suggested by the ordering of the strategies by mean values, sometimes revenge was the least frequently reported whereas at other times immobilization was the least; however, as will be seen in the breakdown of the interactions with sex, the differences were not so much a function of age as it is of sex (i.e., for boys, immobilization tends to be the least often used; for girls, revenge is least often endorsed; see bolded values in Table 12) and of which sex's scores are driving the overall mean.

Interestingly, acting nonchalant never moved from its middle position and it was almost always endorsed significantly less than the three top strategies (see arrows between nonchalance and next highest coping mean for third through fifth grades).

Results from RM-MANOVAs calculated separately by sex to follow up on the sex × coping interaction effects are also shown in Table 12. Because contrasts that are statistically significant for both boys and girls are consistent with main effect findings, they are not interpreted again; however, when a contrast is significant for one sex, but not the other, it indicates a sex effect and will be discussed. For example, sex differences were generally detected when comparing revenge seeking strategies and being immobilized. Specifically, boys tended to report using revenge more often than being immobilized from taking action; contrasts between these two strategies were significant among third, fifth, and sixth grade boys. In contrast, girls consistently rated revenge seeking as the least likely type of strategy they would use, although it wasn't always

significantly less likely than being immobilized (see third and fifth grade contrasts for girls).

Also, compared to the contrasts that emerged for boys, there was a tendency for girls to seek help from friends (third through fifth grades) or adults (sixth grade) rather than to act like they don't care (i.e., nonchalantly). Last, there seemed to be a sex difference for problem solving and friend assistance when children reached fifth and sixth grades. In particular, if contrasts were significant, they indicated that boys (fifth grade) were more likely to problem solve than to use any other strategy whereas girls (sixth grade) were most likely to turn to their friends for help.

Regression Analyses

Finally, regression analyses were used to examine whether earlier coping predicts later victimization and significant interactions were decomposed to address the possible moderating effects of sex, ethnicity, initial victimization, and initial adjustment. A series of hierarchical regression analyses were conducted to determine whether children's use of different coping strategies in response to peer harassment was predictive of changes in their victimization experiences and adjustment (i.e., feelings of loneliness and anxiety) over the course of a school year, as well as whether these associations varied as a function of children's sex, ethnicity, initial (i.e., Fall) level of victimization, initial level of adjustment, or the interaction of these factors. Regressions were run separately for each grade level as well as for each moderator of interest. Variables were mean-centered prior to the creation of interaction terms and inclusion in the regression model.

Victimization. The first block of each regression included children's sex, ethnicity, and initial level of victimization. The second block included children's mean score for each coping strategy. Each subsequent block contained interactions between each coping strategy and the moderating variable of interest (i.e., sex, ethnicity, and initial victimization). Interactions were examined only if they yielded a significant change in the R^2 value of the overall regression equation (e.g., the step in which they were entered explained a significant portion of variation in the dependent variable). Interactions were decomposed using recommendations by Aiken and West (1991). Analysis revealed that the ethnicity × coping interactions failed to contribute to the regression (i.e., failed to provide a significant addition to the R^2 value; Polasky, Kochenderfer-Ladd, & Visconti, 2010) at every grade level, so these interactions were excluded from Table 13.

Overall, Fall victimization was highly predictive of victimization in the Spring (see Table 13) indicating that victimization was fairly stable over time. Fall coping strategy use was most predictive of Spring victimization for the youngest students and displayed variable results for the other grade levels. Interaction effects were more prevalent in the lower than the higher grades. Nevertheless, evidence was found to indicate that children's coping earlier in the year was predictive of changes in future victimization; especially among younger children (i.e., third graders). As children age, coping appears to have less of an influence on students' risk for peer harassment. As variability exists across grade levels, results will be interpreted by grade.

Third grade students. A single unqualified main effect was found for third grade students, suggesting that, regardless of a child's sex or intensity of fall victimization, experiencing immobilization after a victimization experience was associated with decreased victimization over time (b = -.18, p < .05). In addition, several significant interactions were found between third graders' coping with peer victimization and the moderating variables of interest to the current study, including significant interactions between sex and adult support seeking (b = .41, p < .01), revenge seeking (b = .49, p < .01), and nonchalance (b = .41, p < .01). Further, significant Fall victimization × nonchalance (b = -.14, p < .05) and Fall victimization × problem solving (b = .20, p < .05) interactions were also found for third graders.

Tests of simple slopes were conducted and findings suggested that, although a significant adult support seeking × sex interaction was present, seeking support from a parent or teacher was not significantly associated with changes in victimization over time for boys (b = -.18, p = ns) or girls (b = .20, p = ns), indicating that each slope did not differ significantly from zero. The significant interaction between revenge and children's sex was indicative of increases in victimization for girls (b = .63, p < .01) but not for boys (b = -.04, p = ns; see Figure 2; for all interaction figures, plotted points represent the change value in the outcome of interest). Furthermore, exploration of the nonchalance × sex interaction suggests that nonchalance was associated with significant decreases in victimization over time for boys (b = -.37, p < .01); however, the simple slope was not significant for girls (b = .07, p = ns; see Figure 3).

Two significant victimization interactions were also explored for third grade students. Decomposition of the victimization × nonchalance interaction (b = -.14, $p < .05$) revealed that use of nonchalance by highly victimized students was associated with decreased victimization in the spring (b =-.23, $p < .01$); however, the simple slope for children who reported low levels of initial victimization was non-significant (b = -.13, p = ns; see Figure 4). Decomposition of the problem solving × victimization interaction (b = .20, $p < .05$) indicated that attempts to problem solve in response to peer harassment were associated with increased victimization over time for those children reporting high initial levels of peer victimization (b = .32, $p < .01$). The simple slope for children who reported low levels of initial peer victimization was not significantly different from zero (b = .09, p = ns; see Figure 5).

Fourth grade students. Although no significant interactions emerged between coping and sex or ethnicity for fourth grade students, interactions were found between children's coping and their initial level of Fall victimization. Exploration of the adult support seeking × victimization interaction (b = .26, $p <$ .05) revealed that, although a significant interaction was detected, the simple slopes for both highly victimized children (b = .05, p = ns) and infrequently victimized children (b = .02, p = ns) were not significantly different from zero. In addition, a significant friend support seeking × victimization interaction was found (b = -.33, $p < .01$). Decomposition of the interaction for seeking support from a friend revealed that highly victimized children who sought support from friends in the Fall experienced decreased victimization in the Spring (b = -.31, $p <$

.01); however, the simple slope for children who were not frequently victimized in the Fall was not statistically significant (b = .05, p = ns; see Figure 6).

Fifth grade students. One unqualified main effect of coping was found for fifth grade students. Using problem solving was associated with decreased peer victimization over time for all children (b = -.18, p < .05). In addition, a single significant interaction was found for fifth grade students. Interestingly, the significant revenge × victimization interaction (b = .28, p < .01) suggests that seeking revenge in response to victimization was associated with increases in peer harassment over time for highly victimized children (b = .45, p < .01), but the simple slope for low-victimized children did not differ significantly from zero (b = .00, p = ns; see Figure 7).

Sixth grade students. One significant main effect was found for sixth grade students. Children who reported experiencing immobilization following their victimization experiences were likely to experience an increase in victimization across the academic year (b = .22, p < .05). No significant interaction effects were detected.

Loneliness. The first block of each regression included children's sex, ethnicity, and initial level of loneliness. The second block included children's mean score for each coping strategy. Each subsequent block contained interactions between each coping strategy and the moderating variable of interest (i.e., sex, ethnicity, and initial loneliness). Variables were mean-centered prior to the creation of interaction terms and inclusion in the regression model. Similar to prior interpretation of interactions, only those that yielded a significant change in

the R^2 value of the overall regression equation were examined using – recommendations by Aiken and West (1991). Also similar to the previous analysis, the ethnicity × coping interactions failed to provide a significant addition to the R^2 value at every grade level, so these interactions were excluded from Table 14.

In all equations, Fall loneliness was highly predictive of Spring loneliness (see Table 14), suggesting stability in this construct. In addition, select coping strategies were predictive of changes in adjustment over time and interaction effects displayed variable results across grade levels. A consistent pattern was not found across all grade levels. Due to the significant variability, results will be again discussed by grade.

Third grade students. Several significant interactions were found between third graders' coping with peer victimization and the variables expected to moderate Spring loneliness, specifically sex and Fall loneliness: sex × revenge seeking (b = .41, p < .05); sex × nonchalance (b = .51, p < .01); Fall loneliness × revenge seeking (b = .34, p < .01); and Fall loneliness × immobilization (b = -.23, p < .05).

A significant interaction between revenge and children's sex was found for prediction of loneliness for third grade students (b = .41, p < .05), indicating that seeking revenge was predictive of increases in loneliness for girls (b = .75, p < .01), but not for boys (b = .21, p = ns; see Figure 8). Furthermore, a significant nonchalance × sex interaction was found for third grade students (b = .51, p < .01), such that nonchalance was associated with significant decreases in loneliness

over time for boys (b = -.32, p < .01); however, the simple slope for this interaction was not significant for girls (b = .14, p = ns; see Figure 9). Third grade students also evidenced a revenge × Fall loneliness interaction (b = .34, p < .01). Tests of simple slopes indicated that revenge was associated with increased loneliness for children who reported high levels of initial loneliness (b = .63, p < .01), but not for those who reported low initial loneliness (b = .03, p = ns; see Figure 10). Although a Fall loneliness × immobilization interaction was detected, tests of simple slopes revealed that neither slope was significantly different from zero (b = -.16, p = ns for students who reported high levels of initial loneliness and b = .16, p = ns for students who reported low initial loneliness).

Fourth grade students. No significant main effects or interactions were found for grade four.

Fifth grade students. Three unqualified main effects of coping were found for fifth grade students. Seeking help from friends and experiencing immobilization in response to peer harassment were predictive of decreases in loneliness over the course of the year (b = -.19, p < .05 and b = -.24, p <.05, respectively). On the other hand, revenge seeking was predictive of increased loneliness (b = .39, p < .01). In addition, a single significant interaction was found for fifth grade students. Interestingly, the significant nonchalance × Fall loneliness interaction (b = .24, p < .05) suggested that acting nonchalant in response to victimization was associated with decreased loneliness for highly lonely children (b = -.45, p < .01), but not for children who reported lower levels of initial loneliness (b = .00, p = ns; see Figure 11).

Sixth grade students. Three interaction effects were identified for sixth grade students. The first was a sex × immobilization interaction (b = -.38, p < .05). Decomposition of this interaction indicated that feeling immobilized in response to victimization was associated with increases in loneliness for boys (b = .45, p < .01), but not for girls (b = .12, p = ns; see Figure 12). Second, a Fall loneliness × adult assistance interaction (b = .27, p < .05) was decomposed to reveal that neither group had a slope that differed significantly from zero (b = .16, p = ns for children with high initial levels of loneliness and b = .05, p = ns for children with low initial levels of loneliness). Finally, a Fall loneliness × immobilization interaction (b = -.28, p < .01) was detected. Tests of simple slopes revealed that use of immobilization by children with low levels of initial loneliness resulted in increased Spring loneliness (b = .37, p < .01). The simple slope for children with high initial loneliness (b = .09, p = ns; see Figure 13) did not differ significantly from zero, however.

Anxiety. Similar to prior analyses, the first block of each regression included children's sex, ethnicity, and fall anxiety. The second block included children's mean score for each coping strategy. Each subsequent block contained interactions between each coping strategy and the moderating variable of interest (i.e., sex, ethnicity, and initial anxiety). Variables were mean-centered prior to the creation of interaction terms and inclusion in the regression model.

Once again, only the regression blocks that yielded a significant increase in the R^2 were examined; all others were excluded from interpretation and therefore were not included in Table 15. Fall coping strategy use and interaction

effects displayed variable results across grade levels, with no significant interactions present for fourth or fifth grades.

Fall anxiety was highly predictive of Spring anxiety across all grade levels (see Table 15), suggesting stability of children's anxiety levels over time. In addition, select coping strategies were predictive of changes in anxiety between Fall and Spring. Also similar to previous sections, the results will be discussed by grade due to the lack of a consistent pattern within the results.

Third grade students. A single unqualified main effect was found for coping among third graders. Use of nonchalance predicted decreased anxiety over time (b = -.20, p < .01). In addition, two significant interactions were found to moderate the relationship between third graders' coping with peer victimization and their Spring anxiety. First, a Fall anxiety × revenge seeking (b = .45, p < .01) interaction was detected. Tests of simple slopes revealed that, for children who utilized revenge seeking following peer victimization, those with higher initial levels of anxiety were likely to experience increased anxiety over the course of the year (b = .61, p < .01). The slope for children with lower initial anxiety did not differ significantly from zero (b = -.06, p = ns; see Figure 14). Second, a Fall anxiety × problem solving interaction (b = -.37, p < .01) was detected, such that among children who tried to use problem solving skills following victimization experiences, those with higher levels of initial anxiety were likely to experience decreased anxiety over the course of the school year (b = -.35, p < .01). The simple slope for those children who reported lower initial levels of anxiety did not differ significantly from zero (b = .16, p = ns; see Figure 15).

Fourth grade students. A single significant main effect was found for grade four. Experiencing immobilization follow victimization events in the Fall predicted increased anxiety in the Spring ($b = .22$, $p < .05$). No interaction effects were detected.

Fifth grade students. Two unqualified main effects of coping were found for fifth grade students. Specifically, seeking help from an adult and seeking revenge in response to peer harassment were both predictive of increased anxiety over time ($b = .15$, $p < .05$ and $b = .26$, $p < .01$, respectively). No interaction effects were detected.

Sixth grade students. One interaction effect was identified for sixth grade students. Decomposition of the Fall anxiety × immobilization interaction ($b = -.41$, $p < .01$) revealed that experiencing immobilization in response to Fall victimization was associated with increased Spring anxiety for children who reported low initial levels of anxiety ($b = .29$, $p < .01$); however, the simple slope for those who reported high initial levels of anxiety ($b = .11$, $p =$ ns; see Figure 16) did not differ significantly from zero.

CHAPTER 5

Discussion

The results of this study paint a picture of children's coping experiences throughout elementary school that is both detailed and highly variable. Results from concurrent and predictive correlational analyses, as well as means comparisons, provided varied levels of support for the hypothesized differences in coping based on age and sex. Support was not found for the hypothesis that ethnicity would be related to children's coping strategy use. Regression analyses provided insight into the victimization and adjustment outcomes associated with the use of approach and avoidance strategies.

Sex Differences in Coping Strategy Use

Mean group comparisons clearly evidenced consistency with prior findings on variation in coping based upon children's sex. Similar to prior work, results indicated that girls tended to cope more emotionally and cognitively, while boys were more behavioral in their coping. For example, boys always rated revenge seeking higher than girls, while girls repeatedly outranked boys in regards to immobilization (e.g., being overcome by emotion or anxiety), support seeking (from both adults and friends), and problem solving (see Table 12). These results provided support for the two hypotheses related to children’s sex, that boys would fight back more than girls and that girls would report more support seeking than boys.

Boys and girls did not differ significantly, however, in their overall ranking of strategies. That is, both boys and girls reported support seeking and

problem solving as their most common strategies (with previously acknowledged variation across sex and grade levels) and immobilization and revenge as their least common strategies.

Overall, these patterns of strategy endorsement were considered promising as they show that students were using positive or active strategies more often than negative or passive ones. Differences in outcomes for specific groups, based upon age and sex, are the key to improving and tailoring prevention and intervention programs, however, which is why a detailed examination of effectiveness was pursued via the regression analyses.

Age Differences in Coping Strategy Use

In addition to finding added support for sex differences, results also confirmed prior findings for age differences. Overall, the results indicated quite clearly that coping strategy use changes as children age. For example, while adult support seeking was the primary strategy for third graders, problem solving became the most used strategy in both fourth and fifth grades; by sixth grade, however, both of these were second to seeking assistance from friends. The hypothesis that older children would be less likely to discuss their experiences with adults than friends was supported, as indicated by the steady downward movement of adult support seeking within child rankings of coping strategy use, from first to third most frequently used, as children age towards sixth grade.

One interesting finding is that nonchalance was consistently rated as a moderately used strategy by all grade levels (see Table 12). Thus, support was not found for the hypothesis that older children would report ignoring bullies more

often than younger children. In fact, means were relatively consistent across all age groups. This may be of particular relevance for intervention and prevention programs as correlational results suggested that this strategy is relatively beneficial for younger children. Nonchalance was associated with lower levels of future victimization, loneliness, and anxiety, for children in third to fifth grades. In addition, students have reported that they perceive nonchalance as an effective strategy (Salmivalli et al., 1996), which will be addressed by discussion of the regression analyses.

The two strategies reported as used least often were revenge and immobilization, which alternated from year to year between the two bottom positions in the rankings. Overall, they did not differ significantly in the frequency of use across grade levels, indicating the hypothesis that older children would be less likely than younger children to be immobilized was not supported.

Ethnic Differences in Coping Strategy Use

All MANOVA, RM-MANOVA, and regression results were non-significant for ethnicity. Therefore, additional work is needed to further explore the relationship between ethnicity and the coping behavior, victimization experiences, and adjustment outcomes of children from differing backgrounds.

Coping Strategies Associated with Changes in Victimization

Adult and friend assistance. Results related to adult and friend assistance strategies were very similar and therefore will be discussed in concert. Predictive correlations indicated that support seeking behavior was generally associated with lower levels of future victimization for younger students, particularly third

through fifth graders. Although results did not vary dramatically by sex for third or fourth graders, fifth and sixth grade boys and girls displayed quite different results. For example, while predictive correlations for fifth and sixth grade boys were non-significant for both adult and friend support seeking, these results were both statistically significant and of greater magnitude for girls. In contrast, the predictive correlations between Fall support seeking and Spring victimization for boys showed a consistent decrease in magnitude and never indicated a strong positive relationship (i.e., the strongest positive correlation was .18, for sixth grade boys using adult support seeking). These results suggested that support seeking is an appropriate strategy to recommend to all students, as it did not result in significant increases in victimization, as well as because it may be one of the most effective strategies for girls and young children.

Regression results related to seeking support from adults and friends were generally non-significant, however sex and Fall victimization did evidence moderation effects. Sex was found to moderate the influence of adult assistance on Fall victimization for third graders. Although an interaction was detected, tests of simple slopes revealed that the slope for each sex did not differ significantly from zero. In addition, the moderating effect of Fall victimization on the impact of adult support seeking among fourth graders also yielded null results when decomposed. The interaction between friend support and Fall victimization for fourth graders, when decomposed, revealed that this strategy was particularly effective for children who experienced high levels of Fall victimization (b = -.31, p < .01), but not for those with low initial levels of victimization (b = .05, p = ns;

see Figure 6). Given the complexity of these results, it is clear that additional research is needed to determine the impact of support seeking behavior on future victimization, particularly given its prevalence as a recommendation within anti-bullying programs (for an example, see *Stop Bullying Now!*, United States Department of Health and Human Services, 2010).

Revenge-seeking. It was hypothesized that revenge seeking behavior would increase future victimization, given its socially inappropriate nature at all age or grade levels. Revenge displayed an interesting pattern, such that it was significantly positively correlated with future victimization in third, fifth, and sixth grades, but not at fourth grade. Overall, these predictive relations were maintained when examined separately for each sex, with one exception. Neither sex maintained significance when the sixth grade correlations were examined separately by sex.

It is worth noting that results related to revenge seeking behavior were consistently of greater magnitude for girls, likely due to the atypical nature of this coping strategy for this sex. Regression results were not supportive at every grade level, however revenge was a strong predictor of future victimization for both third and fifth graders (see Table 13). Significant interactions were found between revenge and sex for third graders and between revenge and Fall victimization for fifth graders. Decomposition of the interaction for third graders revealed that girls who utilized revenge seeking in the Fall experienced increased victimization over the school year, but that boys who sought revenge did not (see Figure 2). The fifth grade interaction between revenge seeking and Fall victimization indicated that

children who were highly victimized in the fall and sought revenge experienced increased victimization over time, while those who were infrequently victimized did not (see Figure 7).

When considering the overall pattern of results for revenge seeking, one possible explanation is that a statewide change in educational policies could have happened between Y3 and Y4, such as the introduction of a zero tolerance policy on violence, or the implementation of a school-based peer-support program that would discourage revenge seeking in favor of other behaviors, causing a qualitative shift in the tolerance for and prevalence of revenge-seeking behavior. This would explain the difference in results between grades 3 and 5 (Y3 data) and grades 4 and 6 (Y4 data). Unfortunately, such information was not solicited from the schools and therefore the viability of this explanation is unknown.

These results indicate that although a negative approach strategy such as revenge-seeking may have an immediate effect on children's emotional state, providing a release for anger or frustration, and therefore might cause an improvement in a child's immediate psychological well-being (Aldwin, 1994), its lack of long-term effectiveness is understandable given prior research on the utility of negative approach strategies (Parker & Endler, 1996).

Nonchalance. Predictive correlations between Fall coping and Spring victimization indicated that both third and fifth graders who utilized nonchalance in the Fall experienced decreased victimization in the Spring. Breakdown of the predictive correlations by sex revealed additional insights for fifth graders in particular. Although the overall predictive relationship for fifth graders was

significant, this significance was lost for boys and the relationship increased in magnitude for girls, revealing a subtle difference between the sexes. Thus, these results suggest that, for third and fifth graders, girls in particular, nonchalant behavior may be an effective strategy for decreasing future victimization. In addition, the shift revealed between Y3 and Y4 results is again evident and again suggests that a program was implemented or some other change took place at the participating schools.

For third graders, nonchalance predicted decreased victimization over the course of a school year (see Table 13). Thus, younger students who acted as though they didn't care or ignored the bully in the Fall experienced decreased victimization in the Spring. Significant results were not found for students in any higher grade level, therefore it is unclear whether nonchalance was associated with detrimental effects or did not have a strong influence on later victimization for older children. Moderation effects were detected for the influences of both sex and Fall victimization in third grade. Decomposition of the interactions revealed that nonchalance was effective at reducing victimization for boys, but not girls, and for highly victimized, but not infrequently victimized, third graders. Taken together, results of the regression analyses suggest that nonchalance may be a particularly good strategy to recommend to highly victimized third grade boys. Effectiveness for older students remains essentially unknown and warrants further research attention.

Problem-solving. Predictive correlations suggested that problem solving was associated with lower levels of future victimization for third and fifth graders.

Breakdown by sex revealed that these results were due to the predictive relationships for girls, as results for boys were non-significant at all grade levels. In contrast to the predictive correlations, regression results revealed that problem solving appears to only be effective at reducing later victimization for older children. In fact, third graders who used problem solving in response to victimization experienced increased victimization over the course of the school year. In addition, an interaction effect was found such that Fall victimization was a moderator of the relationship between problem solving and spring victimization for third grade students. Students' prior victimization experiences impacted the outcomes of their problem solving strategy use. Third graders who reported a high level of prior victimization and also reported using problem solving frequently in the Fall were likely to experience greater victimization in the Spring, while highly victimized third graders who reported low levels of Fall problem solving behavior did not report increased victimization in the Spring.

The utility of problem-solving coping for third graders was hypothesized to be more positive in nature (i.e., it was expected to bring about decreased, rather than increased, peer victimization). The fact that problem solving resulted in increased victimization over time suggests that this strategy may be considered uncommon for younger children. Thus, younger children who utilize a cognitively sophisticated strategy such as problem solving may in fact be prone to additional victimization.

The relationship predicting increasing victimization did not persist into older grade levels and, in fact, reversed for fifth graders. Fifth grade students who

used problem solving experienced decreased victimization over the course of the school year. Hence, recommending this strategy to older children could improve their experiences with peer victimization.

Immobilization. Fall immobilization was significantly negatively correlated with Spring victimization at third grade and significantly positively correlated with Spring victimization at both fourth and sixth grades; however, breakdown by sex reveals that while third grade boys' results revealed almost no relation between Fall immobilization and Spring victimization (r = -.09, p = ns), third grade girls experienced significantly less future victimization when they felt immobilized following victimization (r = -.28, $p < .05$). Results for older children were maintained across the sexes (see Table 10) and continued to predict higher levels of future victimization.

Similarly, regression results for immobilization predicted decreased victimization over the course of a school year for third grade students. Thus, younger students who felt immobilized (i.e., overwhelmed by emotion) in the Fall experienced decreased victimization in the Spring. Unlike the predictive correlations, sex was not revealed as a moderating factor. In contrast to results for younger students, feeling immobilized was found to be ineffective for older students. Specifically, sixth graders who experienced immobilization following Fall victimization reported increased victimization in the Spring.

This indicated that although immobilization may be effective for young girls, it is likely ineffective for older students. Furthermore, as children age and emphasis is given to social interactions, disengaging from the peer group in

response to victimization may be particularly detrimental. Thus, although allowing oneself to feel overwhelmed would not often be advocated by bullying prevention programs, it is particularly important to equip children who do suffer these experiences with alternative strategies because it appears that immobilization could have negative consequences for older children (see Visconti & Troop-Gordon, 2010). Further research is needed to examine developmental changes in children's views of socially acceptable coping strategies and to elucidate the relative effectiveness of immobilization in response to victimization at different ages.

Coping Strategies Associated with Changes in Adjustment

Avoidance strategies were hypothesized to result in decreased adjustment difficulties (e.g., loneliness and anxiety), due to the potential for them to decrease emotional distress following victimization experiences. The two specific strategies of interest were nonchalance and immobilization, both of which were significantly related to outcomes for loneliness; however results varied based upon the age of the children studied (i.e., grade level) and the moderator of interest. Although avoidance strategies were of particular interest, all coping strategies will be discussed to best inform prevention and intervention program practices.

Adult assistance. Similar to results for victimization, adult support seeking was significantly negatively correlated with future levels of both loneliness and anxiety for third graders. Results were non-significant at all other grade levels. When predictive correlations were considered separately by sex,

however, the relationship between Fall use of adult support seeking and spring loneliness and anxiety for fifth grade girls achieved significance and was of greater magnitude than relations for boys. These results suggested that seeking support from adults may have been an effective strategy for fifth grade girls, but not fifth grade boys.

Regression results revealed a significant interaction between adult assistance and Fall loneliness for sixth graders. Decomposition of this interaction revealed neither of the simple slopes differed significantly from zero. In addition, adult assistance revealed increased anxiety for fifth graders overall. Thus, although some promising results were revealed for fifth grade girls, additional research is needed to truly understand the effectiveness of seeking adult assistance for adjustment outcomes.

Friend assistance. Also similar to results for victimization, friend support seeking was significantly negatively correlated with future loneliness and anxiety for third and fifth grade students. When broken down by sex, results provide additional support for effectiveness of friend assistance being dependent upon typical behavior during the pre-teen years. Results for third grade did not differ greatly by sex, however correlations for girls were of greater magnitude. In contrast, fifth grade boys reported a significant positive relationship between Fall friend support seeking and Spring loneliness, while fifth grade girls reported a significant negative relationship of greater magnitude. Moreover, regression results for fifth graders reveal a main effect of friend assistance, such that children who utilized friend seeking frequently experienced decreased loneliness over the

course of the school year (b = -.19, p < .05; see Table 14). In addition, although friend support seeking was associated with lower levels of future anxiety for fifth grade girls, this was not true for fifth grade boys (r = -.16, p = ns). Thus, although regression results suggested that seeking support from friends should be beneficial for all students in reducing loneliness, predictive correlations by sex reveal it to be a potentially maladaptive strategy for boys, as it resulted in increased loneliness over the course of the school year; girls, however, should be encouraged to utilize this strategy as it was associated with lower future levels of loneliness and anxiety.

Revenge-seeking. Revenge seeking was significantly positively correlated with future loneliness and anxiety for third and fifth graders. Unlike prior constructs, relationships related to revenge seeking behavior did not differ significantly between sexes, except that correlations for third grade girls were of greater magnitude. Similar to correlational results, regression results revealed that revenge seeking predicted increased loneliness and anxiety for third and fifth grade students. Further, significant moderation effects were found. Sex and Fall loneliness were moderating factors for third graders. Decomposition revealed that revenge seeking predicted increased loneliness for girls by not boys, as well as that revenge seeking was associated with increased loneliness for children with high levels of initial loneliness, but not those with low levels of initial loneliness. In addition, Fall anxiety was found to moderate third graders' later anxiety. Specifically, children with high initial anxiety experienced further increases in

anxiety across the third grade year, while those with lower initial anxiety levels did not.

All results indicate that revenge seeking behavior was not an effective strategy for reducing future loneliness or anxiety when coping with peer victimization. Thus, this strategy should be discouraged by practitioners, teachers, and parents. In addition, although aggression or retaliatory behavior would not be a recommendation of formal intervention programs, adults do persist in telling children to stick up for themselves or fight back in response to bullying (Nicolaides, Toda, & Smith, 2002) and should be encouraged to discontinue this practice given the deleterious outcomes associated with these particular coping responses.

Nonchalance. Predictive correlations revealed that both third and fifth grade children reported lower levels of Spring loneliness and anxiety following Fall use of nonchalance. Results did not differ substantially across sexes for the relationships between nonchalance and loneliness or anxiety. Overall, for third grade students, use of nonchalance in the Fall predicted decreased anxiety in the Spring.

A few moderating effects were found related to the predictions for loneliness. For example, the interaction of sex and Fall use of nonchalance predicted decreased loneliness for third grade boys, but the relationship was non-significant for third grade girls. In addition, the interaction of Fall loneliness and nonchalance was significant for fifth grade students' Spring loneliness. Decomposition of this interaction revealed that nonchalance was an effective

strategy for highly lonely (e.g., socially isolated), but not less lonely, fifth grade students. This suggests that, as anticipated, decreasing the immediate emotional reaction to the peer victimization experience may result in decreased long-term negative emotional outcomes as well.

These results are not all that surprising given that nonchalance might be considered uncommon by children who are socialized to seek support from friends and adults, particularly younger girls and socially isolated children. Taken together, the results indicated that while younger students may be able to act like they don't care following instances of victimization and continue to experience positive peer interactions and a reduction in feelings of loneliness anxiety, continued use of this behavior is likely to result in feelings of isolation and worry, thus this is a particularly maladaptive strategy for older children.

Problem-solving. Problem solving was associated with lower levels of future loneliness and anxiety for third grade students. Among third graders, results did not differ across sexes for loneliness, however the correlation between Fall problem solving and Spring anxiety was revealed as positive and significant for third grade girls only. In addition, breakdown by sex indicated a significant negative correlation between problem solving and Spring loneliness for fifth grade girls only. Further, regression results were promising for third graders. A significant moderation effect was found for Fall Anxiety, such that third graders with higher initial levels of anxiety experienced decreased Spring anxiety following use of problem solving in the Fall.

Although the results varied by age and sex, they are generally promising because the strategy of problem solving does not appear to carry with it any negative consequences (e.g., increased loneliness or anxiety). Therefore, helping younger students to learn problem solving strategies for coping with peer victimization may ultimately result in decreased adjustment problems over time. However, results for older students were less promising due to lack of significant findings. This is not necessarily a negative result, because as children become more cognitively sophisticated they may internalize the guidance provided by adults and friends and become able to independently problem solve following peer victimization experiences. A lack of relationship between problem solving and loneliness and anxiety for older children may actually be indicative of the regular nature of problem solving as a part of their day to day functioning. Thus, problem solving may no longer be considered an actual coping strategy by these groups.

Immobilization. Immobilization was significantly negatively correlated with Spring loneliness for third graders and was associated with higher levels of Spring loneliness for fourth and sixth grades. In addition, immobilization was significantly positively correlated with future anxiety at third, fourth, and sixth grades. For loneliness, results did not differ across sexes; when results for anxiety were examined by sex, however, immobilization appeared to be more problematic for boys than girls, as evidenced by the results' difference in magnitude and statistical significance. Specifically, sixth grade boys indicated that Fall immobilization was significantly positively associated with Spring anxiety (r =

.40, $p < .01$), while sixth grade girls did not experience the same relationship (r = .22, p = ns).

Regression results revealed a number of interesting findings. Fourth graders indicated a significant main effect for anxiety, such that experiencing immobilization in the Fall predicted increased anxiety in the Spring (b = .22, $p <$ .05). In addition, fifth graders reported decreased Spring loneliness following Fall immobilization (b = -.24, $p < .05$). These results revealed conflicting evidence for the effectiveness of immobilization for decreasing future adjustment problems. Fortunately, several interaction effects were also identified, which provided additional insight into the specific effectiveness of immobilization for different groups of children.

First, a significant Fall loneliness × immobilization interaction was found for third grade students. Decomposition of this effect indicated that frequently becoming immobilized following victimization experiences was predictive of increased loneliness for children with low levels of Fall loneliness, but not for children who reported high initial loneliness. A sex × immobilization interaction revealed that sixth grade boys who felt immobilized following peer victimization in the Fall were likely to report increased loneliness in the Spring, however results for sixth grade girls were non-significant. For sixth grade students, a Fall anxiety × immobilization interaction was also identified. Decomposition of this effect indicated that children who reported low initial levels of anxiety experienced increased anxiety in the spring; results for children who reported high initial anxiety were non-significant.

Clearly, immobilization is an ineffective coping strategy as it is associated with higher levels of maladaptive outcomes for children of many ages. As mentioned previously, the benefit of this result is to show practitioners and teachers that these students need to be educated about and prepared to use alternate and more productive strategies to use when faced with peer victimization experiences, so as not to experience additional immobilization in the future. Older children, particularly boys, should be discouraged from using this strategy and instead equipped with more positive and adaptive ones.

Limitations

Limitations of this study include a variety of factors that would serve to improve research on peer victimization in general, such as limitations of the sample's age range and methodological issues related to psychometrics, context, and measurement of the coping strategies.

Restricted age ranges are common in early childhood research due to the complex nature of working with children, school-based research, and both expected and unexpected attrition. One way to combat restriction of age range is to conduct longitudinal work. This study followed children for two academic years, which is a significant improvement over solely cross-sectional research. Although this provides a great deal of prospective value, longer-term assessment of children would add to the body of literature on this topic and would provide further information regarding how coping strategies influence future victimization experiences and adjustment outcomes. In addition, expanding the sample to include both younger (i.e., preschool and kindergarten) and older students (i.e.,

follow children through the transition to middle school), would increase the prospective ability of the work. Because bullying behavior starts in preschool (Hanish, Ryan, Martin, & Fabes, 2005; Kochenderfer-Ladd, 2004) and continues throughout childhood and adolescence (Juvonen, Nishina, & Graham, 2000; Prinstein, Boergers, & Vernberg, 2001), it is imperative for researchers and practitioners to obtain the most comprehensive understanding of these developmental patterns in order to prevent them among future generations.

Although the measures used in this study have significant history, psychometrically speaking, some of the internal reliability values for the *What I Would Do* measure were substantially lower than is traditionally desirable (e.g., .38 for immobilization in Fall of third grade). Inclusion of additional scale items would likely improve the reliability of this scale in future use.

A number of important contextual factors could not be accommodated in this work. For example, understanding each school's individual climate, including expectations and policies related to peer interactions at school, classroom policies and practices, and teacher behaviors, would all help to paint a more comprehensive picture of a victimized child's experiences. In addition, knowledge of the social dynamics of the classroom, such as friendship patterns, and an assessment of each child's level of aggressiveness would also contribute to a richer understanding of individual children's bullying experiences.

Finally, whether or not children utilized multiple coping strategies concurrently or in immediate succession was not directly assessed in this work; however, coping subscale intercorrelations do indicate some consistency in

significant positive associations between select coping strategies, such as the consistent relationship between Adult Assistance and Friend Assistance (see Table 6). Based upon prior work on the approach-avoidance paradigm, although individuals tend to prefer a specific group of strategies (e.g., positive approach strategies), they are likely to vacillate between groups of strategies (e.g., positive and negative strategies), as well as are likely to use multiple strategies at once (Aldwin, 1994). Taken together, this suggests that certain strategies are more likely to be used by the same person (i.e., frequent use of one is associated with frequent use of another), and it is possible that they might be used concurrently. Thus, it would be of great value to inquire as to whether and how children cope in multiple ways simultaneously, as well as to identify which strategy pairings are most effective for them.

Implications

Findings from the current study help to elucidate some of the factors that may put certain children at particular risk for the maladjustment commonly associated with peer victimization and also explain how others appear to be buffered from these harmful effects. Specifically, the ways in which children cope with harassment from peers was found to be differentially associated with changes in their victimization experiences and adjustment outcomes. Furthermore, a number of these relationships were moderated by children's sex or initial level of victimization and adjustment, as well as varied across age levels. These findings strengthen the claim that formal and informal intervention efforts, particularly those addressing children’s responses to bullying, must take into

consideration unique demographic characteristics or social experiences of children both when designing and implementing such programs.

In addition, in order to further tease apart the reasons behind children's use of specific strategies, as well as their utility at different age levels, it would be beneficial to conduct follow-up research taking into consideration the context of the bullying behavior. Particular efforts should be made to understand the socially appropriate nature of various coping behaviors among children of specific ages, sexes, and levels of victimization. In addition, although results of this work were not indicative of the specific influence of ethnicity, it may also be important to also consider a child's race as an influential factor in their victimization experiences. Moreover, because results in this study have implications for narrow groups, such as third grade boys who used revenge seeking frequently, it is important to recognize the limitations of general bullying intervention and prevention programs.

Specificity in results is again indicative of the need for individualization of programs for each child at risk for victimization; however, some generality was noted within the results. Children should continue to be encouraged to seek social support from adults and friends and the support provided should include encouragement for children to improve their coping skills. Specifically, children should be encouraged to utilize more sophisticated strategies (i.e., nonchalance) as they age, and discouraged from seeking revenge. Such improvements to the understanding of children's coping behavior in response to victimization will help

adults support children involved in such negative experiences and should improve the social climate, at home and at school, for children and adults alike.

These results add yet another layer of complexity to the development and revision to intervention and prevention programs; however, the more individualistic and tailored these programs can be, the more likely they are to improve children's coping skills. By recommending skills that have been found to be effective for children of the same age and sex, these programs should help children to effectively cope with and prevail when faced with classroom bullying, as well as decrease their risk for future victimization.

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Table 1

Descriptive Statistics for Fall Coping Strategy, Peer Victimization, Loneliness, and Anxiety by Grade Level

Variable	Third Grade $N = 157$			Fourth Grade $N = 157$			Fifth Grade $N = 160$			Sixth Grade $N = 160$		
	α	*M*	*SD*	*α*	*M*	*SD*	*α*	*M*	*SD*	*α*	*M*	*SD*
Adult Seeking	.90	2.49	.96	.86	2.50	.82	.89	2.18	.87	.89	2.11	.77
Friend Seeking	.84	2.19	.88	.83	2.48	.83	.82	2.21	.84	.81	2.52	.75
Revenge Seeking	.89	1.76	.88	.88	1.38	.56	.91	1.73	.85	.87	1.66	.73
Nonchalance	.67	1.88	.84	.65	2.00	.68	.69	1.83	.71	.70	2.00	.63
Problem Solving	.56	2.48	.79	.67	2.54	.76	.63	2.37	.76	.57	2.34	.64
Immobilization	.38	1.67	.62	.45	1.76	.58	.58	1.55	.57	.68	1.66	.60
Peer Victimization	.82	1.85	.75	.82	1.70	.71	.79	1.75	.69	.85	1.73	.72
Loneliness	.74	1.92	.80	.81	1.72	.78	.76	1.65	.73	.80	1.46	.60
Anxiety	.46	1.80	.66	.72	1.65	.66	.61	1.60	.59	.68	1.49	.56

Table 2

Descriptive Statistics for Fall Peer Victimization, Loneliness, and Anxiety by Grade Level and Sex

Variable	Third Grade *N* Boys = 75 *N* Girls = 82		Fourth Grade *N* Boys = 75 *N* Girls = 82		Fifth Grade *N* Boys = 82 *N* Girls = 78		Sixth Grade *N* Boys = 82 *N* Girls = 78	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Peer Victimization								
Boys	1.82	.75	1.61	.70	1.67	.68	1.70	.76
Girls	1.87	.76	1.79	.72	1.82	.70	1.76	.68
Loneliness								
Boys	1.78*	.75	1.58*	.76	1.58	.68	1.38	.49
Girls	2.04*	.83	1.84*	.78	1.73	.77	1.55	.67
Anxiety								
Boys	1.69*	.54	1.55	.61	1.54	.54	1.40*	.47
Girls	1.90*	.75	1.74	.70	1.66	.63	1.59*	.63

Note. A * denotes that means were significantly different at $p < .05$.

Table 3

Descriptive Statistics for Fall Peer Victimization, Loneliness, and Anxiety by Grade Level and Ethnicity

Variable	Third Grade *N* Latino/a = 76 *N* White = 81		Fourth Grade *N* Latino/a = 76 *N* White = 81		Fifth Grade *N* Latino/a = 81 *N* White = 79		Sixth Grade *N* Latino/a = 81 *N* White = 79	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Peer Victimization								
Latino/a	1.71*	.67	1.68	.69	1.73	.65	1.63	.64
White	2.00*	.82	1.73	.73	1.76	.73	1.83	.78
Loneliness								
Latino/a	1.90	.76	1.67	.72	1.63	.74	1.42	.57
White	1.94	.85	1.76	.83	1.67	.72	1.50	.63
Anxiety								
Latino/a	1.78	.65	1.68	.68	1.68	.53	1.53	.62
White	1.82	.68	1.61	.64	1.53	.63	1.46	.49

Note. A * denotes that means were significantly different at $p < .05$.

Table 4

Confirmatory Factor Analysis Final Fit Statistics for the Six-Factor Solution to the "What I Would Do" Questionnaire Data

Time Point	χ^2	(df)	CFI	RMSEA	SRMR
Time 1	380.70**	(219)	.95	.05	.06
Time 2	516.93**	(243)	.93	.06	.08
Time 3	415.11**	(242)	.94	.05	.06
Time 4	402.20**	(242)	.95	.04	.05

Note. CFI = Comparative fit index; RMSEA = Root mean square error of approximation; SRMR = Standardized root mean square residual. **$p < .01$.

Table 5

Items and Cronbach's Reliability Alphas for Coping Subscales

	Third Grade		Fourth Grade		Fifth Grade		Sixth Grade	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Adult Seeking (6 items) I tell the teacher what happened I get help from a teacher I ask the teacher what I should do I tell Mom or Dad what happened I get help from Mom or Dad I ask Mom or Dad what I should do	.90	.92	.86	.88	.89	.91	.89	.90
Friend Seeking (4 items) I tell a friend what happened I get help from a friend I ask a friend what I should do I talk to a friend about it	.84	.85	.83	.85	.82	.84	.81	.88
Revenge Seeking (5 items) I do something mean right back I hurt the kid who was mean to me I would get mad and throw or hit something I yell at the kid who is being mean I hurt the kids back	.89	.89	.88	.85	.91	.88	.87	.86
Nonchalance (3 or 4 items) I act like nothing happened I forget the whole thing I tell myself it doesn't matter I tell the mean kids I don't care (excluded at T1)	.67	.52	.65	.56	.69	.66	.70	.76
Problem Solving (4 items) I try to think of ways to stop it I would think about what I would do next time I try to find out what happened so it wouldn't happen again I change things so it doesn't happen again	.56	.71	.67	.68	.63	.67	.57	.64
Immobilized (3 items) I become so upset I can't talk to anyone I feel like crying I don't know what to do	.38	.67	.45	.41	.58	.77	.68	.66

Table 6

Stability Coefficients

Variable	Third Grade			Fourth Grade			Fifth Grade			Sixth Grade		
	Fall	→	Spring	Fall	→	Spring	Fall	→	Spring	Fall	→	Spring
Adult-Seeking		.70**		.59**	.64**			.68**	.58**		.65**	
Friend-Seeking		.62**		.42**	.61**			.68**	.55**		.67**	
Revenge-Seeking		.82**		.43**	.69**			.82**	.61**		.74**	
Nonchalance		-.02		.37**	.40**			.23**	.44**		.49**	
Problem-Solving		.43**		.40**	.55**			.54**	.28**		.45**	
Immobilized		-.06		.26**	.48**			.36**	.53**		.59**	
Peer Victimization		.73**		.41**	.64**			.73**	.60**		.67**	
Loneliness		.72**		.45**	.59**			.66**	.39**		.56**	
Anxiety		.42**		.29**	.46**			.63**	.30**		.41**	

** $p < .01$.

Table 7

Concurrent Intercorrelations for Coping Strategies

Variable	1	2	3	4	5	6
Time 1						
1 Adult Seeking	--	.63**	-.52**	.33**	.56**	.27**
2 Friend Seeking		--	-.48**	.34**	.50**	.30**
3 Revenge Seeking			--	-.31**	-.24**	-.17**
4 Nonchalance				--	.30**	.26**
5 Problem Solving					--	.31**
6 Immobilized						--
Time 2						
1 Adult Seeking	--	.58**	-.45**	-.15**	.58**	-.15**
2 Friend Seeking		--	-.41**	-.04	.52**	-.22**
3 Revenge Seeking			--	.16**	-.31**	.35**
4 Nonchalance				--	-.01	.33**
5 Problem Solving					--	-.13**
6 Immobilized						--
Time 3						
1 Adult Seeking	--	.40**	-.31**	.11**	.50**	.13**
2 Friend Seeking		--	-.19**	.15**	.47**	.12**
3 Revenge Seeking			--	-.04	-.20**	.02
4 Nonchalance				--	.29**	.21**
5 Problem Solving					--	.06
6 Immobilized						--
Time 4						
1 Adult Seeking	--	.32**	-.37**	.02	.52**	.04
2 Friend Seeking		--	-.19**	.10	.44**	.08
3 Revenge Seeking			--	-.07	-.24**	.00
4 Nonchalance				--	.16**	.14*
5 Problem Solving					--	.01
6 Immobilized						--

*$p < .05$; **$p < .01$.

Table 8

Fall Concurrent Correlations between Coping Strategies and Peer Victimization, Loneliness, and Anxiety by Grade Level

	Coping Strategy					
	Adult Seeking	Friend Seeking	Revenge Seeking	Nonchalance	Problem Solving	Immobilization
Peer Victimization						
Third Grade	-.39**	-.36**	.57**	-.09	-.24**	.07
Fourth Grade	-.08	.06	.10	.13	-.03	.37**
Fifth Grade	-.05	-.07	.37**	-.17*	-.04	.30**
Sixth Grade	.10	-.11	.14	.19**	-.01	.57**
Loneliness						
Third Grade	-.40**	-.28**	.47**	-.29**	-.11	.07
Fourth Grade	.00	.01	.02	.07	.01	.44**
Fifth Grade	-.07	-.14	.36**	-.08	-.05	.41**
Sixth Grade	.02	-.16*	.05	.17*	-.08	.56**
Anxiety						
Third Grade	-.23**	-.13	.32**	-.13	.05	.24**
Fourth Grade	-.03	.08	-.08	.04	-.08	.44**
Fifth Grade	-.07	-.15	.27**	-.02	.01	.31**
Sixth Grade	.10	-.13	.02	.20*	.13	.59**

*$p < .05$; **$p < .01$.

Table 9

Predictive (Fall to Spring) Correlations between Coping Strategies and Peer Victimization, Loneliness, and Anxiety by Grade Level

	Coping Strategy					
	Adult Seeking	Friend Seeking	Revenge Seeking	Nonchalance	Problem Solving	Immobilization
Peer Victimization						
Third Grade	-.52**	-.53**	.70**	-.37**	-.26**	-.20**
Fourth Grade	-.13*	-.12	.15	-.02	-.15	.33**
Fifth Grade	-.13	-.16**	.45**	-.18*	-.16*	.15
Sixth Grade	.01	-.14	.16*	.06	-.09	.46**
Loneliness						
Third Grade	-.51**	-.49**	.65**	-.40**	-.24**	-.16*
Fourth Grade	.02	-.07	.02	-.01	-.05	.34**
Fifth Grade	-.20*	-.32*	.56**	-.27**	-.13	.08
Sixth Grade	.07	-.10	.13	.15	-.01	.49**
Anxiety						
Third Grade	-.46**	-.44**	.60**	-.42**	-.28*	.18*
Fourth Grade	-.12	.01	-.03	.05	-.02	.36**
Fifth Grade	-.11	-.24*	.42**	-.18**	-.10	.08
Sixth Grade	-.05	-.10	.10	.15	.01	.31**

*$p < .05$; **$p < .01$.

Table 10

Predictive (Fall to Spring) Correlations between Coping Strategies and Peer Victimization, Loneliness, and Anxiety by Grade Level and Sex

	Coping Strategy					
	Adult Seeking	Friend Seeking	Revenge Seeking	Nonchalance	Problem Solving	Immobilization
Boys						
Peer Victimization						
Third Grade	-.50**	-.45**	.59**	-.44**	-.21	-.09
Fourth Grade	-.12	-.15	.14	-.12	-.19	.29*
Fifth Grade	.01	-.11	.43**	-.13	-.08	.21
Sixth Grade	.18	-.07	.18	.08	-.04	.53**
Loneliness						
Third Grade	-.47**	-.41**	.54**	-.52**	-.24**	-.15
Fourth Grade	.03	.07	.06	-.09	-.02	.36**
Fifth Grade	-.08	.24*	.58**	-.24*	-.05	.12
Sixth Grade	.08	-.02	.19	.18	-.04	.57**
Anxiety						
Third Grade	-.38**	-.31**	.53**	-.49**	-.18	-.15
Fourth Grade	-.07	.01	.05	-.10	.05	.31**
Fifth Grade	.03	-.16	.35**	-.18	-.03	.16
Sixth Grade	.03	-.01	.17	.22	.10	.40**
Girls						
Peer Victimization						
Third Grade	-.55**	-.62**	.82**	-.30**	-.30**	-.28**
Fourth Grade	-.16	-.13	.27*	.10	-.12	.35**
Fifth Grade	-.28*	-.24*	.56**	-.23*	-.26*	.05
Sixth Grade	-.24*	-.24*	.16	.04	-.15	.45**
Loneliness						
Third Grade	-.54**	-.58**	.79**	-.30**	-.25**	-.19
Fourth Grade	.00	-.21	.03	.07	-.10	.29**
Fifth Grade	-.33*	-.42**	.60**	-.31**	-.22*	.02
Sixth Grade	.04	-.22	.08	.11	.02	.44**
Anxiety						
Third Grade	-.53**	-.58**	.70**	-.35**	-.38*	-.22
Fourth Grade	-.18	-.02	-.05	.21	-.07	.37**
Fifth Grade	-.26*	-.33**	.56**	-.18	-.18	-.01
Sixth Grade	-.15	-.21	.09	.05	-.09	.22

*$p < .05$; **$p < .01$.

Table 11

Fall Victimization and Adjustment Means from MANOVAs

Grade	Victimization	Loneliness	Anxiety
Third			
Overall	1.85	1.92	1.80
Boys	1.82	1.78*	1.69*
Girls	1.87	2.04*	1.90*
Fourth			
Overall	1.70	1.72	1.65
Boys	1.61	1.58*	1.55
Girls	1.79	1.84*	1.74
Fifth			
Overall	1.75	1.65	1.60
Boys	1.67	1.58	1.54
Girls	1.82	1.73	1.66
Sixth			
Overall	1.73	1.46	1.49
Boys	1.70	1.38	1.40*
Girls	1.76	1.55	1.59*

Note. * denotes means that were significantly different at $p < .05$.

Table 12

Repeated-Measures Multivariate Analyses of Variance Fall Coping Strategy Means

Grade	Coping Strategy											
	Immobilization		Revenge Seeking		Nonchalance		Friend Seeking		Problem Solving		Adult Seeking	
Third												
Sample	1.67		1.76		1.88	→	2.19	→	2.48		2.49	
Boys	**1.53**	→	1.90		1.87		2.07	→	2.43		2.46	
Girls	1.79		**1.64**		1.89	→	2.29	→	2.54		2.51	
	Revenge Seeking		Immobilization		Nonchalance		Friend Seeking		Adult Seeking		Problem Solving	
Fourth												
Sample	1.38	→	1.76	→	2.00	→	2.48		2.50		2.54	
Boys	**1.52**		1.62	→	1.99	→	2.37		2.47		2.56	
Girls	**1.24**	→	1.88		2.01	→	2.58		2.53		2.52	
	Immobilization		Revenge Seeking		Nonchalance		Adult Seeking		Friend Seeking		Problem Solving	
Fifth												
Sample	1.55	→	1.73		1.83	→	2.18		2.21	→	2.37	
Boys	**1.46**	→	1.92		1.83	→	2.08		2.07	→	2.39	
Girls	1.63		**1.52**	→	1.84	→	2.28		2.35		2.36	
	Revenge Seeking		Immobilization		Nonchalance		Adult Seeking		Problem Solving		Friend Seeking	
Sixth												
Sample	1.66		1.66	→	2.00		2.11	→	2.34	→	2.52	
Boys	1.95	→	**1.48**	→	1.94		1.99	→	2.30		2.34	
Girls	**1.36**	→	1.85	→	2.08	→	2.24		2.39	→	2.71	

Note. Coping strategies are arranged be grade level in order of ascending mean-values for the overall sample. Bolded values indicate the least-used strategy for children of that grade level and sex. Arrows denote significant contrasts between coping strategies.

Table 13

Regressions Predicting Changes in Children's Victimization as a Function of Fall Coping Strategy Use

	Spring Victimization											
	Third Grade			Fourth Grade			Fifth Grade			Sixth Grade		
	ΔR^2	β	t	ΔR^2	β	t	ΔR^2	β	t	ΔR^2	β	t
Step 1	.53**			.41**			.54**			.45**		
Sex		-.02	-.19		.04	.49		-.02	-.23		-.07	-.79
Ethnicity		-.02	-.15		.00	.03		-.11	-1.18		.00	-.01
Fall Victimization		.94	12.84**		.61	10.10**		.94	13.41**		.65	11.12**
Step 2	.18**			.05*			.06**			.03		
Adult Seeking		-.05	-.67		.00	-.01		.11	1.41		-.01	-.20
Friend Seeking		-.12	-1.58		-.12	-1.95		-.03	-.45		-.03	-.48
Revenge Seeking		.30	3.75**		.07	.84		.27	3.77**		.04	.69
Nonchalance		-.19	-3.05**		-.08	-1.15		.03	.36		-.08	-1.16
Problem Solving		.18	2.54*		-.03	-.41		-.18	-2.26*		-.05	-.60
Immobilization		-.18	-2.06*		.15	1.83		-.05	-.52		.22	2.44*
Step 3 - Sex × Coping	.06**											
Sex × Adult Seeking		.41	2.78**									
Sex × Friend Seeking		-.26	-1.67									
Sex × Revenge Seeking		.49	3.80**									
Sex × Nonchalance		.41	3.49**									
Sex × Problem Solving		.04	.29									
Sex × Immobilization		-.33	-1.82									
Step 4 - Fall Vict. × Coping	.02*			.06**			.04*					
Fall Vict. × Adult Seeking		.10	.87		.26	2.50*		-.03	-.22			
Fall Vict. × Friend Seeking		-.07	-.61		-.33	-3.54**		.09	.70			
Fall Vict. × Revenge Seeking		.20	1.87		-.03	-.22		.28	2.43*			
Fall Vict. × Nonchalance		-.14	-2.08*		-.06	-.60		-.08	-.65			
Fall Vict. × Problem Solving		.20	2.24*		-.04	-.39		-.14	-1.07			
Fall Vict. × Immobilization		-.09	-.96		.15	1.31		-.21	-1.55			

Note. Vict. = Victimization. Blocks with non-signifcant ΔR^2 were excluded from the table. * $p < .05$, ** $p < .01$.

Table 14

Regressions Predicting Changes in Children's Loneliness as a Function of Fall Coping Strategy Use

		Spring Loneliness											
		Third Grade		Fourth Grade					Fifth Grade		Sixth Grade		
	ΔR^2	β	t	ΔR^2	β	t	ΔR^2	β	t	ΔR^2	β	t	
Step 1	.53**			.34**			.44**			.32**			
Sex		-.19	-1.50		.01	.05		-.04	-.32		-.05	-.63	
Ethnicity		-.14	-1.14		-.02	-.19		.15	1.31		.06	.70	
Fall Loneliness		1.03	12.97**		.58	8.79**		.88	11.04**		.56	8.53**	
Step 2	.14**			.02			.18**			.07*			
Adult Seeking		.04	.47		.07	.88		.12	1.56		.04	.60	
Friend Seeking		-.18	-1.92		-.10	-1.33		-.19	-2.47*		-.02	-.31	
Revenge Seeking		.40	4.37**		-.03	-.34		.39	5.25**		.09	1.50	
Nonchalance		-.13	-1.64		-.03	-.41		-.14	-1.91		.00	.06	
Problem Solving		.05	.54		-.04	-.41		.02	.21		.01	.16	
Immobilization		-.08	-.78		.18	1.70		-.24	-2.34*		.28	3.34**	
Step 3 - Sex × Coping	.04**									.06*			
Sex × Adult Seeking		.11	.59								.12	.97	
Sex × Friend Seeking		-.16	-.81								-.16	-1.32	
Sex × Revenge Seeking		.41	2.42*								-.10	-.71	
Sex × Nonchalance		.51	3.34**								-.03	-.27	
Sex × Problem Solving		.09	.51								.25	1.72	
Sex × Immobilization		.04	.20								-.38	-2.66*	
Step 4 - Fall Lone. × Coping	.04*						.04*			.06*			
Fall Lone. × Adult Seeking		.01	.07					.15	1.19		.27	2.17*	
Fall Lone. × Friend Seeking		.02	.17					-.21	-1.68		-.09	-.83	
Fall Lone. × Revenge Seeking		.34	2.75**					.18	1.84		.17	1.67	
Fall Lone. × Nonchalance		.11	1.06					-.24	-2.14*		-.12	-1.05	
Fall Lone. × Problem Solving		.01	.06					.04	.31		-.09	-.69	
Fall Lone. × Immobilization		-.23	-2.12*					-.14	-.96		-.28	-3.27**	

Note. Lone. = Loneliness. Blocks with non-signifcant ΔR^2 were excluded from the table. * $p < .05$, ** $p < .01$.

Table 15

Regressions Predicting Changes in Children's Anxiety as a Function of Fall Coping Strategy Use

	Spring Anxiety											
	Third Grade			Fourth Grade			Fifth Grade			Sixth Grade		
	ΔR^2	β	t	ΔR^2	β	t	ΔR^2	β	t	ΔR^2	β	t
Step 1	.18**			.24**			.41**			.17**		
Sex		-.06	-.49		.09	1.12		.02	.25		-.01	-.18
Ethnicity		.02	.15		.16	1.88		.11	1.23		.05	.76
Fall Anxiety		.56	5.78**		.40	6.24**		.77	9.90**		.35	5.44**
Step 2	.30**			.05			.10**			.03		
Adult Seeking		.04	.39		-.10	-1.62		.15	2.19*		-.06	-1.08
Friend Seeking		-.06	-.70		-.04	-.71		-.08	-1.29		.00	-.03
Revenge Seeking		.41	4.79**		-.06	-.73		.26	4.22**		.06	.99
Nonchalance		-.20	-2.74**		.01	.19		-.07	-1.07		.06	.91
Problem Solving		-.07	-.80		.08	1.11		-.09	-1.21		.01	.12
Immobilization		-.04	-.41		.22	2.52*		-.10	-1.26		.10	1.25
Step 3 - Fall Anx. × Coping	.08**									.09**		
Fall Anx. × Adult Seeking		.04	.30								.22	1.70
Fall Anx. × Friend Seeking		.08	.57								-.17	-1.59
Fall Anx. × Revenge Seeking		.45	2.93**								.13	1.09
Fall Anx. × Nonchalance		.02	.14								.02	.13
Fall Anx. × Problem Solving		-.37	-2.46**								-.01	-.10
Fall Anx. × Immobilization		-.09	-.82								-.41	-3.84**

Note. Anx. = Anxiety. Blocks with non-signifcant Δ R^2 were excluded from the table. * $p < .05$, ** $p < .01$.

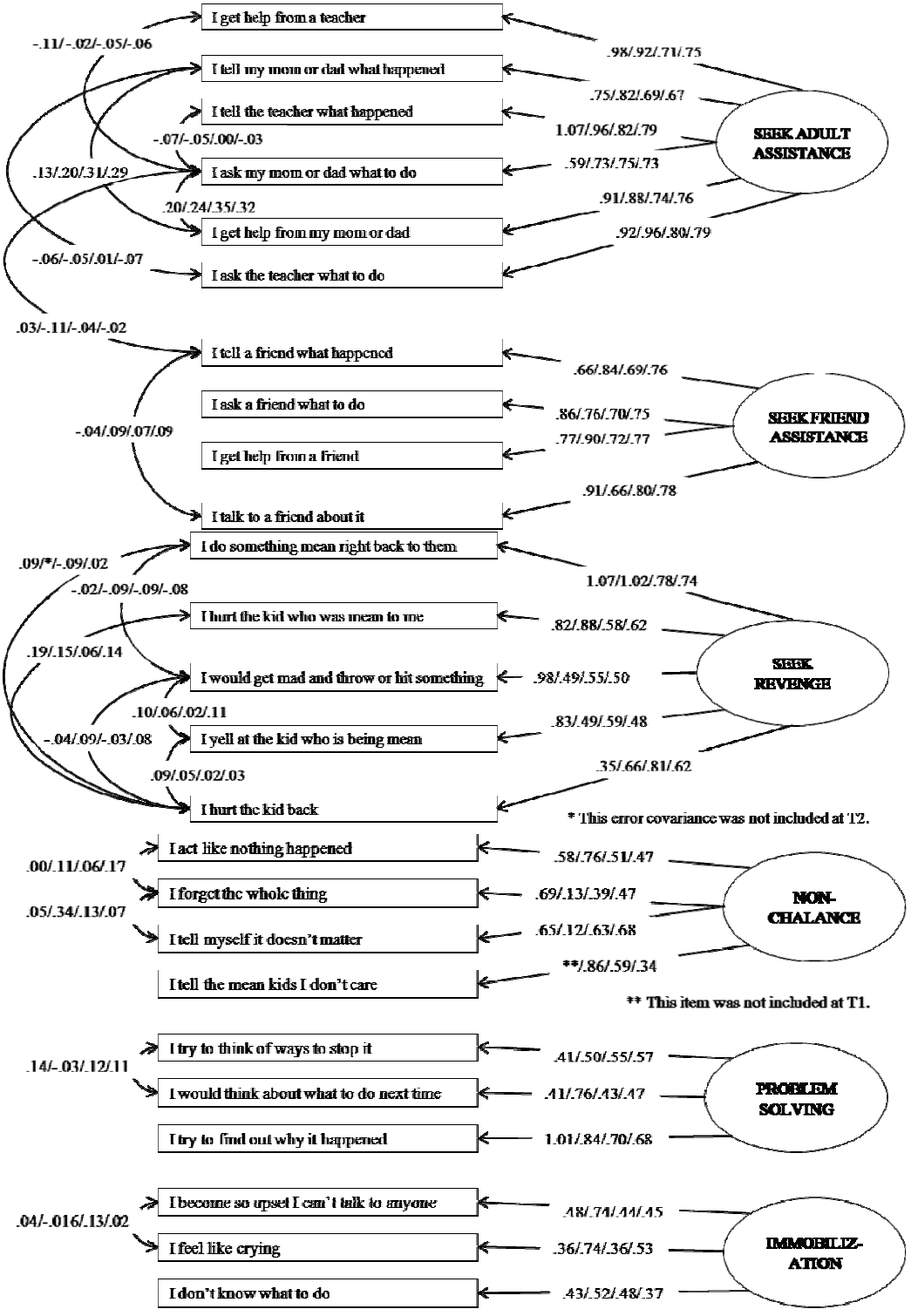

Figure 1. Measurement model T1/T2/T3/T4.

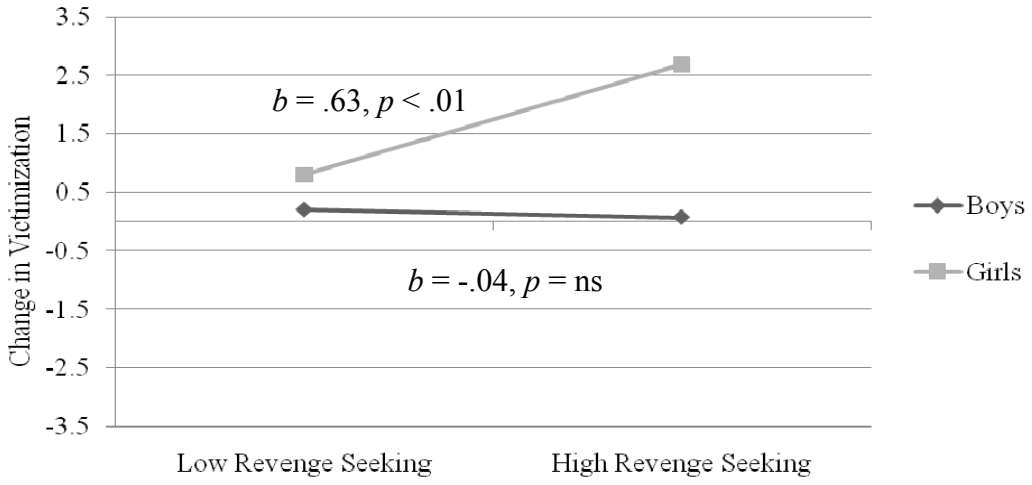

Figure 2. Simple slopes plot for third graders' spring victimization as a function of fall revenge-seeking and sex.

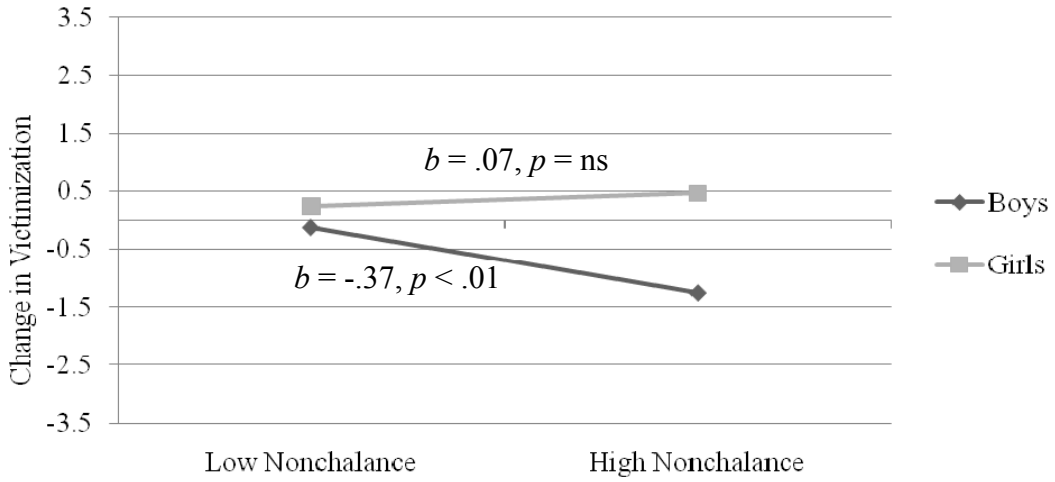

Figure 3. Simple slopes plot for third graders' spring victimization as a function of fall nonchalance and sex.

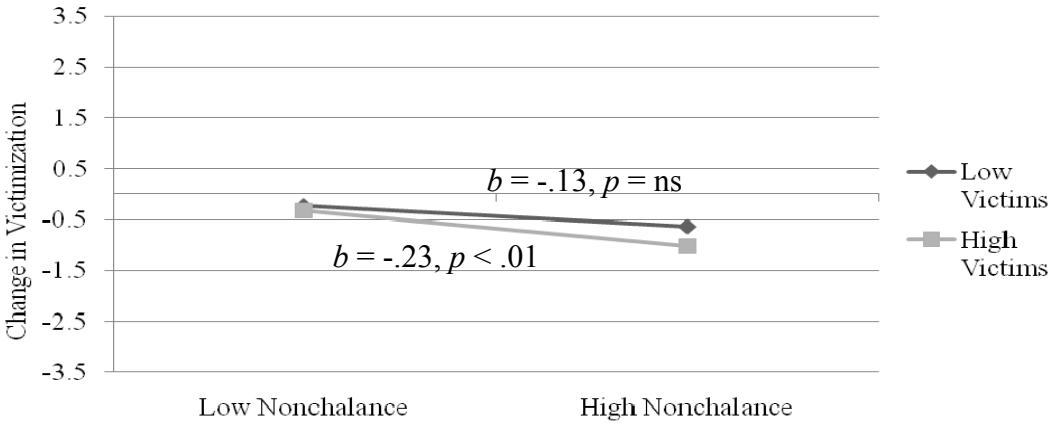

Figure 4. Simple slopes plot for third graders' spring victimization as a function of fall nonchalance and fall victimization.

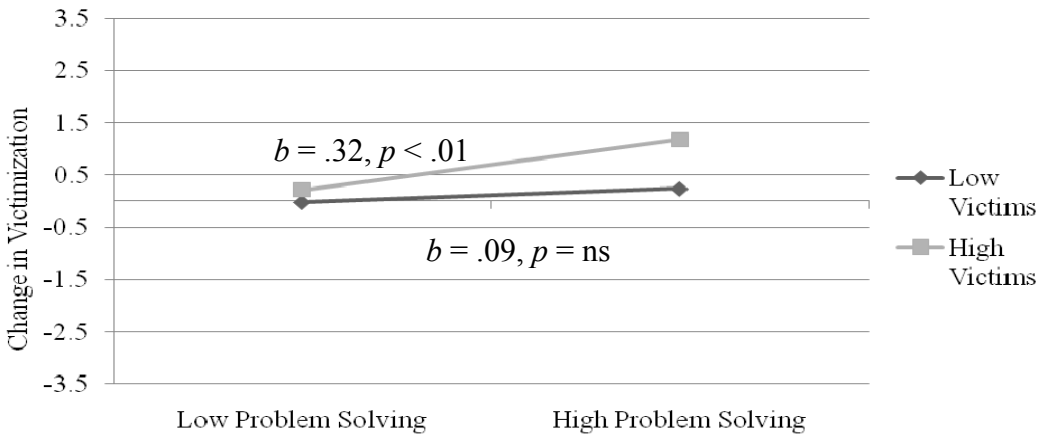

Figure 5. Simple slopes plot for third graders' spring victimization as a function of fall problem solving and fall victimization.

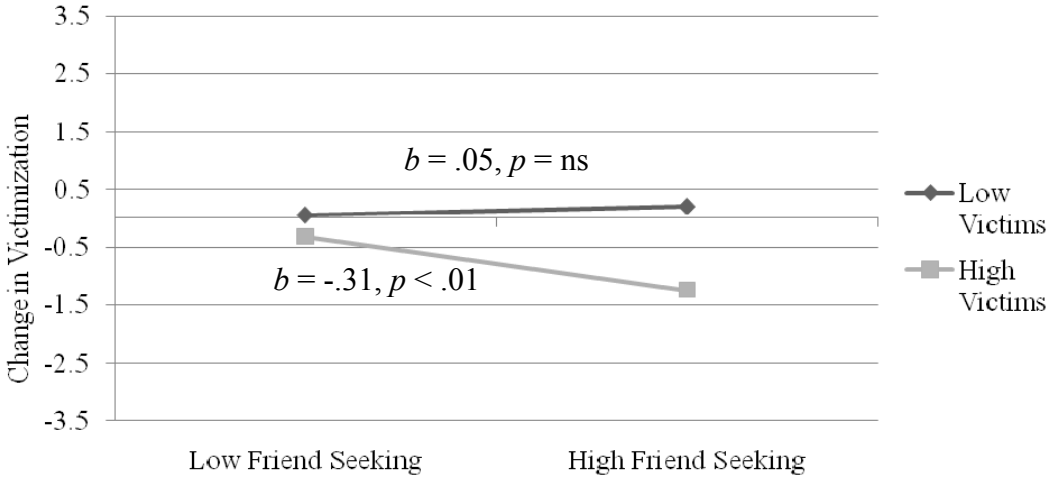

Figure 6. Simple slopes plot for changes in fourth graders' spring victimization as a function of fall friend support-seeking and fall victimization.

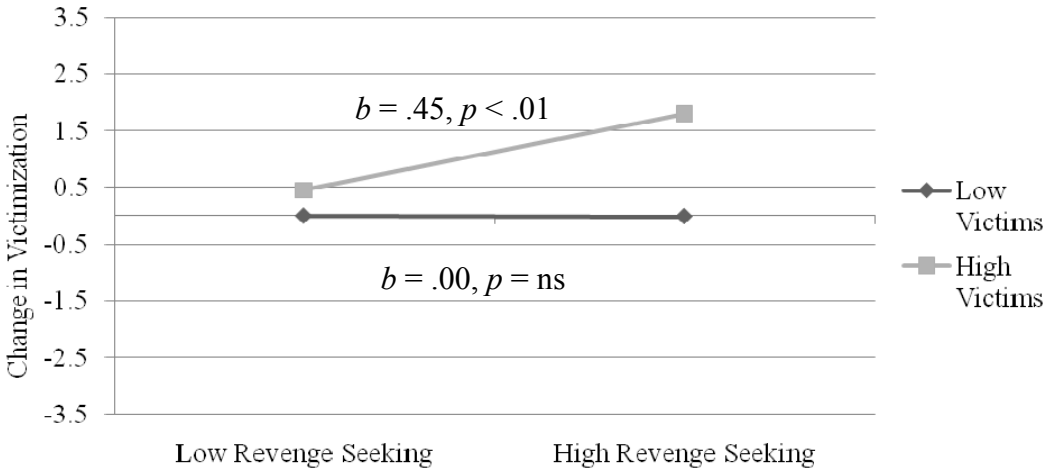

Figure 7. Simple slopes plot for fifth graders' spring victimization as a function of fall revenge seeking and fall victimization.

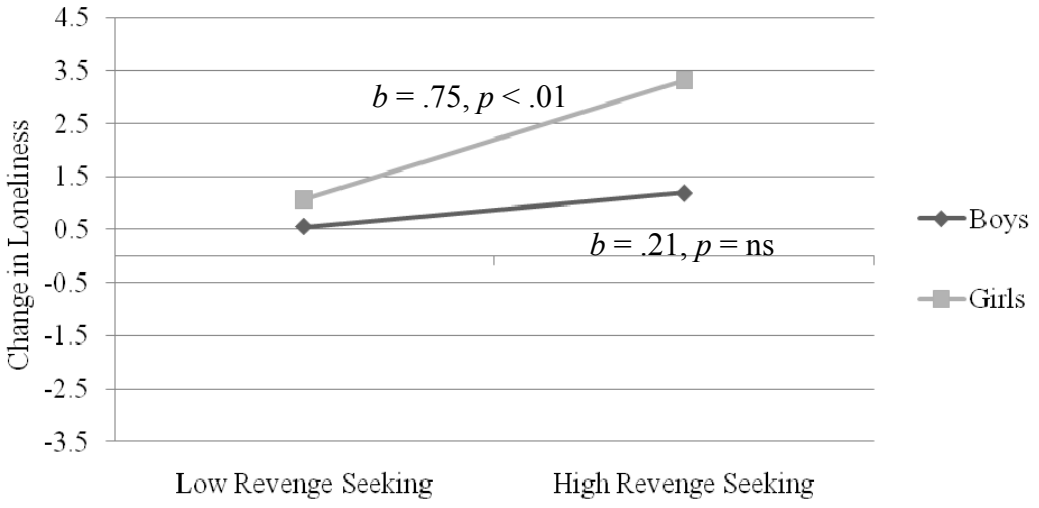

Figure 8. Simple slopes plot for third graders' spring loneliness as a function of fall revenge seeking and sex.

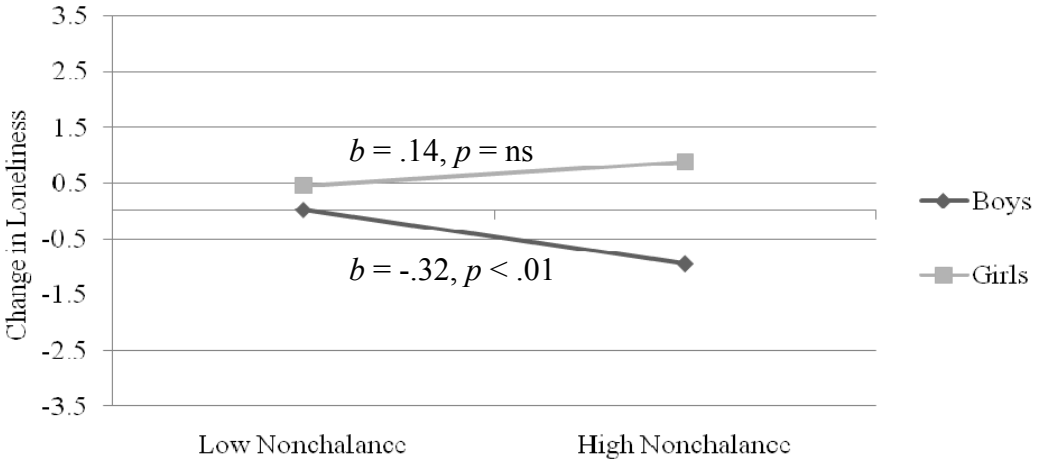

Figure 9. Simple slopes plot for third graders' spring loneliness as a function of fall nonchalance and sex.

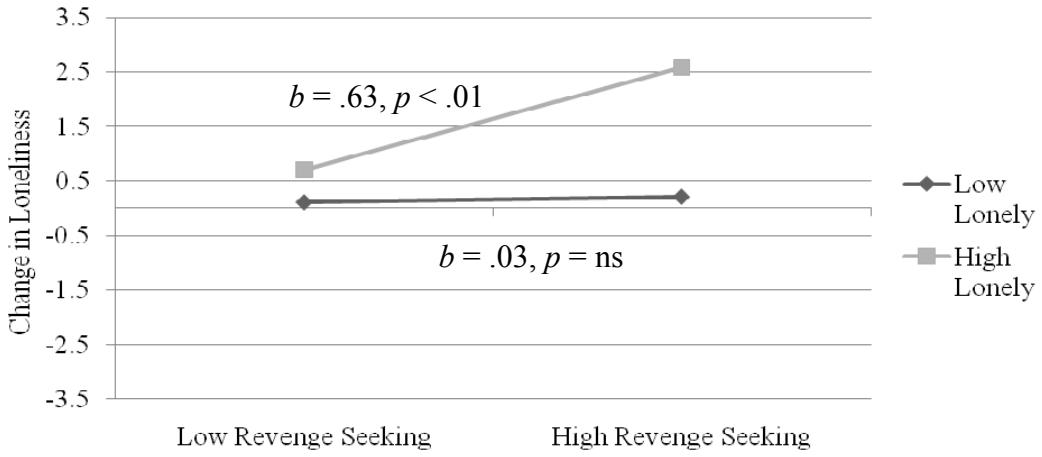

Figure 10. Simple slopes plot for third graders' spring loneliness as a function of fall revenge seeking and fall loneliness.

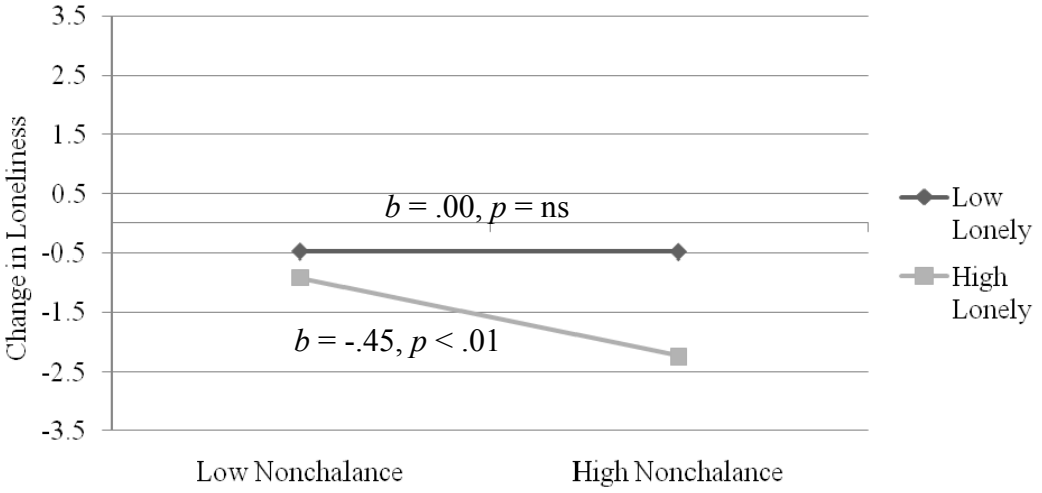

Figure 11. Simple slopes plot for fifth graders' spring loneliness as a function of fall nonchalance and fall loneliness.

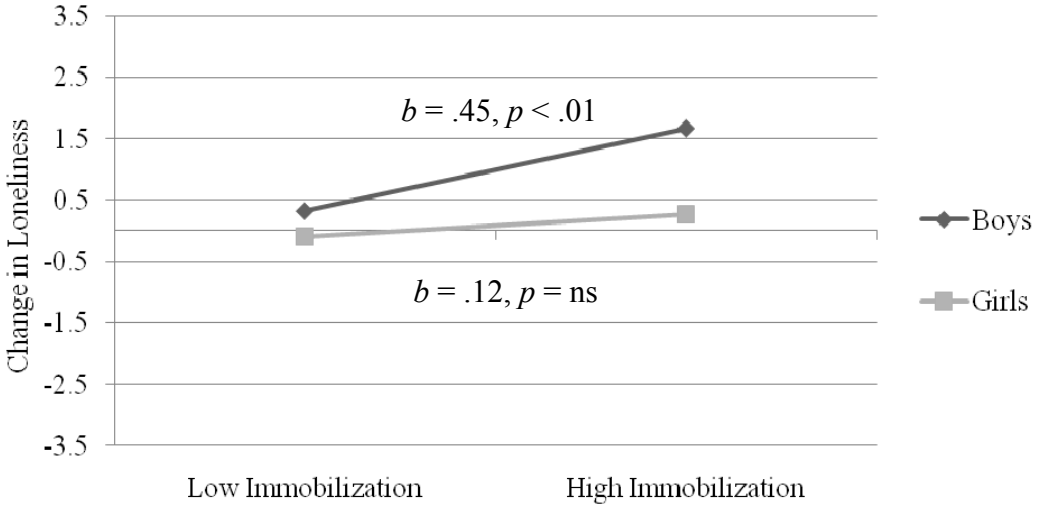

Figure 12. Simple slopes plot for sixth graders' spring loneliness as a function of fall immobilization and sex.

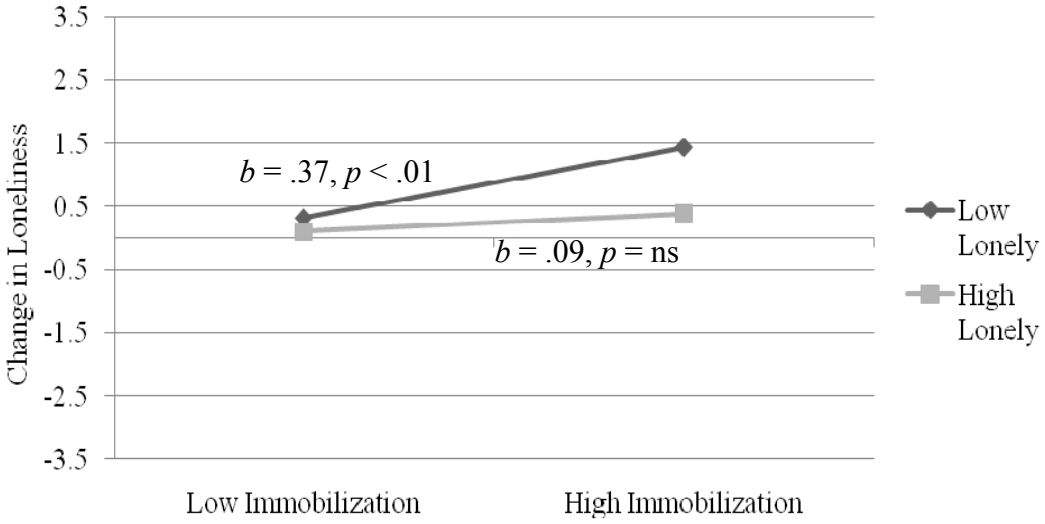

Figure 13. Simple slopes plot for sixth graders' spring loneliness as a function of fall immobilization and fall loneliness.

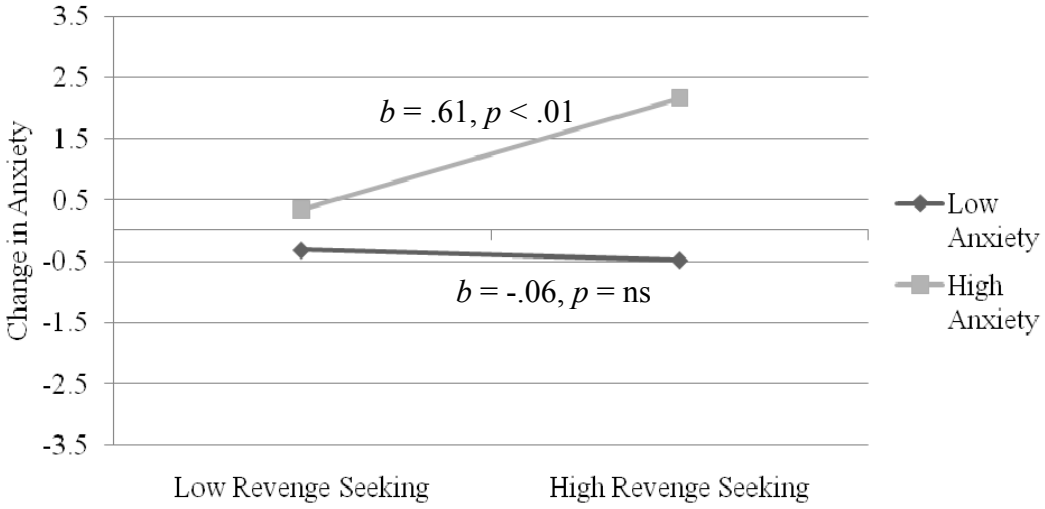

Figure 14. Simple slopes plot for third graders' spring anxiety as a function of fall revenge seeking and fall anxiety.

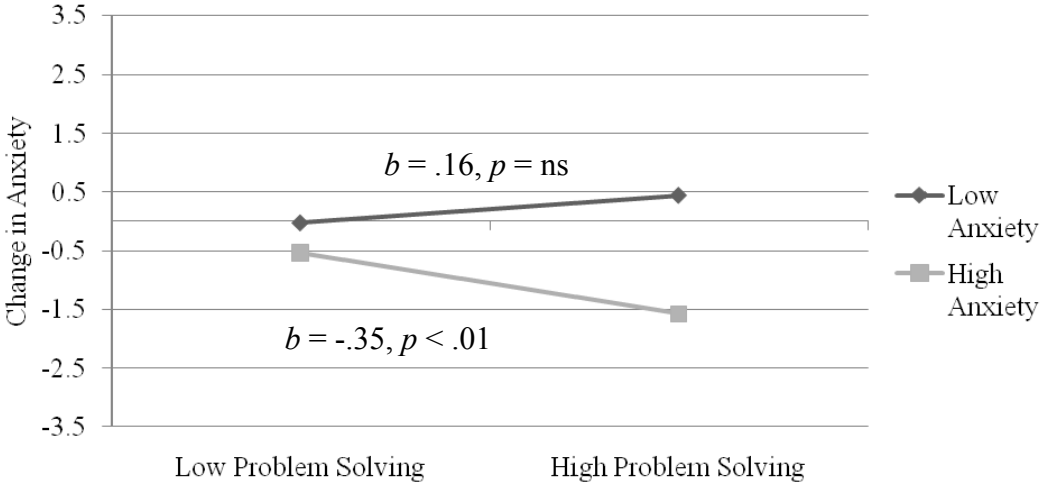

Figure 15. Simple slopes plot for third graders' spring anxiety as a function of fall problem solving and fall anxiety.

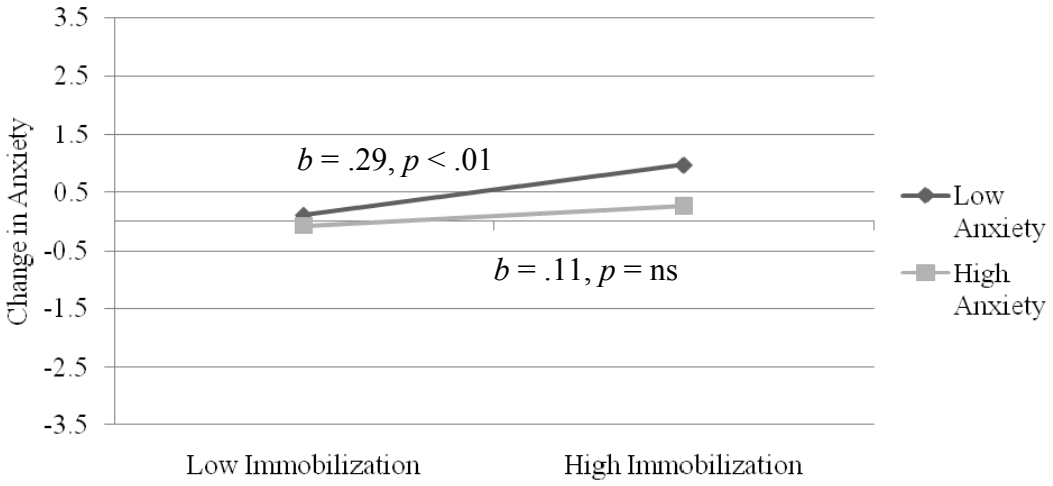

Figure 16. Simple slopes plot for sixth graders' spring anxiety as a function of fall immobilization and fall anxiety.

APPENDIX A

ARIZONA STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

Box 873503
Tempe, AZ 85287-3503
480-965-6788 FAX: 480-965-7772

ARIZONA STATE UNIVERSITY
Office of Human Research Administration
Vice President for Research and Economic Affairs

HS# 07202-04
Principal Investigator: **Becky KOCHENDERFER-LADD**
Co-Investigator(s):
Department: **Psychology in Education**
Original Approval Date: **8 /29/2003**
Title: **IDENTIFICATION OF EFFECTIVE/ADAPTATIVE RESPONSES TO PEER VICTIMIZATION AMONG ELEMENTARY SCHOOL-AGED CHILDREN**

From: Dr. Albert Kagan, Chair
Thursday, September 23, 2004

The Human Subjects Institutional Review Board has approved the recently submitted modification to the above-referenced application for the conduct of research involving human subjects on the date noted above with no stipulations.

The IRB would like to remind you that Federal regulations require investigators to immediately report to the board any complaints, incidents, or injuries that may occur as part of the project. Please sign below indicating your willingness to comply with IRB procedures, and return one copy with original signature to Karol Householder at the Office of Human Research Administration (mail code 3503) for our files.

APPENDIX B

THE "WHAT I WOULD DO" QUESTIONNAIRE

What I Would DO
Lo que yo HARÍA

Please mark the box that shows how often you would do these things.
Por favor marca el cuadro que muestra que tan frecuentemente harías estas cosas.

When kids are being mean to me…. ***Cuando los niños son malos conmigo, yo***	**Never** *Nunca*	**Sometimes** *A Veces*	**Most of the time** *La Mayoría del Tiempo*	**Every time** *Todo el tiempo*
1. I act like nothing happened. *Actúo como si nada pasó.*				
2. I try to think of ways to stop it. *Trato de pensar en formas de pararlo*				
3. I tell a friend what happened. *Le digo a un amigo lo que pasó.*				
4. I do something mean right back to them. *Le hago algo malo de vuelta a ellos.*				
5. I get help from a teacher. *Consigo ayuda de un maestro.*				
6. I forget the whole thing. *Me olvido de todo.*				
7. I ask a friend what I should do. *Pregunto a un amigo lo que debo hacer*				
8. I tell my mom or dad (or another adult at home) what happened. *Le digo a mi mamá o papá lo (u otro adulto en tu casa) lo qué pasó.*				
9. I hurt the kid who was mean to me. *Lastimo al niño que fue malo conmigo.*				
10. I become so upset I can't talk to anyone. *Me disgusto tanto que no puedo hablar con nadie.*				
11. I tell myself it doesn't matter. *Me digo a mí mismo que no importa.*				
12. I would think about what I would do the next time. *Pienso lo que haría la próxima vez.*				
13. I would work it out on my own. *Trataría de encontrar solito (a) (sin la ayuda de nadie) qué hacer.*				
14. I would get mad and throw or hit something *Me enojaría y tiraría o golpearía algo.*				

When kids are being mean to me…. ***Cuando los niños son malos conmigo, yo***	**Never** *Nunca*	**Sometimes** *A Veces*	**Most of the time** *La Mayoría del Tiempo*	**Every time** *Todo el tiempo*
15. I feel like crying. *Siento ganas de llorar.*				
16. I get help from a friend. *Consigo ayuda de un amigo.*				
17. I try to find out why it happened, so it won't happen again. *Trato de saber por qué pasó, para que no vuelva a suceder otra vez.*				
18. I tell the teacher what happened. *Le cuento al maestro (a) lo qué pasó*				
19. I yell at the kid who is being mean. *Le grito al niño(a) que es malo conmigo.*				
20. I don't know what to do. *No sé qué hacer.*				
21. I tell the mean kids I don't care. *Lo digo a los niños malos que no me importa.*				
22. I change things to keep it from happening again. *Cambio las cosas para que no vuelva a suceder otra vez.*				
23. I ask my mom or dad (or another adult at home) what to do. *Pregunto a mi mamá o papá (u otro adulto en la casa) sobre lo que debo hacer.*				
24. I hurt the kid back. *Hago daño al niño(a) que me molestó.*				
25. I get help from my mom or dad *Consigo ayuda de mi mamá o papá (u otro adulto en la casa).*				
26. I ask the teacher what I should do. *Pregunto a la maestra lo que debería hacer.*				
27. I talk to a friend about it. *Hablo con un amigo sobre eso.*				
28. I would blame myself for doing something to deserve it. *Me culparía a mí mismo(a) por hacer algo que lo mereciera.*				
29. I would feel sorry for myself. *Me sentiría pena de me mismo(a)*				

APPENDIX C

THE "WAY KIDS ARE" QUESTIONNAIRE

The Way Kids Are

La forma en que los niños se comportan

These questions are about what kids in your class are like. How often do you think kids do these things?

Estas preguntas son sobre la forma en que los niños se comportan en clase. ¿Qué tan a menudo crees tú que los niños hacen las siguientes cosas?

HOW MUCH DO THE KIDS IN YOUR CLASS… ¿QUÉ TAN A MENUDO LOS NIÑOS EN TU CLASE…	Never *Nunca*	Rarely (once/twice) *Casi nunca*	Some times *A veces*	A lot *Muchas veces*
1. pick on you, or tease you? *se meten contigo o te molestan?*				
2. share things with you? *comparten cosas contigo?*				
3. like to boss kids around? *les gusta mangonear (mandar) a otros niños?*				
4. try to be fair and play by the rules? *tratan de ser justos y jugar limpio?*				
5. call you names or say other hurtful things to you? *te ponen apodos y te dicen cosas feas?*				
6. let you play with them? *te dejan jugar con ellos?*				
7. act friendly towards other kids? *son amistosos con otros niños?*				
8. help you if you are being picked on by other kids? *te ayudan si otros niños te molestan?*				
9. hit or push you? *te pegan o empujan?*				
10. return things that they borrowed? *te devuelven lo que tomaron prestado?*				
11. help you when you ask? *te ayudan cuando lo pides?*				
12. say mean things, or lies, about you to other kids? *dicen cosas feas o mentiras sobre tí a otros niños?*				
13. cheer you up if you feel sad? *te animan si estás triste?*				
14. choose you for a partner? *te escogen como compañero (de juego)?*				
15.tell you that you are good at doing things? *te dicen que eres bueno haciendo cosas?*				

APPENDIX D

THE "ABOUT ME" QUESTIONNAIRE

About Me
Acerca de Mí

The following questions are about things that might have happened to you in the last few weeks.
Las siguientes preguntas son sobre cosas que te podrían haber pasado en las últimas semanas.

In the past few weeks, how often… *En las últimas semanas, qué tan frecuentemente…*	**Never** *Nunca*	**A little** *Un poco*	**Sometimes** *A veces*	**A lot** Muchas veces
1. did you think school was fun? *pensaste que la escuela era divertida?*				
2. did you want to stay home from school? *deseaste quedarte en casa?*				
3. did you feel safe from bullies in your class? *te sentiste a salvo (seguro) de los matones en tu clase?*				
4. were you sad in school? *estuviste triste en la escuela?*				
5. were you worried that another kid might hurt you? *te preocupó que otro niño te lastimara?*				
6. were you upset about having to go to school? *te sentiste disgustado(a) por tener que ir a la escuela?*				
7. did you do something really well? *hiciste algo realmente bien?*				
8. were you sad and alone? *te sentiste triste y solo(a)?*				
9. did you worry? *te preocupaste?*				
10. did you like school? *te gustá la escuela?*				
11. did you feel left out of things kids were doing? *sentiste que otros niños te dejaban por fuera?*				
12. were you lonely? *te sentiste solo(a)?*				
13. were you unhappy and depressed? *has estado infeliz y deprimido/a?*				
14. did you feel that other kids really liked you? *sentiste que le caías bien a otros niños?*				
15. were you scared? *estuviste asustado (a)?*				
16. did you worry about other kids picking on you when you use the bathroom? *te preocupaste de que otros niños te molestaran cuando usabas el baño?*				
17. did you feel nervous? *te sentiste nervioso(a)?.*				
18. did you ask to stay home from school? *pediste quedarte en casa?*				
19. did you like being in school?				

te gustó estar en la escuela?				
20. did you feel like crying? *sentiste ganas de llorar?*				
21. did you do well on your school work? *hiciste bien tus trabajos de la escuela (e.g.,tareas)?*				
22. did you feel alone in school? *te sentiste solo (a) en la escuela?*				
23. did you pretend to be sick, so you could stay home? *te hiciste el(la) enfermo(a) para poder quedarte en casa?*				
24. were you excited to go to school? *estuviste emocionado(a) de ir a la escuela?*				
25. did you feel safe from bullies in the lunchroom? *te sentiste a salvo (seguro) de los matones en la cafetería?*				
26. did you feel good about yourself at school? *te sientes bien contigo mismo(a) en la escuela?*				
27. did you feel sorry for kids you see getting picked on? *te dan pena los niños que ves que otros niños molestan?*				
28. did you feel sad when you see kids who don't have anyone to play with? *te sientes triste cuando ves niños que no tienen con quién jugar?*				
29. did you feel sad when you see someone get hurt? *te sientes triste cuando ves que alguien se lastima?*				
30. did you feel safe from bullies on the playground? *te sentiste a salvo (seguro) de matones en el patio de recreo?*				