

**BULLYING AND STRESS IN EARLY ADOLESCENTS:
THE ROLES OF COPING AND SOCIAL SUPPORT**

by

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Abstract

The present study investigated the relation between stress experiences and bullying behavior, examining the potential stress-buffering role of effective coping and social support in reducing the likelihood of bullying in response to stress. It was expected that greater stress would be associated with more bullying behavior, and that the relation between stress and bullying would be moderated by particular coping strategies, specifically active and distraction coping, and by social support. Students in grades 5-7 (N=312) completed questionnaires assessing levels of stress (including major stressful events and daily hassles), bullying behavior (peer and self assessments), coping strategies used (active, avoidance, distraction, and support seeking), and perceived social support (from friends, family, or teachers).

Results indicated that both major stressful events and daily hassles were positively but modestly associated with self-reported bullying behavior, not peer-assessed bullying. Children who reported high levels of stress reported more bullying behavior, although they were not more likely to be viewed by peers as bullies. Regression analyses revealed a unique moderation effect of distraction coping on the stress-bullying link. At low levels of stress, children who reported using high levels of distraction coping also reported lower levels of bullying, although this pattern varied across three forms of bullying (i.e., physical, verbal, relational) and by gender. However, as levels of stress increased, the effect of distraction coping reversed; those who reported high levels of distraction coping reported higher levels of bullying than those who reported lower levels of distraction coping. With respect to social support, family support was found to moderate the relationship between

stress and bullying, although this moderation effect differed across three forms of bullying, and by gender. With low levels of perceived support from family, the positive relation between stress and bullying was greater, whereas with high levels of perceived support from family, the stress-bullying relation was weaker. Perceived friend support also moderated the stress-bullying link, only when physical bullying was considered, and only for girls when gender differences were considered. Taken together, these findings suggest possible protective factors that might help children to minimize the likelihood of bullying under conditions of stress, including the potential buffering effect of social support, especially from family and friends.

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Introduction

Bullying and peer harassment have gained growing public attention in recent years as a serious threat to the safe environment of the school (e.g., Juvonen & Graham, 2001; Morita, 1999). Among eight school shootings¹ that took place in the U.S. from 1997 to 1999, bullying experiences seem to have affected five cases, in which shooters seemed to take revenge against those who had teased them (Cloud & Barovick, 1999). The salient feature of these bullying cases as well as others in general is that it affects both bullies and victims. Recent studies show that both bullies and victims are at risk for suicide (Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä, & Rantanen, 1999; Rigby & Slee, 1999). Bullies are especially at risk for later criminality and other forms of antisocial behavior (e.g., Farrington, 1993; Kaltiala-Heino, Rimpelä, Rantanen, & Rimpelä, 2000; Olweus, 1991). For victims, repeated bullying can cause significant psychological distress and might interfere with many domains of their functioning, including internalizing difficulties like depression and low self-esteem (Besag, 1989; Boivin, Hymel, & Hodges, 2001; Rigby, 2000). Results of these studies indicate serious negative effects of bullying on children and adolescents' well-being.

Taking the view of victims, some studies have considered bullying as a stressor (e.g., Rigby, 1998; Sharp, 1995). For example, Sharp reported that 34 percent of secondary students (13- to 16-year-olds) who had been bullied found being bullied stressful. This study also showed that the most commonly used coping strategies with bullying situations

¹ These shootings are: February 1996, Moses Lake, Washington; October 1997, Pearl, Mississippi; December 1997, West Paducah, Kentucky; March 1998, Jonesboro, Arkansas; April 1998, Edinboro, Pennsylvania; May 1998, Springfield, Oregon; April 1999, Littleton, Colorado; May 1999, Conyers, Georgia.

were passive behavior such as ignoring bullies, walking away from the situation, or/and passively accepting the bullying behavior.

From the perspective of the bully, however, the relationship between stress and bullying behavior has received little attention, although some critical links have been proposed. In particular, Shimada (1997) has suggested that both stressful life event experiences, especially stressful events at school, and inadequate ways of coping with stress may be major contributors to bullying behavior as one form of aggression. Borrowing from the established literature on stress and coping (e.g., Cohen, 1988; Johnson & Bradlyn, 1988; Seiffge-Krenke, 1995, as reviewed below), the aim of the present study was to examine stressful life experiences as a potential risk/predictive factor for bullying behavior. Of additional interest were the potential roles of coping and social support in the relation between stress and bullying.

This thesis begins with an overview of recent research on bullying, as a unique form of aggression. Next, I consider the potential link between bullying behavior and life stress, derived in part from the frustration-aggression hypothesis initially put forward by Dollard, Miller, and colleagues in the 1930s and 40s (Dollard, Doob, Miller, Mowrer, & Sears, 1939). In 'Frustration and Aggression', Dollard et al. (1939) initially formulated the theoretical hypothesis that frustration (e.g., deprivation, punishment, barriers preventing the achievement of goals, threats to self-esteem, anxiety inhibiting the pursuit of desirable outcomes) is the cause of aggression and aggression is the inevitable result of frustration. Later, they adopted a less extreme position, arguing that aggression is only one of several possible responses to frustration (Miller, 1941). Consistent with this theoretical notion, I

then review evidence that links aggressive behavior to stressful events, with the hypothesis that a similar association should be observed between stress and bullying, as a unique form of aggressive behavior. Subsequently, I consider the issues of coping and social support as stress-buffering factors that can change the relationship between stress and aggression on behavioral and psychological problems. Following from this review, a proposed theoretical model of stress and bullying, with life stress viewed as a risk factor for bullying (and other forms of aggression) and certain types of coping strategies and social support viewed as protective factors, is illustrated. After outlining the specific hypotheses developed for this thesis, methodological procedures are presented, followed by results of the present investigation. Finally, a summary and discussion of the findings are presented.

Literature Review

What is Bullying?

In 'Aggression In The Schools: Bullies And Whipping Boys', which is considered by scholars as the first systematic study of the phenomenon of bullying, Olweus (1978) defined bullying in terms of three critical elements: a) bullying is repeated over time, b) bullying is intended to hurt, and c) bullying involves a power imbalance. In other words, in bullying, perpetrator or perpetrators harass others who are often younger or weaker or otherwise less powerful repeatedly and over time with the intention of harming their victim(s). While aggressive behavior is generally defined as any form of behavior that is intended to harm someone physically or psychologically (Baron & Richardson, 1994; Berkowitz, 1993; Olweus, 1999), bullying is regarded as a subcategory of aggressive behavior that is distinguished from general aggressive behavior in terms of its frequency of occurrence and the power imbalance between perpetrator(s) and their victim(s).

Since the early 1980s, the public has become increasingly aware of the extent to which students experience bullying in various countries. For example, in Australia, student surveys collected in 1995 indicated that over 30 percent of male students and 16 percent of female students (aged 11 to 16) reported being bullied weekly (Peterson & Rigby, 1999). In Canada, 17.2 percent of males and 8.7 percent of females in elementary schools reported bullying others, while 13.6 percent of males and 8.1 percent of females report being victimized among school children aged 10 through 11 (Craig, Peter, & Konarski, 1998). In terms of students in secondary schools, 10 percent of students (grades 8-10) reported being bullies, 22 percent reported being victims, and 42 percent reported being both a bully and a

victim at least a few times during the current year (Hymel, Bonanno, & Rocke Henderson, 2002). In England, results of a questionnaire survey completed by youth in 1997 and 1998 indicated that 23 percent of Year 7 students (average age: 12 years) and 13 percent of Year 9 students (average age: 14 years) reported having been bullied during the current year (Naylor & Cowie, 1999). In Japan, results of a nationwide survey for elementary and junior high school students (aged from 11 to 15) in 1997 indicated that 13.9 percent of school children reported being bullied and 17 percent of school students reported bullying others during the current term/semester (Morita, Taki, Hata, Hoshino, & Iwai, 1999). Although these data are not necessarily comparable because of the different definitions, sample selections, and data analysis procedures, they generally reveal that the number of students suffering from bullying is considerable in countries around the globe.

Research also indicates significant associations between bullying and health problems. Among victims, depression, anxiety, and psychosomatic symptoms are common (e.g., Kaltiara-Heino et al., 2000; Rigby, 2000). In addition, victimization experiences in childhood are related to low self-esteem and greater depression in adulthood (Olweus, 1991; 1992; 1993). Bullies also commonly experience depression, anxiety, and psychosomatic symptoms (e.g., Kaltiara-Heino et al., 2000). Furthermore, bullies are at risk for substance abuse (e.g., Kaltiara-Heino et al., 2000) and for carrying on their aggressive inclination into adulthood in the form of criminality and other types of antisocial behavior (e.g., Farrington, 1993; Olweus, 1991). In addition, recent studies have shown that both bullies and victims are at risk for suicide (Kaltiala-Heino et al., 1999; Rigby & Slee, 1999). The results of these studies suggest that bullying is a significant

problem that affects a considerable number of children and that is associated with many negative long-term adjustment outcomes.

Given the prevalence of bullying and its negative impact on both bullies and victims, it becomes important to understand the factors that contribute to both its maintenance and its reduction. Of initial interest in the present study was replication of previous findings, primarily from other countries (Bru, Murberg, & Stephens, 2001; Okayasu & Takano, 2000; Taki, 1992), that indicate that bullying is more likely among children who experience extensive levels of stress either through major negative life events or daily hassles. To develop this potential link between life stress and bullying behavior, as a form of aggressive behavior, evidence that links aggressive behavior to stressful events is reviewed in the following section.

Stress Studies in Children and Adolescents

Although school children and adolescents face stressful events in response to drastic physical, cognitive, and social changes, the literature on stress among children and adolescents is surprisingly scarce compared to the enormous number of studies examining stress in adults. Since the mid 1980s, however, the number of studies of stress among children and adolescents has increased substantially, although such studies are largely based on the general paradigm used to study stress in adults (e.g., Lazarus & Folkman, 1984). Within this literature, several studies have demonstrated a relation between experiences with stressful life events and psychological/behavioral problems in children and adolescents (e.g., Bennett & Bates, 1995; Compas, Davis, Forythe, & Wagner, 1987; Compas, Howell, Phares, Williams, & Giunta, 1989; MacKinnon-Lewis, Volling, Lamb,

Dechman, Rabiner, & Curtner, 1994; Sterling, Cowen, Weissberg, Lotyczewski, & Boike, 1985; Swearingen & Cohen, 1985).

Following studies of adults, much of the research to date has examined major stressful events as stressors among children and adolescents, although there has been some recent interest in daily hassles as a stressor. According to Lazarus and Folkman's (1984) model, stress reflects an interaction between the person and the environment. Stress is a process that involves a potential stressor, characteristics of a person, and the person's reaction to the stressor (Aldwin, 2000; Lazarus & Folkman, 1984). Major stressful events or changes are one category of stressors, including dramatic and severely taxing incidents that may occur infrequently (e.g., parents' divorce, death of family members) (Compas, 1987). In addition to major life events, however, daily hassles (or minor events) represent another type of stressor and include "the irritating, frustrating, distressing demands that to some degree characterize everyday transactions with the environment" (Kanner, Coyne, Schaefer, & Lazarus, 1981, p.3). Both daily hassles and major stressful events have been identified as stressors that potentially can have negative effects on child and adolescent mental health, physical health, and social and psychological adjustment (for a review see Compas & Phares, 1991; Grant, Compas, & Stuhlmacher, 2003; Johnson, 1986).

The majority of studies have assessed the relationship between stress and general maladjustment indices (e.g., Bennett & Bates, 1995; Compas et al., 1987; Compas et al., 1989; MacKinnon-Lewis et al., 1994; Sterling et al., 1985; Swearingen & Cohen, 1985). These studies have consistently demonstrated that increased stress is associated with a number of negative outcomes, including less social competence with peers, learning

difficulties, depression, anxiety, aggression, psychological and somatic symptoms, in addition to aggression. Other researchers have focused on specific types of psychological/behavioral outcomes, including aggressive behavior (e.g., Atter, Guerra, & Tolan, 1994; Guerra, Huesmann, Tolan, van Acker, & Eron, 1995; Paschall, Ennett, & Flewelling, 1996; Tolan, 1988; Vaux & Ruggiero, 1983). Among these studies, both Guerra et al. (1995) and Atter et al. (1994) found that negative major stressful event experiences were significantly correlated with peer-reported aggressive behavior in school-age children. Children who experienced more negative life events were more likely to be described by peers as aggressive. With adolescent samples, studies have shown that increased antisocial and delinquent behaviors were associated with both the experience of major stressful events (Vaux & Ruggiero, 1983) and the experience of more daily hassles (Tolan, 1988).

Taken together, these studies consistently demonstrate links between stress experiences (both major stressful events and daily hassles) and increased aggressive behavior in children and adolescents. Given evidence linking aggressive behavior to stress experiences, of interest was whether a similar relation was observed between stress experiences and bullying behavior, as a form of aggressive behavior. This hypothesized link was addressed in the next section.

Stress and Bullying

Consistent with studies demonstrating links between stress and increased levels of aggression, results of three studies consistently show that stress is a predictor of bullying behavior. Taki (1992) studied a sample of junior high and elementary school children in Japan. He assessed students' levels of stress, specifically related to school, by asking

students to indicate the degree to which they agreed with or experienced various forms of stress in school across several questionnaire items (e.g., "My teacher scolds me all the time", "School rules are too strict"). Extent of bullying behavior was assessed by a self-report measure. In his study, Taki found that the greater the stress school children and adolescents experienced, the more they reported being bullies.

Okayasu and Takano (2000) examined the levels of school stress reported by both bullies and victims among junior high school students in Japan, distinguishing four different types of stress: stress in peer relationships, stress in teacher relationships, stress in academic performance, and stress in after-school activities. To identify bullies and victims, a self-report measure was used. Okayasu and Takano found that levels of school stress were significantly higher among both bully and victim groups compared to a non-bully/non-victim group across all of these four types of stress. While victims reported the highest levels of stress in academic performance, bullies reported the greatest levels of stress in their relationships with teachers in this study.

In Finland, Bru et al. (2001) found a significant association between the experience of negative major life events and antisocial behavior towards peers (including a subscale of bullying behavior) among young adolescents (aged 14 and 15). In this study, self-report measures were used to assess both levels of major stressful events (e.g., parents divorcing, parents becoming unemployed, self becoming ill, self being harassed) and pupil misbehavior (e.g., bullying others, quarrels and fighting with peers, disruptive behavior). Bru et al. found that the greater the major stressful events young adolescents reported, the more they also reported antisocial behavior toward peers, including increased bullying

behavior.

Taken together, these three studies all demonstrate significant associations between various forms of stress and levels of reported bullying behavior, consistent with established links between stress and more general forms of aggressive behavior. Across studies, children who experienced more stress reported more bullying.

Bullying is a distinctive form of aggressive behavior that shares some of the salient features of general aggressive behavior. Bullying generally has a component of an antisocial behavior pattern such as aggression toward peers and rule-breaking behavior (Olweus, 1991; 1999). Considering these common features between bullying and aggression, it is not surprising that positive relations with stress have been observed not only for general aggressive behavior, but also for bullying. However, the correlations between stress and aggression as well as those between stress and bullying have been modest in previous studies, ranging from .10 to .41 (e.g., Atter et al., 1994; Bru et al., 2001; Guerra et al., 1995; Okayasu & Takano, 2000; Paschall et al., 1996; Taki, 1992; Tolan, 1988; Vaux & Ruggiero, 1983), suggesting that not everyone becomes aggressive or bullies when facing stressful events. Thus, stress accounts for only a small portion of the variance in aggression and bullying behavior. Other variables may moderate or mediate the association between stress and aggression, serving as protective factors that make such negative responses to stress less likely for some individuals.

Accordingly, it is important to consider studies that have examined potential stress-buffering variables in children and adolescents. Among the few studies that have begun to examine this issue, two major stress-buffering variables have been considered –

coping strategies and social support, as discussed in the next section.

The Roles of Coping and Social Support

Coping. Theoretical frameworks for coping with stress in children and adolescents have been derived from studies of coping in adults. The most widely cited definition of coping in adults is that of Lazarus and Folkman (1984) who argue that coping refers to “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of that person” (p. 142). This definition implies that, regardless of positive or negative outcomes, coping strategies include anything that a person thinks and/or does in an attempt to deal with a stressor.

In adult populations, researchers have distinguished between problem-focused and emotion-focused coping (Lazarus & Folkman, 1984) as well as between approach and avoidance coping (Billings & Moos, 1981; Ebata & Moos, 1991). Subsequently, these two theoretical frameworks on coping have been applied to children and adolescents. In the former theoretical distinction, problem-focused coping efforts are those intend to modify the stressor (Lazarus & Folkman, 1984) and are actively directed at making the situation less stressful (Lazarus, 1999). Emotion-focused coping strategies, in contrast, are aimed at regulating emotional states associated with the stressful situation (Lazarus & Folkman, 1984) and involve efforts to reduce the tension or any other psychological arousal that accompanies the stressor.

In the latter distinction, the approach/avoidance-coping model emphasizes the efforts of the person’s coping, which characterized as either approach-oriented (active) or

avoidance-oriented (passive) (Billings & Moos, 1981; Ebata & Moos, 1991). Approach strategies are cognitive or behavioral attempts oriented directly to the stressor, in order to change ways of thinking about the stressful situation or in order to resolve the problem (Roth & Cohen, 1986). With avoidance strategies, the individual attempts to distance him or herself from the stressful situation. Avoidance strategies include cognitive attempts to deny or minimize threat and behavioral attempts to escape from the stressor or relieve tension by expressing emotions (Ebata & Moos, 1991).

Ayers, Sandler, West and Roosa (1996) applied these two-dimensional models to children and adolescents and used confirmatory factor analysis to evaluate the adequacy of these strategies in describing the full range of children's coping strategies. Results of the analysis distinguished four dimensions or strategies for coping: active coping, avoidance, distraction, and support-seeking. Components of each dimension are shown in Figure 1 below. Given that the Ayers et al.'s system provides an integration of both two-dimensional models and appears to capture the strategies reported by children and adolescents, this system is employed in the present study to assess coping strategies that are generally used by children.

<Coping Dimensions>

<Subscales of Dimensions>

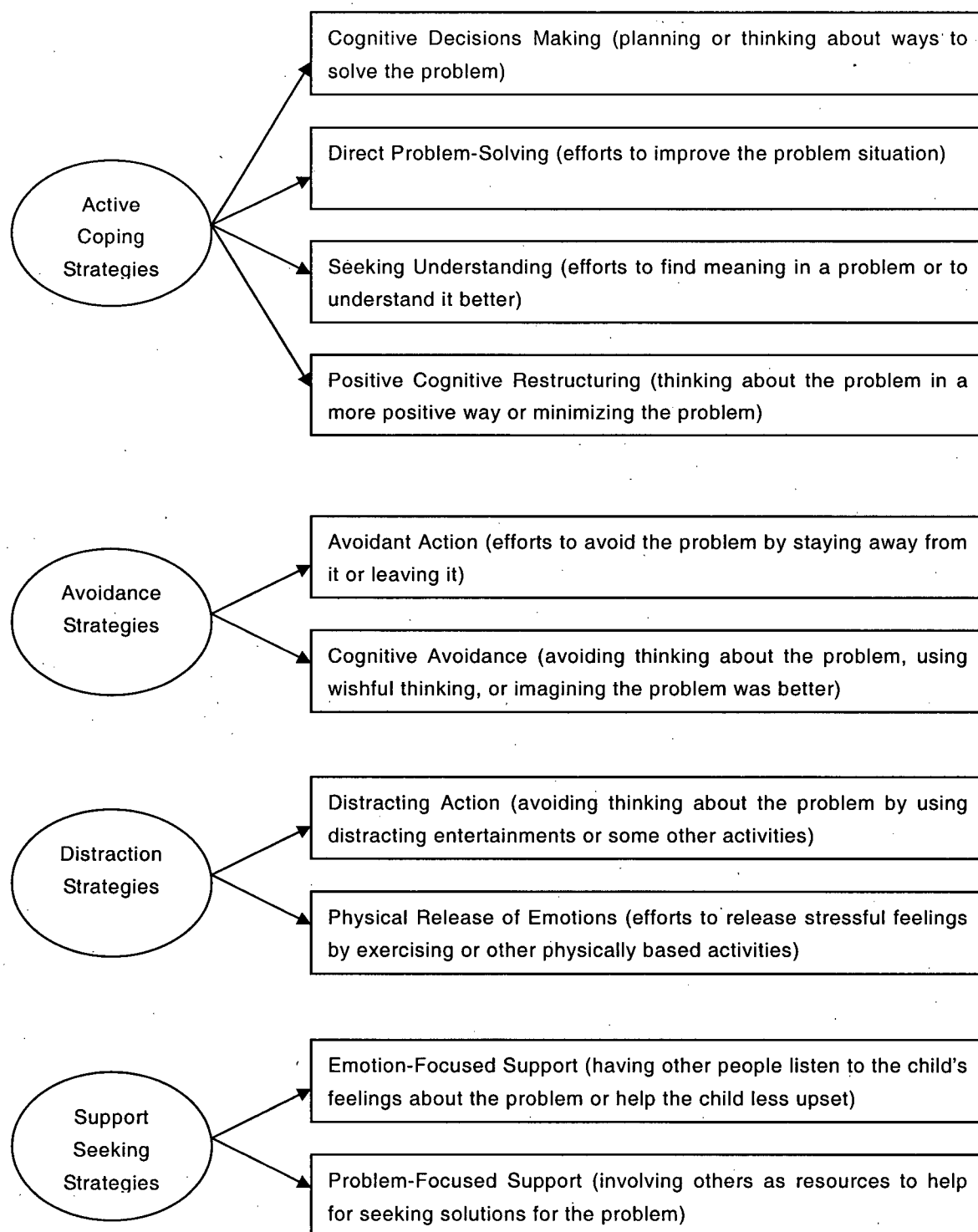


Figure 1. Ayer et al.'s (1996) Model of Children's Coping

In considering variations in how one copes with stress, coping has been conceptualized in two different ways in the adult literature. One view suggests that an individual exhibits particular patterns of coping across situations; that is, ways of coping are seen as a trait-like quality (Billings & Moos, 1984; Costa & McCrae, 1990; Krohne, 1990; Lazarus, 1990). Another view suggests that use of coping strategies varies depending on the situation (Lazarus & Folkman, 1984). Three studies provide empirical evidence supporting the former view, suggesting considerable cross-situational consistency in children and adolescents' coping (Ayers, Sandler, & Twohey, 1998). Among them, Compas, Malcarne and Fondacaro (1988) found correlations ranging from .25 to .43 between coping strategies across academic and interpersonal stressors among adolescents (aged 14). Similarly, Causey and Dubow (1992) as well as Gamble (1994) reported significant correlations in coping strategies across different types of stressors with correlations ranging from .38 to .68 (for Causey and Dubow's study) and from .44 to .62 (for Gamble's study) among children and adolescents. Ayers et al. (1998) suggest that the consistency in coping across situations is considerably higher for children than that reported for adult populations.

Given the empirical evidence that supports cross-situational consistency, I viewed coping strategies as something like personality characteristics, suggesting that people tend to use the same strategies across situations. This perspective was adopted in the present study. Adapting this notion of cross-situational consistency, studies examining the links between coping strategies and psychological/ behavioral problems in children and adolescents have shown that use of problem-focused and active coping strategies is

associated with less maladjustment and fewer internalizing/externalizing problems than use of avoidance and emotion-focused coping strategies (e.g., Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000; Ebata & Moos, 1991; Windle & Windle, 1996). Thus, how individuals cope with stress has implications for long-term adjustment.

To date, only two studies have examined the associations between bullying behavior and coping strategies (Andreou, 2001; Olafsen & Viemerö, 2000). Andreou (2001) identified children (age 9 to 12) as bullies, victims, or both bullies and victims using a self-report measure. Coping strategies were assessed using a self-report inventory concerning coping with conflictual peer interactions, given the lead question, "When I have an argument or a fight with a friend, I usually....". Results indicated that bullies/victims (those who are both bullies and victims) were less likely to employ active/approach (problem-focused) coping strategies than were victims, bullies and students who were not involved as either bullies or victims. Bullies, in turn, were less likely to employ active/approach (problem-focused) strategies than were victims and children who were not involved as either bullies or victims.

Olafsen and Viemerö (2000) identified children (age 10 to 12) as bullies, victims, both bullies and victims, or neither bullies nor victims using a self-report scale. Coping strategies were assessed using a self-report inventory concerning coping with stressful encounters in school (e.g., "take a walk or bike ride", "hit or hurt someone physically"). In this study, results indicated that the bully/victim group tended to use more self-distraction strategies and aggression strategies as compared to other groups (victims, bullies, or children who were neither bullies nor victims).

Thus, few studies have examined links between bullying behavior, stress, and coping but those that have been conducted indicate that, consistent with findings in the aggression literature, children who bully others do tend to experience higher levels of stress (Bru et al., 2001; Okayasu & Takano, 2000; Taki, 1992), but also that children who bully others tend to use less active (Andreou, 2001) and less effective coping strategies (Olafsen & Viemerö, 2000) than do children who do not bully others. Of interest in the present study was whether the nature of how individuals cope affects the link between stress and bullying.

Only one study, to date, has examined the role of coping in the relationship between stress and externalizing behavior. Gonzales, Tein, Sandler, and Friedman (2001) examined the stress-buffering effects of different coping strategies on conduct problems, depression, and achievement in seventh- and eighth-graders. Using a stress measure consisting both life events and daily hassles, and Ayers et al.'s (1996) coping scale (described earlier) distinguishing four dimensions or types of coping strategies (active coping, avoidance coping, distraction, and support seeking), Gonzales et al. found that, among females (but not males), both active coping and distraction coping moderated the relation between family stress and conduct problems. That is, female students who were stressed but who used more active coping and/or distraction coping were less likely to have conduct problems. Active coping includes strategies in which the person makes efforts either to change the situation or to think about it more positively. Distraction coping refers to attempts to engage in an alternative activity (e.g., entertainment) to avoid thinking the problem, which is distinguished from avoidance coping where the person simply avoid or

stop thinking about the problem. Thus, active coping and distraction coping share their effort-like quality in helping to work out stressful situations.

Thus, there is some evidence to suggest that how individuals cope with stress can serve to augment or decrease the likelihood that stressful events will lead to more externalizing types of behaviors, at least for females. Of interest in the present study was whether one's particular coping strategies can similarly buffer the established links between stress and bullying behavior.

In light of the literature reviewed thus far, the present study addresses the links between stress and coping and bullying behavior. First, consistent with bullying and stress research by Bru et al. (2001), Okayasu and Takano (2000), and Taki (1992) as well as aggression and stress research by Atter et al. (1994), Guerra et al. (1995), Paschall et al. (1996), Tolan (1988), and Vaux and Ruggiero (1983), I anticipated that children identified as bullies would report greater levels of stress than children who are neither bullies nor victims, both in terms of daily hassles and major stressful events. The previous studies on bullying and stress (Bru et al., 2001; Okayasu & Takano, 2000; Taki, 1992) were based solely on self-reports. As a result of this single method being used, it is possible that all we have is evidence that children who feel that they are stressed claim to be more antisocial or bullies. Replicating and extending previous studies by examining this link (between stress and bullying) with peer-identified as well as self-identified bullying would also be a contribution to the literature. Second, consistent with research by Andreou (2001) and Gonzales et al. (2001) with regard to the potential associations between bullying and use of particular coping strategies, I expected that children identified as bullies would report less

use of active/approach (problem-focused) coping strategies and less use of distraction coping strategies, relative to children who do not bully others. Third, following results reported by Gonzales et al. (2001) with regard to the potential buffering effects of certain types of coping in reducing the links between family stress and conduct problems in girls, I expected that active coping and distraction coping might moderate the relation between stress and bullying behavior. Specifically, students who employ active and distraction coping strategies were expected to be less likely to perform bullying behavior. Although Gonzales et al.'s study shows these stress-buffering effects among only girls, there has been no other empirical evidence providing such gender differences. Therefore, it is difficult to hypothesize that such gender differences may appear in the present study.

Coping may not be the only factor that moderates the relationship between bullying behavior and stress. In the next section, another potential moderating factor – social support, is discussed.

Social support. Several authors have considered social support to be an important resource to protect children and adolescents from the negative effects of stressful life experiences (e.g., Garmezy, 1983; Johnson, 1986; Nestmann & Hurrelmann, 1994; Rutter, 1983; Seiffge-Krenke, 1995). Social support is generally measured by assessing individuals' perceptions about the degree of support they feel available to them from others. Perceived social support measures generally request a responder to evaluate who and/or how much support the responder think would be available to them if needed. Types of support generally include: emotional support, informational support/advice, social companionship, and instrumental help (Cauce, Mason, Gonzales, Hiraga, & Liu, 1994;

Cohen & Wills, 1985; Reid, Landesman, Treder, & Jaccard, 1989). Emotional support represents the ability to turn to others for comfort and security. Informational support is advice or guidance provided that concerns possible solutions to a problem. Social companionship refers to enjoying being with others, and instrumental help refers to concrete assistance.

Empirically, perceived social support has been shown to be an effective buffer against the negative outcomes of psychological and behavioral problems among children and adolescents. Greater perceived social support tends to moderate the relation between negative outcomes and stress. A study by Dubow and Tisak (1989) revealed significant stress-buffering effects for perceived social support on teacher-rated behavior problems (comprising conduct problems, aggression, attention problems, anxiety, hyperactivity, and psychotic behaviors). In this study, children's stressful life events through parent reports. Social support was assessed using a self-report measure that taps children's perceptions of family, peer, and teacher support. Results indicated that higher levels of perceived social support moderated the relation between major stressful event experiences and teacher-rated behavior problems of children. That is, greater levels of stress were associated with greater teacher-rated behavior problems (comprising conduct problems, aggression, attention problems, anxiety, hyperactivity, and psychotic behaviors) among those children that reported low levels of social support, but not among those that reported high levels of social support.

Other studies have demonstrated stress-buffering effects of perceived social support on psychological distress (i.e., depression and anxiety) (DuBois, Felner, Brand,

Adan, & Evans, 1992), and on teacher-rated school adjustment problems (i.e., acting-out, shy-anxious, and learning problems) (Pryor-Brown & Cowen, 1989), with greater levels of stress being associated with greater psychological and behavioral problems in those that reported low levels of social support, but not in among those that reported high levels of social support. Although these findings do not provide any evidence of the stress-buffering effects of perceived social support on bullying behavior, the present study examines whether the same protective effect of perceived social support will be observed for bullying behavior as well. Some support for this link comes from a recent study by Bru et al. (2001) that showed that perceived social support from parents, teachers, and peers was negatively correlated with pupil misbehavior (including bullying as well as serious conflicts with other pupils, disruptive behavior, quarrels with teachers, truancy, poor concentration in class) among young adolescents (aged 14 and 15). In other words, students who reported low levels of social support tended to display more antisocial behavior to their peers and teachers.

Given the evidence that indicates stress-buffering effects of perceived social support on negative outcomes including aggressive behavior (DuBois et al, 1992; Dubow & Tisak, 1989; Pryor-Brown & Cowen, 1989) and the evidence that indicates the negative correlation between perceived social support and pupil misbehavior (including bullying) (Bru et al., 2001), it was hypothesized that perceived social support would reduce the links between stress from both major life events and daily hassles and the likelihood of bullying behavior. Regarding these roles of coping and social support, a model of stress and bullying was developed, and is illustrated in the next section.

Toward A Model of Stress and Bullying

Considering the theoretical and empirical literature reviewed above, I proposed a model describing possible relationships between stress experiences and bullying behavior, with particular emphasis on the role that coping and social support may play in moderating this relationship. I viewed coping strategies and levels of perceived social support as potential moderators of the stress-bullying relation. That is, the association between experiences of stress and bullying was expected to vary depending on particular types of coping strategies and the levels of perceived social support that are available to the individual. It was expected that the positive relationship between experiences of stressful situations and bullying behavior would be weaker for children/adolescents who report active coping and distraction coping strategies and for those who report higher levels of social support available to them. This model is illustrated in Figure 2.

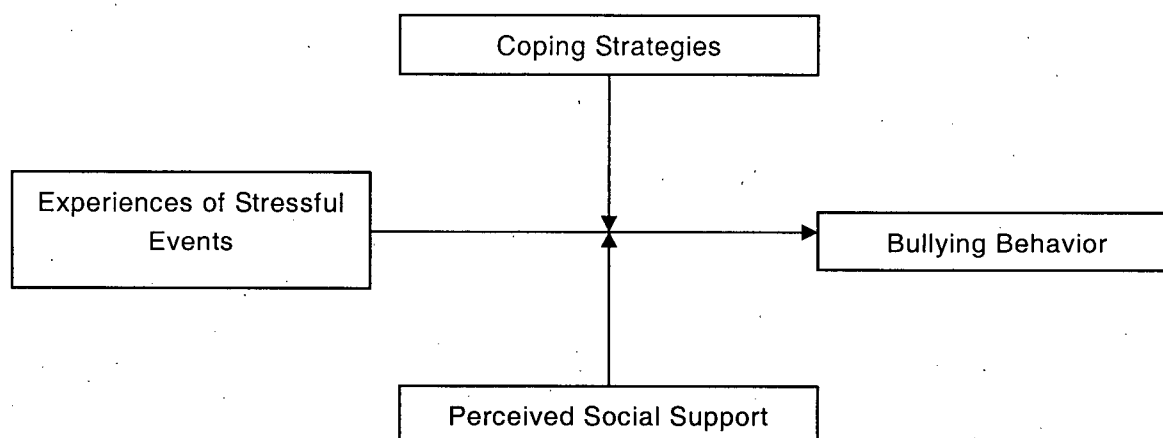


Figure 2. Model of stress and bullying with coping strategies and social support.

Statement of the Problem

The study aimed at exploring the two central questions: a) whether there is a relationship between stress and bullying, and b) whether particular ways of coping and perceived social support moderate the relation between bullying and stress. The following hypotheses were formulated in this study:

1) High levels of stress, in the form of both/either major stressful events and/or daily hassles, will be positively, but modestly related to bullying behavior.

This hypothesis was primarily based on the three studies that have already demonstrated positive relations between high levels of stress experiences and bullying behavior (Bru et al., 2001; Okayasu & Takano, 2000; Taki, 1992). Other studies demonstrating positive relations between high levels of stressful life event experience and general aggressive dimensions of behavioral problems in children and adolescents (e.g., Atter et al., 1994; Guerra et al., 1995; Paschall et al., 1996; Tolan, 1988; Vaux & Ruggiero, 1983) provide additional, albeit indirect support for this hypothesis. Although bullying is a distinctive form of aggressive behavior, it does share salient features with general aggressive behavior. Bullying is one component of an antisocial behavior pattern such as aggression toward peers and rule-breaking behavior (Olweus, 1991; 1999). Therefore, it seemed reasonable to expect a positive relation between stress and bullying as well as general aggression. In addition, this present study aimed to replicate and extend these previous studies (Bru et al., 2001; Okayasu & Takano, 2000; Taki, 1992) by examining this link (between stress and bullying) with peer-identified as well as self-identified bullying.

2) Active coping and distraction coping will moderate the relation between stress

experiences and bullying behavior. Specifically, the positive relations observed between stress and bullying will be greater in a group of individuals who are less likely to use active coping and distraction, compared to a group of individuals who are more likely to use active coping and distraction.

This hypothesis was based on the findings reported by Andreou (2001), investigating the relation between ways of coping and bullying behavior, and by Gonzales et al. (2001), examining the stress-buffering effects of coping on conduct problems, as well as depression and achievement. Following Andreou's (2001) study, which showed that bullies and bully-victims tended to rely less on active/approach (problem-focused) coping strategies, I hypothesized that children/adolescents who perform bullying behavior would report less use of active or problem-focused coping strategies. In terms of the stress-buffering hypothesis, following Gonzales et al.'s study (2001) that indicates the potential buffering effects of certain types of coping in reducing the links between family stress and conduct problems in girls, I hypothesized that greater use of active/approach (problem-focused) coping and distraction coping would moderate the relation between stress and bullying behavior, with less bullying evident when such strategies are employed. Although the Gonzales et al.'s study showed these stress-buffering effects among only girls, it might not be apt for assuming the same result in the proposed study because there has been no other empirical evidence providing such gender differences.

3) Levels of perceived social support will moderate the relation between stress and bullying behavior. Specifically, with low levels of perceived social support, positive relations between stress and bullying behavior are expected, whereas with high levels of

perceived social support, weaker relations between stress and bullying behavior are expected.

This hypothesis was based on previous studies of the positive stress-buffering effects of social support (DuBois et al., 1992; Dubow & Tisak, 1989; Pryor-Brown & Cowen, 1989). Specifically, greater levels of stress have been found to correlate positively with psychological and behavioral problems in individuals who perceived low levels of social support, but not in individuals who perceived high levels of social support. Although these findings do not provide any specific evidence for support of the stress-buffering effects of perceived social support on bullying behavior per se, it seemed reasonable to assume that a similar buffering effect of perceived social support would be demonstrated in bullying behavior as well. In fact, Bru et al. (2001) recently found that perceived social support was negatively correlated with pupil misbehavior (including bullying as well as other antisocial behaviors) among young adolescents. Although this study did not actually investigate the stress-buffering effects of perceived social support, the direct effects of social support on reducing antisocial-like behavior is consistent with this hypothesis. Specifically, I proposed that perceived social support would moderate the relation between stress and bullying behavior in that students who indicated low levels of perceived social support would be more likely to demonstrate bullying behavior, whereas students who indicated high levels of perceived social support would be less likely to demonstrate bullying behavior.

Methodology

Participants

Students in fifth- through seventh-grade classrooms ($N = 387$) from four elementary schools in Vancouver, British Columbia were recruited. Of these students, participants included 312 students (165 females and 147 males), ranging in age 9 to 13 years ($M = 11.20$ years). The sample contained a variety of different ethnic backgrounds, including approximately 64% Asian Canadian, followed by 16% White, 3% Indo, 3% Latin, 2% First Nations, 2% Black, and 10% "Other" (non-specified or mixed). The overall participation rate was 81%. The distribution of the participants by grade level and gender is presented in Table 1. The grade 5-7 age range was selected because previous research indicates that bullying behavior is particularly evident within this age group (Menesini, Elsea, Smith, Genta, Giannetti, Fonzi, & Costabile, 1997; Morita et al., 1999; Nancel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt, 2001), and decreases somewhat at later ages (Whitney & Smith, 1993).

Table 1

Distribution of Participants by Grade Level and Gender

Grade	Girls (n)	Boys (n)
4 ¹	4	6
5	51	43
6	47	49
7	63	49

Measures

Demographic information. To obtain descriptive information about the sample, participants were asked to provide information on their a) gender, b) birth date/age, c) grade, and d) ethnic background (see Appendix A-1).

Bullying behavior. To assess bullying behavior, both self-reports and peer assessments were used. Specifically, the bullying subscale from a self-report instrument – the Bullying Survey Questionnaire (Hymel et al., 2002; see Appendix A-2) and a modified peer assessment item, “Who is a bully?” (Vaillancourt, 2001; see Appendix A-3) were used. My decision to use self-reports as well as peer-reports as opposed to teacher report indices of bullying and victimization was based on several considerations. First, bullying incidents tend to occur in the absence of adults (Morita & Kiyonaga, 1996; Olweus, 1987; Pellegrini & Bartini, 2000). Moreover, studies have shown that teachers tend to overlook some types of bullying, especially relational aggression types (e.g., threatening someone for money,

¹ These 10 fourth-graders were included in this study because they were classmates in a combined class with fifth graders.

excluding someone from the group) (Morita et al., 1999). Therefore, it seems reasonable to consider use of adults (i.e., teachers, parents) as informants to be inadequate. Peers may have difficulty identifying less visible and subtler forms of bullying behavior in peer-reports (Pellegrini & Bartini, 2000). Students may underestimate their own bullying behavior in self-reports (Pellegrini & Bartini, 2000; Perry, Kusel, & Perry, 1988). However, utilizing both self and peer measures complement each other in identifying bullies and bullied students (Juvonen, Nishina, & Graham, 2001; Pellegrini, 2001; Pellegrini & Bartini, 2000).

The 3 self-report items², completed in approximately 5 minutes, were designed to assess three different forms of bullying behavior – physical, verbal, and relational (e.g., “How often have you taken part in physically bullying another student?”, “How often have you taken part in verbally bullying another student through insults or threats?”, “How often have you taken part in bullying another student through exclusion, rumors, or making someone look bad?”). For each item, participants responded by indicating “Not at all”, “Only a few times this year”, “Every month”, “Every week” or “Many times a week”, scored 1, 2, 3, 4, or 5. To make the self-report items comparable with the peer assessment items, one general bullying item (i.e., “How often have you taken part in bullying another student?”) was included in this self-report measure. Since a single, overall index of bullying was considered in the present study, a composite bullying score was computed by creating a mean of the responses across all three items, with higher scores indicating

² Comparable items tapping perceived victimization and witness of bullying were included, but results are not relevant to the present study.

greater bullying behavior.

Following Vaillancourt (2001), a single peer assessment item, “Who is a bully?” was used to evaluate peer perceptions of bullying. Participants were asked to identify classmates of both sexes who best fit the descriptor, with unlimited number of nominations accepted. The number of nominations received for the item from all peers were summed and standardized within class in order to permit comparisons across classrooms differing in size (i.e., based on nominations from all classmates). In addition, the nominations received from same-sex peers were summed and standardized within class and gender groups in order to permit comparisons across classrooms and gender groups. Higher scores reflected a greater percentage of peers identifying a student as a bully. This item was embedded with items of four other subscales³ as fillers including positive items: a) prosocial behavior subscale, b) competitive subscale, c) peer perceived popularity subscale, and d) victimization subscale (see Appendix A-3). Participants completed these peer assessment questions in approximately 10 minutes.

Stress. Both negative life events and daily hassles were considered to be important stressors (Compas, 1987; Grant et al., 2003; Johnson, 1986). In this study, the Children’s Hassles Scale (CHS: Kanner, Feldman, Weinberger, & Ford, 1987) was used to assess student daily hassles and the Major Event Inventory (Elwood, 1987) was used to assess major stressful events.

The CHS is a 25-item, self-report measure, consisting of day-to-day concerns of

³ Prosocial and popularity subscale items were drawn from the peer assessment (Vaillancourt, 2001), and competitive subscale item(s) was drawn from Matthews and Angulo (1980). Comparable items tapping victimization were also included in this peer assessment instrument, but results are not relevant to this present study.

school-age children (see Appendix A-4). The items were originally generated from the responses of children and early adolescents. The internal consistency of the scale has been found to be highly satisfactory (Cronbach's $\alpha = .87$ [Kanner et al., 1987]) among sixth graders. Participants were asked to rate whether or not each of 25 different hassles happened, and the extent to which each item is a hassle they experienced during the past one month on a 4-point scale (1 = didn't happen, 2 = didn't feel bad, 3 = felt sort of bad, 4 = felt very bad). Participants completed this scale in approximately 10 minutes. A mean of the 25 items was computed as an overall index of daily hassles, with higher scores indicating greater stressfulness of daily hassles experiences.

The Major Event Inventory (Elwood, 1987) is a self-report inventory consisting of a list of 8 major stressful events (see Appendix A-5). The items were originally generated by seventh graders. Previous research (Elwood, 1987) has demonstrated the psychometric adequacy of the scale, with internal consistency estimates of .60, and stability estimates (test-retest correlations) ranging from .53 to .84 over a two-week period. Participants were asked to rate degree of stressfulness of major life events on a 5-point scale (1 = has not happened, 2 = no trouble, 3 = bothersome, 4 = stressful, 5 = very stressful). A double rating scale – “How do I feel now when I think about the event?” and “How did I feel when the event actually happened?” was included. Consistent with the scoring on daily hassles, the mean of the 14 items⁴ (i.e., 7 items for each – “when” and “now”) was computed as an overall index of major stressful events, with higher scores indicating greater levels of reported stress.

⁴ The item 8 – “Another life events that happened to me (please describe):” was included, but results are not relevant to the present study.

Overall, in terms of psychometric quality and appropriateness for the age group chosen in the present study, these measures appeared reasonable for use. Studies have indicated that daily hassles are more strongly associated with psychological symptoms than major stressful events in both adults (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982, Kanner et al., 1981) and youth (Compas et al., 1987), although both represent important stressors in one's life. Moreover, the relative influence of each type of stressor on bullying behavior per se has not been examined. Examination of the correlations between both major stressful events and daily hassles on children's bullying behavior was a secondary focus of this study.

Coping. Participants' coping strategies were assessed using the Children's Coping Strategies Checklist (CCSC; Ayers et al., 1996). This is a 45-item, self-report measure in which children report how often they used each coping strategy to try to solve a problem or make themselves feel better. Responses were indicated on a 4-point scale (1 = never, 4 = most of the time). The entire scale required approximately 15 minutes to complete (see Appendix A-6).

As described previously, this coping measure is based on a theoretically-derived factor structure (e.g., Connor-Smith et al., 2000; Walker, Smith, Garber, & van Slyke, 1997). Ayer and his colleagues (1996) created coping strategy descriptions based on theoretical dimensions of problem-focused versus emotion-focused coping as well as active (approach/engagement) versus passive (avoidance/disengagement) coping dimensions, and used confirmatory factor analyses to test conceptual models of the structure of coping in a sample of 9- through 13-year-old children. Results indicated that

coping strategy items represented four factors (dimensions): a) active coping, b) avoidance, c) distraction, and d) support seeking. The internal consistency reliabilities for each dimension were adequate: .88 for active coping, .77 for avoidance, .72 for distraction, and .75 for support seeking.

Student responses to items included in each of the 4 subscales of the CCSC were averaged to create an overall (mean) index for each type of coping. Higher scores reflected greater use of a particular coping style in each case.

Social support. Participants' perceived social support was measured using subscales from the Relational Provisions Loneliness Questionnaire (RPLQ; Hayden Thomson, 1989; see Appendix A-7). This measure consists of four 7-item subscales that assess perceived social support from peers and family members, respectively, with regard to both "intimacy" (having people to go to with problem) and "integration" (having a group you can be with or do things with). Only the "intimacy" subscale was used in the present study. Also, for the present study, a third subscale was created to tap the availability of teachers as a third source of social support. The items appear identical across these three subscales, apart from changes in the referent of the statement (e.g., "There is someone my age I can turn to" vs. "There is someone in my family I can turn to" vs. "There is a teacher I can turn to"). Participants responded to each item by indicating "YES", "yes", "sometimes", "no" or "NO", scored 5, 4, 3, 2, or 1. The big "YES" indicated, "really or always true" for a responder, and the small "yes" indicated "kind of or sometimes true". The small "no" referred to "not really true or not usually true", and the big "NO" referred to "not at all true". Scores on items included within each subscale were

summed and divided by 7 (the number of items within that dimension) in order to create overall indices of social support scores across peers, family, and teachers. Higher mean scores reflected greater perceived social support in each case. In a sample of school students (grades 3-8), the internal consistency for peer support and family support subscales ranged from .82 to .93 (Cronbach's alpha) (Hayden Thomson, 1989). Thus, in terms of psychometric quality and appropriateness for the age group chosen for the proposed study, this measure seemed particularly useful as a measure of social support in the present study.

Participants completed all three subscales in approximately 10 minutes.

Procedures

After obtaining permission from the school staff (principals, teachers) regarding interest in the study, the school board approval, and behavioral research ethics board approval from the University of British Columbia, I established communication with students in grades five, six, and seven in their classrooms. After hearing a description of the nature of the study by the experimenter, students took home parent consent letters (see Appendix B-1) that explicitly stated the purpose of the research and requirements for written consent. In response to requests from principals, the parent consent letters were also translated into Chinese (i.e., simplified Chinese). Students were informed that those who return completed permission slips (regardless of whether or not permission is granted) were eligible to win a \$15 gift certificate at their local book store or movie theatre. After obtaining written permission from parents, testing sessions were arranged with participating classroom teachers.

Approximately 1 to 5 months before the end of the school year (2003), students who received parental permission and who themselves agreed to participate (see Appendix B-2) participated in a single group-testing session, approximately 50 to 60 minutes in length. During the session, students completed a demographic information questionnaire (Appendix A-1), the Bullying Survey Questionnaire (Appendix A-2), the peer assessment measure (Appendix A-3), the Children's Hassles Scale (CHS) (Appendix A-4), the Major Event Inventory (Appendix A-5), the Children's Coping Strategies Checklist (CCSC) (Appendix A-6), and the Relational Provisions Loneliness Questionnaire (RPLQ; Appendix A-7) in their classrooms.

Results

The results section is organized in the following manner. First, preliminary analyses examine the reliabilities of and intercorrelations among the measures used in the present study. Subsequently, the primary analyses are presented, evaluating the proposed moderation model using regression analyses procedures, as described by Baron and Kenny (1986).

Preliminary Analyses

Reliability analyses. Prior to testing the major hypotheses of the present study, reliability analyses (coefficient alpha) were performed to examine how consistent the actual items were within each measurement scale for the present sample. Adequate internal consistency was obtained for each of the scales, including the Bullying Survey Questionnaire ($\alpha = .72$), the Children's Hassles Scale (CHS) ($\alpha = .83$), each of the four dimensions of Children's Coping Strategies Checklist (CCSC) ($\alpha = .87$ for Active Coping, .76 for Avoidance Coping, .74 for Distraction Coping, and .70 for Support Seeking Coping), and Relational Provisions Loneliness Questionnaire (RPLQ) subscales ($\alpha = .87$ for Support from Friends, .90 for Support from Family, and .90 for Support from Teachers).

Correlational analyses were conducted to assess the interrelations among the measures included in the present study. One-tailed tests of significance were used in the present study because there was a specific direction to the hypothesis being tested. Results are presented in Table 2. As seen in the table, the relationship between the two different indices of stress (i.e., major stressful events and daily hassles) was reasonably high (r

= .57), consistent with previous research (DuBois et al., 1992; Jose, D'Anna, Cafasso, Bryant, Chiker, Gein, & Zhezmer, 1998). Given the magnitude of this correlation, use of a composite measure of overall stress is appropriate, as verified by the very strong correlations observed between the overall stress composite score and its components, the major stressful events scale ($r = .90$) and the daily hassles scale ($r = .87$). Follow-up analyses, however, were conducted to examine whether the relations between stress and bullying are consistent across these two conceptually distinct types of stress.

Not surprisingly, the two peer assessment indices of overall bullying, one based on same-sex nominations and the other based on nominations from all peers, substantially overlapped ($r = .90$), suggesting considerable redundancy between these two measures. In subsequent analyses, peer assessments based on nominations from all peers were used, reflecting the collective judgment of the entire classroom group. In terms of the self-reports, verbal bullying ($r = .84$) shares the biggest proportion of variance with the composite index of bullying, followed by relational bullying ($r = .78$) and physical bullying ($r = .58$).

Self-reports and peer assessments of bullying were significantly but only marginally related, regardless of the specific measure used (range from $r = .14$ to $.32$, see Table 2). The relatively low magnitude of these correlations raises questions regarding whether or not these two sources are tapping the same construct, which is consistent with earlier research (Pellegrini & Bartini, 2000).

When correlations were computed separately for girls and boys, the overall pattern of correlations observed (see Table 3) indicated noteworthy differences. First, the overall

relation between self-report and peer assessments of overall bullying was stronger for girls ($r_s = .34, .31$) than for boys ($r_s = .13, .16$). When different forms of self-reported bullying were considered, significant relations between self-reports and peer assessments (same-sex nominations and both-sex nominations) emerged for verbal and relational only for girls ($r_s = .22, .20$ and $r_s = .31, .29$, respectively) not boys ($r_s = .08, .12$ and $r_s = .08, .10$, respectively), whereas similar associations were observed between self-reports and peer assessments for physical bullying for both girls and boys.

Given these correlational results, subsequent analyses initially considered the overall composite index of stress (combining major stressful events and daily hassles), with follow-up analyses examining each type of stress separately. Peer assessments of bullying were based on nominations from all peers, not just same-sex peers. The overall self-report composite index of bullying, combining self-reports of physical, verbal and relational bullying, was first considered, with secondary, follow-up analyses conducted to determine whether patterns of relations obtained were consistent across different forms of bullying. Finally, given the relatively low magnitude of the correlation observed between peer and self reports of bullying, primary analyses were conducted for each index separately, with initial consideration of whether both peer and self assessments of bullying were related to reported stress.

Testing of Hypotheses

Three major hypotheses were tested in the present study, as described below.

Hypothesis 1: High levels of stress, in the form of both/either major stressful events and/or daily hassles, will be significantly and positively related to bullying behavior.

However, the correlation will be modest.

Contrary to expectations, results of correlational analyses (see Table 2) indicated that peer assessments of bullying were not significantly related to self-reported stress, regardless of the stress measure considered. Self-reported bullying, however, was significantly related to reported stress, for both the overall composite measure of stress ($r = .32$), and for reported major stressful events and daily hassles ($r = .28$ for both). Although somewhat weaker, significant correlations were also observed between reported stress and separate reports of different forms of bullying (r s ranging from .15 to .17 with physical bullying, from .20 to .23 for verbal bullying and from .26 to .29 for relational bullying).

When separate correlational analyses were conducted for boys and girls (see Table 3), links between composite stress and self-reported bullying were somewhat stronger for boys than for girls (r s = .38 vs. .27), although this appeared to be primarily due to major stressful events (r s = .37 vs. .22) rather than daily hassles (r s = .29 vs. .28). When different forms of bullying (self-reported) were considered, significant relations between stress (composite, major stressful events, daily hassles) and physical bullying were only evident for boys, not girls ($r = .08$ to .09 for girls, $r = .21$ to .25 for boys), whereas similar (albeit modest) relations were observed between stress and both verbal and relational bullying for both girls and boys.

Given these findings, subsequent primary analyses examining the moderating effect of coping and social support on the links between stress and bullying could only be conducted for self-reported bullying, not peer assessed bullying.

Table 2

Intercorrelations Among Study Variables

Variable	1	2	3	4	5	6	7	8	9
1.Composite stress	1.00								
2.Major stressful events	.90**	1.00							
3.Daily hassles	.87**	.57**	1.00						
4.Peer assessment bullying-same sex nominations	.04	.06	.01	1.00					
5.Peer assessment bullying-both sex nominations	.03	.05	-.00	.90**	1.00				
6.Composite self-reported bullying	.32**	.28**	.28**	.23**	.23**	1.00			
7.Physical bullying (self-report)	.17**	.15**	.15**	.19**	.18**	.58**	1.00		
8.Verbal bullying (self-report)	.23**	.21**	.20**	.14**	.16**	.84**	.34**	1.00	
9.Relational bullying (self-report)	.29**	.26**	.26**	.20**	.18**	.78**	.17**	.44**	1.00

Note. All correlations are one-tailed.

** $p < .01$.

Table 3

Intercorrelations Among Study Variables by Gender

Variable	1	2	3	4	5	6	7	8	9
1.Composite stress	1.00								
Girls									
Boys									
2.Major stressful events		1.00							
Girls	.92**								
Boys	.89**								
3.Daily hassles			1.00						
Girls	.88**	.61**							
Boys	.86**	.53**							
4.Peer assessment bullying-same sex				1.00					
Girls	.06	.09	.02						
Boys	.02	.03	.01						
5.Peer assessment bullying-both sex					1.00				
Girls	.07	.10	.02	.91**					
Boys	.00	.02	-.02	.89**					
6.Composite self-reported bullying						1.00			
Girls	.27**	.22**	.28**	.34**	.31**				
Boys	.38**	.37**	.29**	.13	.16*				
7.Physical bullying (self-report)							1.00		
Girls	.09	.09	.08	.21**	.20**	.57**			
Boys	.25**	.23**	.21**	.17*	.16*	.58**			
8.Verbal bullying (self-report)								1.00	
Girls	.20*	.14*	.22**	.22**	.20**	.85**	.46**		
Boys	.29**	.30**	.20**	.08	.12	.82**	.24**		
9.Relational bullying (self-report)									1.00
Girls	.28**	.23**	.28**	.31**	.29**	.77**	.10	.42**	
Boys	.31**	.29**	.25**	.08	.10	.80**	.24**	.48**	

Note. All correlations are one-tailed.

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

Hypothesis 2: Active coping and distraction coping will moderate the relation between stress experiences and bullying behavior. Specifically, the positive relations observed between stress and bullying will be greater among individuals who are less likely to use active coping and distraction, compared to individuals who are more likely to use active coping and distraction.

Following Baron and Kenny (1986), a three-step analytical approach was used to test this hypothesis. As noted above, since self-reported bullying but not peer-assessed bullying was significantly associated with stress, only self-reported bullying was used to test the hypothesis.

Regression analyses were used to examine whether particular coping strategies moderated the relationship between stress and bullying behavior. This was tested by the Stress \times Coping interaction terms. For these analyses, bullying behavior (self-reported) was used as the criterion variable and reported stress as the predictor, along with coping strategies. Separate analyses were conducted for each of the four coping strategies (i.e., active coping, avoidance coping, distraction coping, and support seeking). There were three causal paths to be considered in testing the potential moderating effect of coping on the relationship between stress and bullying: a) the impact of stress as a predictor (path a), b) the impact of coping strategies as a predictor (path b), and the interaction of these two as a predictor of bullying (path c). According to Baron and Kenny, if the interaction is significant, the hypothesized moderator model is supported.

A series of four hierarchical multiple regression analyses was conducted (one for each coping strategy), consistent with those suggested by Cohen, Cohen, West, and Aiken

(2003) and used by others in similar studies (e.g., Dubow & Tisak, 1989; Gonzales et al., 2001). Before being entered into the regression analyses, predictor variables were “centered” (i.e., put in deviation form by subtracting their means from each observed score) following the procedure recommended by Aiken and West (1991) and Cohen et al. (2003) for interpretation of interactions (e.g., avoiding computational difficulties) (Aiken & West, 1991). The overall composite stress index and coping (i.e., active, avoidance, distraction, or support seeking) were entered simultaneously in the first step of the regression(s) as predictors of bullying. In the second step, the interaction terms between the stress and coping variables were entered as predictors of bullying. For each regression analysis, R Square Change ($R^2\Delta$) was computed with statistical significance of the increment (i.e., F Change [$F\Delta$]) to test whether there was a moderator effect (Pedhazur, 1997).

Second, in order to follow-up on significant effects, simple slope analyses were conducted using procedures outlined by Aiken and West (1991). Following this procedure, students’ reports of each coping were used to separate participants into three groups (giving a mean \pm 1 standard deviation split), reflecting low, medium, and high levels of the particular coping. The relation between stress and bullying was then examined for each group. If this relation differed across the low, medium, and the high levels of a coping strategy, the hypothesized moderator model would be supported. Operationally, the relation between stress and bullying was estimated in the value of the coefficient (β [beta]) of stress (a predictor) at each level of a moderator (a particular coping strategy). By comparing the regression coefficients (β s) which represent gradients of the regression lines

across low, medium, and high levels of coping, we can see how the relation between stress and bullying changes in accordance with different levels of coping used (Cohen et al., 2003; Pedhazur, 1997). Finally, simple slopes were plotted, producing a graphic display, to examine the nature of significant interactions.

As seen in Table 4, of the four coping strategies, the interaction term obtained for distraction coping was the only one that was significantly associated with the composite stress index ($F \Delta s = 5.60, p < .05$). Follow-up analyses (i.e., simple slope analyses) were conducted to test the significant relation between bullying and the composite stress as a function of different levels of distraction used. Results from the follow-up analyses (see Table 5) indicated that the relation between the composite stress index and self-reported bullying was stronger for children who reported high levels of distraction coping relative to those who reported low levels of distraction coping (β s for low, medium, and high levels of distraction coping = .10, .32, and .59). That is, greater overall stress was more likely to be associated with increased bullying among children who relied on more distraction coping strategies. Figures 3 and 4, however, show that at low levels of stress, bullying was significantly higher for children who use low levels of distraction coping relative to those who use high levels of the coping. As the levels of the stress increased, the role of distraction coping reversed. That is, although at high levels of stress, greater stress was associated with more bullying for those who relied on distraction coping, at low levels of stress, the opposite pattern was evident.

A similar series of regression analyses was conducted to consider these relations for different types of stressors, evaluating major stressful events and daily hassles

separately. Results indicated that the moderation pattern observed for overall composite stress was only evident for major stressful events, not daily hassles (see Figure 4). In other words, at high levels of major stressful events, greater major stressful events were associated with more bullying for those who relied on distraction to cope. At low levels of major stressful events, however, the opposite pattern was evident.

Subsequent analyses examined whether this pattern of moderation held for different forms of self-reported bullying (i.e., physical, verbal, and relational). Accordingly, three separate regression analyses were conducted, one for each of the forms of bullying (i.e., physical, verbal, and relational). Once again, only distraction coping was found to have a significant impact on the stress-bullying relationship, but this relationship varied across the three forms of bullying (see Table 6). Specifically, the moderation pattern observed for overall stress was only evident for physical and relational bullying, but not verbal bullying ($F \Delta s = 7.90, p < .01$ for physical; $4.22, p < .05$ for relational; and $.55, ns$ for verbal). That is, at high levels of stress, greater stress was associated with more physical bullying or relational bullying not verbal bullying for those who relied on distraction coping. However, as indicated in Figures 5 and 8, at low levels of stress, the opposite pattern was found.

Furthermore, a similar series of regression analyses were conducted to consider these relations for different types of stressors, evaluating major stressful events and daily hassles separately for these different forms of bullying. As seen in Tables 6 and 7, and depicted in Figures 6, 7, and 9, results showed that the moderation pattern observed above was evident for major stressful events for both physical and relational bullying ($F \Delta s =$

4.14, $p < .05$; and 4.02, $p < .05$; respectively). However, the pattern was evident for daily hassles only for physical bullying ($F \Delta = 7.91$, $p < .01$), not relational bullying. That is, at high levels of major stressful events, greater major stressful events were associated with more physical and relational bullying for those who relied on distraction coping, whereas at low levels of major stressful events, the opposite pattern was evident. On the other hand, greater daily hassles were associated with more physical bullying, not relational bullying at high levels of daily hassles, while the opposite pattern was evident at low levels of daily hassles.

Finally, when separate regression analyses were conducted for gender, distraction coping, again, was the only coping strategy that significantly interacted with stress, but only for girls. As seen in Table 8, the significant interaction term was found only with the major stressful events ($F \Delta = 4.19$, $p < .05$). As shown in Figure 10, at low levels of major stressful events, high distraction coping related to lower bullying behavior among girls, but at higher levels of the coping, high distraction coping related to higher bullying behavior. The regression coefficients for this simple slope analysis are provided in Table 9.

In summary, although we predicted that both active coping and distraction coping would moderate the positive relation between stress and bullying, the hypothesis was not fully supported. Active coping was not found to exhibit a moderation effect on the stress-bullying link. In terms of distraction coping, however, the findings indicated that at low levels of stress, bullying behavior was significantly lower for children who reported high levels of distraction coping relative to those who reported low levels of distraction coping, providing partial support for the moderator hypothesis of distraction coping,

although the opposite pattern was evident at high levels of stress. This pattern was always found for subsequent analyses. However, there were several other critical findings to note in the present study. First, when separate regression analyses were conducted for different types of stressors (i.e., major stressful events and daily hassles), the moderation pattern observed for composite stress was only evident for major stressful events, not daily hassles. Second, from separate regression analyses for different forms of bullying, the same pattern was found only for physical and relational bullying, not verbal bullying. Also, this pattern was evident for major stressful events for both physical and relational bullying, whereas that was evident for daily hassles only for physical bullying not relational bullying. Finally, separate regression analyses for gender revealed that the same pattern of moderation held only for major stressful events, not daily hassles, and only for girls, not boys.

Table 4

Summary of Regression Analysis for Bullying as A Function of Stress and Coping

Variable	R^2	ΔR^2	ΔF
Active coping			
Step 1			
Composite stress			
Active coping	.11		
Step2			
Composite stress x Active coping	.11	.00	.32
Step 1			
Major stressful events			
Active coping	.08		
Step 2			
Major stressful events x Active coping	.09	.00	.84
Step1			
Daily hassles			
Active coping	.08		
Step 2	.08	.00	.10
Daily hassles x Active coping			
Avoidance coping			
Step 1			
Composite stress			
Avoidance coping	.10		
Step2			
Composite stress x Avoidance coping	.11	.00	.84
Step 1			
Major stressful events			
Avoidance coping	.08		
Step 2			
Major stressful events x Avoidance coping	.08	.00	.82
Step1			
Daily hassles			
Avoidance coping	.08		
Step 2			
Daily hassles x Avoidance coping	.08	.00	.15

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

(continued)

Table 4

Continued

Variable	R^2	ΔR^2	ΔF
Distraction coping			
Step 1			
Composite stress			
Distraction coping	.11		
Step 2			
Composite stress x Distraction coping	.13	.02	5.60*
Step 1			
Major stressful events			
Distraction coping	.09		
Step 2			
Major stressful events x Distraction coping	.11	.02	5.38*
Step 1			
Daily hassles			
Distraction coping	.09		
Step 2			
Daily hassles x Distraction coping	.10	.01	2.46
Support seeking coping			
Step 1			
Composite stress			
Support seeking	.11		
Step 2			
Composite stress x Support seeking	.12	.00	1.45
Step 1			
Major stressful events			
Support seeking	.09		
Step 2			
Major stressful events x Support seeking	.09	.00	1.35
Step 1			
Daily hassles			
Support seeking	.09		
Step 2			
Daily hassles x Support seeking	.09	.00	.26

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

Table 5

Summary of Simple Slope Analyses for Bullying as A Function of Stress and Coping

Variable	Moderator level	β	Intercept
Distraction coping Composite stress	High	.59***	1.36
	Medium	.32***	1.38
	Low	.10	1.34
Major stressful events	High	.47***	1.35
	Medium	.24***	1.38
	Low	.04	1.35

Note. Unstandardized coefficient (β) was used for the analyses according to the procedures outlined by Aiken and West (1991)

* $p < .05$. ** $p < .01$. *** $p < .001$

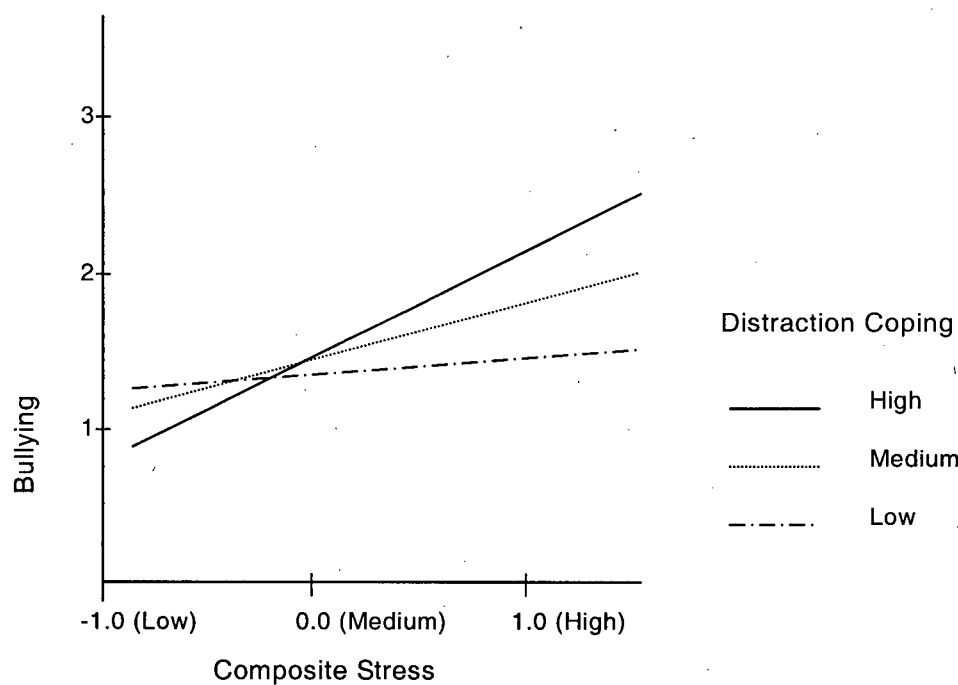


Figure 3. Plotted simple slopes for the relation of bullying to composite stress at 3 levels of distraction coping.

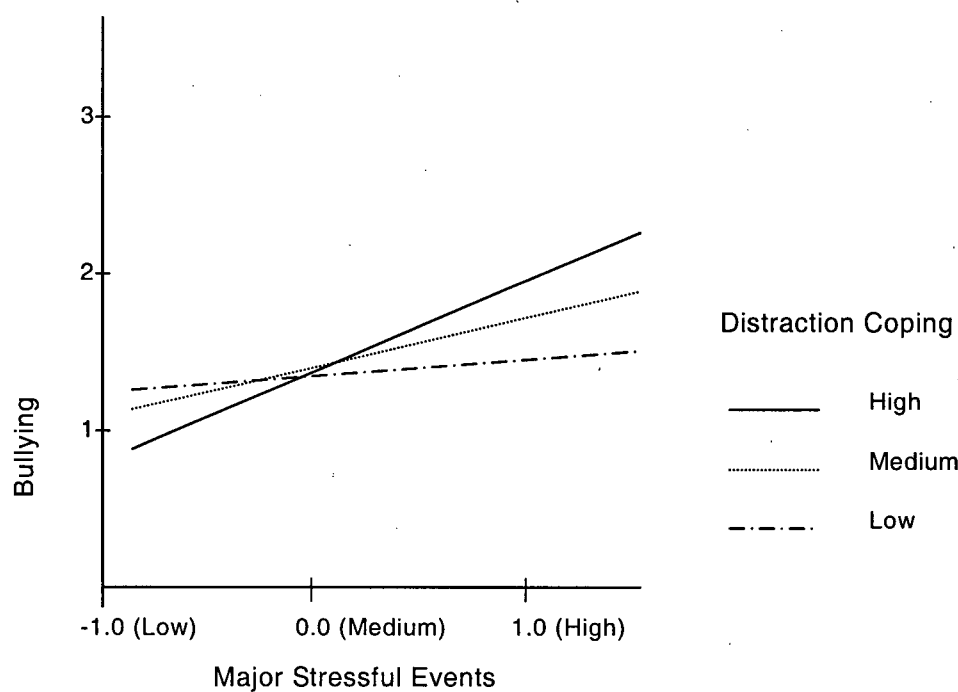


Figure 4. Plotted simple slopes for the relation of bullying to major stressful events at 3 levels of distraction coping.

Table 6

Summary of Regression Analyses for Different Forms (i.e., Physical, Verbal, and Relational) of Bullying

Variable	R^2	ΔR^2	ΔF
Physical bullying			
Active coping			
Step 1			
Composite stress			
Active coping	.03		
Step 2			
Composite stress x Active coping	.03	.00	.04
Step 1			
Major stressful events			
Active coping	.02		
Step 2			
Major stressful events x Active coping	.02	.00	.11
Step 1			
Daily hassles			
Active coping	.02		
Step 2			
Daily hassles x Active coping	.02	.00	.01
Avoidance coping			
Step 1			
Composite stress			
Avoidance coping	.03		
Step 2			
Composite stress x Avoidance coping	.03	.00	.13
Step 1			
Major stressful events			
Avoidance coping	.02		
Step 2			
Major stressful events x Avoidance coping	.03	.00	.49
Step 1			
Daily hassles			
Avoidance coping	.03		
Step 2			
Daily hassles x Avoidance coping	.03	.00	.00

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

(continued)

Table 6

Continued

Variable	R^2	ΔR^2	ΔF
Physical bullying (continued)			
Distraction coping			
Step 1			
Composite stress			
Distraction coping	.03		
Step 2			
Composite stress x Distraction coping	.05	.02	7.90**
Step 1			
Major stressful events			
Distraction coping	.02		
Step 2			
Major stressful events x Distraction coping	.04	.01	4.14*
Step 1			
Daily hassles			
Distraction coping	.02		
Step 2			
Daily hassles x Distraction coping	.05	.02	7.91**
Support seeking coping			
Step 1			
Composite stress			
Support seeking	.03		
Step 2			
Composite stress x Support seeking	.03	.00	.21
Step 1			
Major stressful events			
Support seeking	.02		
Step 2			
Major stressful events x Support seeking	.03	.00	.50
Step 1			
Daily hassles			
Support seeking	.02		
Step 2			
Daily hassles x Support seeking	.02	.00	.09

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

(continued)

Table 6

Continued

Variable	R^2	ΔR^2	ΔF
Verbal bullying			
Active coping			
Step 1			
Composite stress			
Active coping	.06		
Step 2			
Composite stress x Active coping	.06	.00	.35
Step 1			
Major stressful events			
Active coping	.05		
Step 2			
Major stressful events x Active coping	.05	.00	.62
Step 1			
Daily hassles			
Active coping	.04		
Step 2			
Daily hassles x Active coping	.04	.00	.00
Avoidance coping			
Step 1			
Composite stress			
Avoidance coping	.05		
Step 2			
Composite stress x Avoidance coping	.06	.01	1.82
Step 1			
Major stressful events			
Avoidance coping	.04		
Step 2			
Major stressful events x Avoidance coping	.05	.01	2.45
Step 1			
Daily hassles			
Avoidance coping	.04		
Step 2			
Daily hassles x Avoidance coping	.04	.00	.28

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

(continued)

Table 6

Continued

Variable	R^2	ΔR^2	ΔF
Verbal bullying (continued)			
Distraction coping			
Step 1			
Composite stress			
Distraction coping	.06		
Step 2			
Composite stress x Distraction coping	.06	.00	.55
Step 1			
Major stressful events			
Distraction coping	.05		
Step 2			
Major stressful events x Distraction coping	.05	.00	1.45
Step 1			
Daily hassles			
Distraction coping	.05		
Step 2			
Daily hassles x Distraction coping	.05	.00	.01
Support seeking coping			
Step 1			
Composite stress			
Support seeking	.07		
Step 2			
Composite stress x Support seeking	.08	.01	2.84
Step 1			
Major stressful events			
Support seeking	.06		
Step 2			
Major stressful events x Support seeking	.07	.01	3.66
Step 1			
Daily hassles			
Support seeking	.05		
Step 2			
Daily hassles x Support seeking	.05	.00	.50

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

(continued)

Table 6

Continued

Variable	R^2	ΔR^2	ΔF
Relational bullying			
Active coping			
Step 1			
Composite stress			
Active coping	.09		
Step 2			
Composite stress x Active coping	.09	.00	.42
Step 1			
Major stressful events			
Active coping	.07		
Step 2			
Major stressful events x Active coping	.08	.01	1.51
Step 1			
Daily hassles			
Active coping	.07		
Step 2			
Daily hassles x Active coping	.07	.00	.28
Avoidance coping			
Step 1			
Composite stress			
Avoidance coping	.09		
Step 2			
Composite stress x Avoidance coping	.09	.00	.44
Step 1			
Major stressful events			
Avoidance coping	.07		
Step 2			
Major stressful events x Avoidance coping	.07	.00	.43
Step 1			
Daily hassles			
Avoidance coping	.07		
Step 2			
Daily hassles x Avoidance coping	.07	.00	.06

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

(continued)

Table 6

Continued

Variable	R^2	ΔR^2	ΔF
Relational bullying (continued)			
Distraction coping			
Step 1			
Composite stress			
Distraction coping	.10		
Step 2			
Composite stress x Distraction coping	.11	.01	4.22*
Step 1			
Major stressful events			
Distraction coping	.08		
Step 2			
Major stressful events x Distraction coping	.09	.01	4.02*
Step 1			
Daily hassles			
Distraction coping	.08		
Step 2			
Daily hassles x Distraction coping	.09	.01	1.89
Support seeking coping			
Step 1			
Composite stress			
Support seeking	.10		
Step 2			
Composite stress x Support seeking	.10	.00	.92
Step 1			
Major stressful events			
Support seeking	.08		
Step 2			
Major stressful events x Support seeking	.08	.00	.67
Step 1			
Daily hassles			
Support seeking	.07		
Step 2			
Daily hassles x Support seeking	.08	.00	.23

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

Table 7

Summary of Simple Slope Analyses for Interactions (with Distraction Coping) for Different Forms of Bullying

Variable	Moderator level	β	Intercept
Physical bullying			
Distraction coping Composite stress	High	.33*	1.17
	Medium	.19**	1.16
	Low	-.15	1.27
Major stressful events	High	.19	1.18
	Medium	.16**	1.16
	Low	-.07	1.27
Daily hassles	High	.35*	1.19
	Medium	.14*	1.16
	Low	-.16	1.27
Relational bullying			
Distraction coping Composite stress	High	.78**	1.47
	Medium	.47***	1.47
	Low	.11	1.30
Major stressful events	High	.64**	1.45
	Medium	.34**	1.47
	Low	.02	1.31

Note. Unstandardized coefficient (β) was used for the analyses according to the procedures outlined by Aiken and West (1991)

* $p < .05$. ** $p < .01$. *** $p < .001$

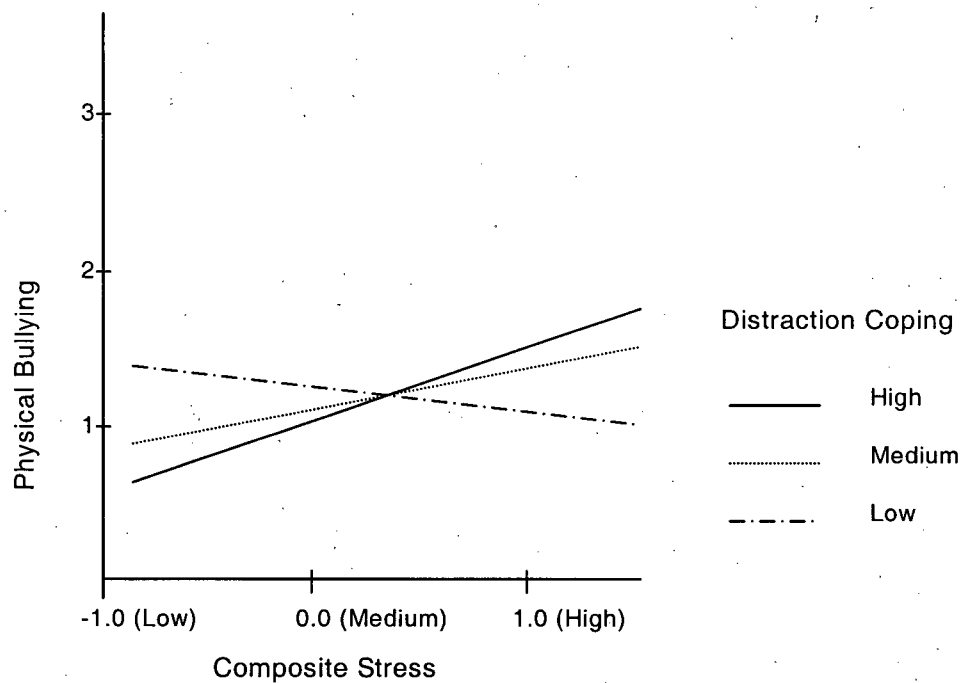


Figure 5. Plotted simple slopes for the relation of physical bullying to composite stress at 3 levels of distraction coping.

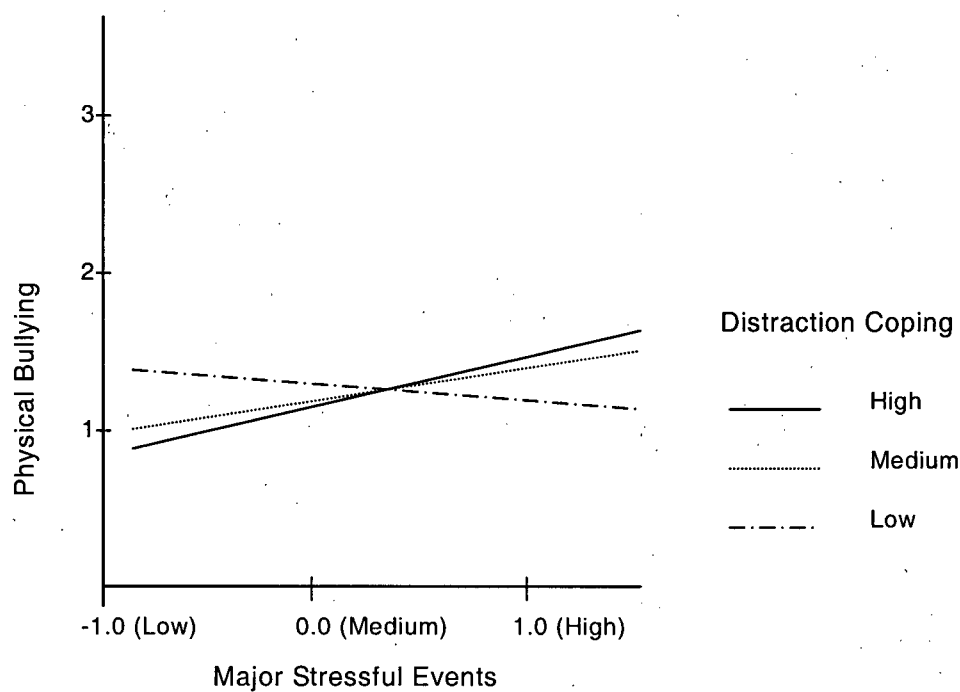


Figure 6. Plotted simple slopes for the relation of physical bullying to major stressful events at 3 levels of distraction coping.

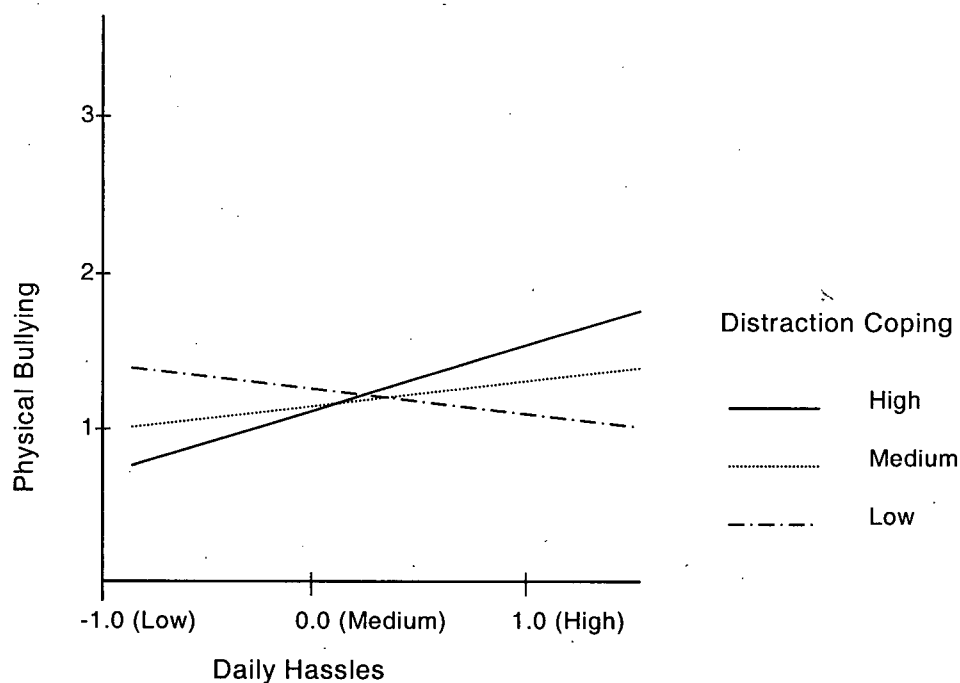


Figure 7. Plotted simple slopes for the relation of physical bullying to daily hassles at 3 levels of distraction coping.

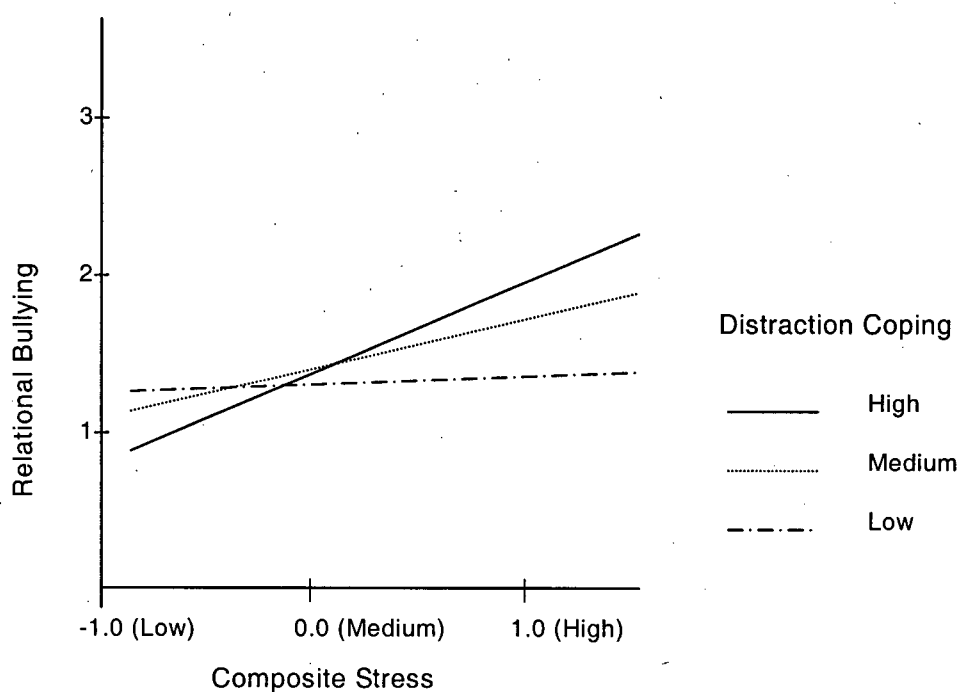


Figure 8. Plotted simple slopes for the relation of relational bullying to composite stress at 3 levels of distraction coping.

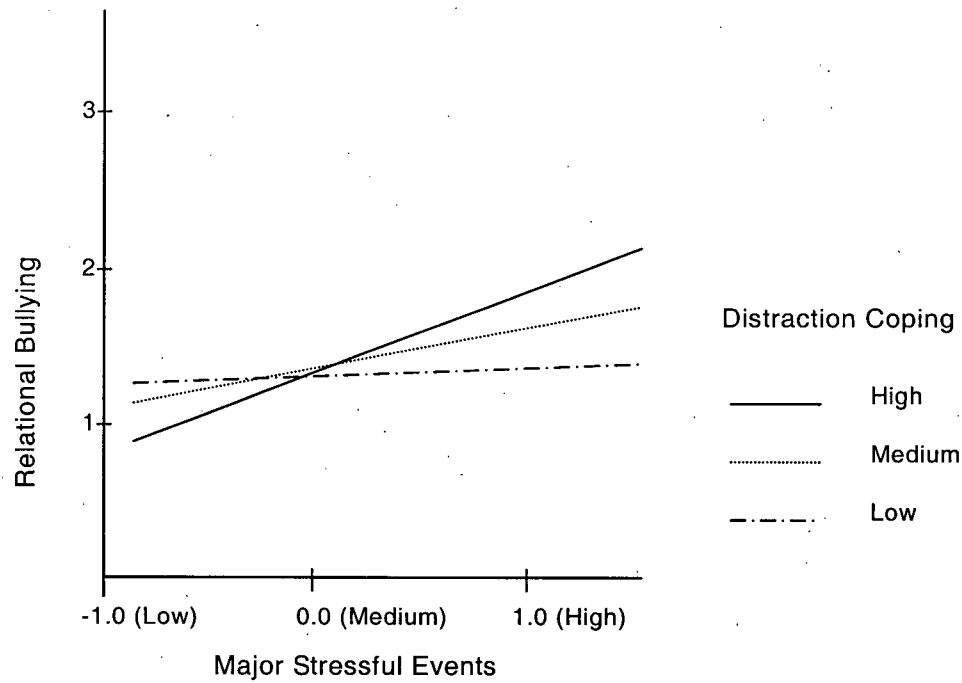


Figure 9. Plotted simple slopes for the relation of relational bullying to major stressful events at 3 levels of distraction coping.

Table 8

Summary of Regression Analysis for Bullying as A Function of Stress and Coping by Gender

Variable	Girls			Boys		
	R^2	ΔR^2	ΔF	R^2	ΔR^2	ΔF
Active coping						
Step 1						
Composite stress						
Active coping	.08			.15		
Step2						
Composite stress x Active	.08	.00	.45	.15	.00	.02
Step 1						
Major stressful events						
Active coping	.05			.14		
Step 2						
Major stressful events x Active	.05	.00	.00	.14	.01	.95
Step1						
Daily hassles						
Active coping	.08			.09		
Step 2						
Daily hassles x Active	.09	.01	.83	.10	.01	1.78
Avoidance coping						
Step 1						
Composite stress						
Avoidance coping	.07			.14		
Step2						
Composite stress x Avoidance	.08	.00	.22	.15	.00	.39
Step 1						
Major stressful events						
Avoidance coping	.05			.14		
Step 2						
Major stressful events x Avoidance	.05	.00	.27	.15	.01	2.24
Step1						
Daily hassles						
Avoidance coping	.08			.09		
Step 2						
Daily hassles x Avoidance	.09	.01	1.56	.09	.00	.12

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

(continued)

Table 8

Continued

Variable	Girls			Boys		
	R^2	ΔR^2	ΔF	R^2	ΔR^2	ΔF
Distraction coping						
Step 1						
Composite stress						
Distraction coping	.09			.15		
Step 2						
Composite stress x Distraction	.11	.01	2.53	.16	.02	2.59
Step 1						
Major stressful events						
Distraction coping	.07			.14		
Step 2						
Major stressful events x Distraction	.09	.02	4.19*	.14	.01	1.00
Step 1						
Daily hassles						
Distraction coping	.10			.09		
Step 2						
Daily hassles x Distraction	.10	.01	.86	.10	.01	1.66
Support seeking coping						
Step 1						
Composite stress						
Support seeking	.08			.17		
Step 2						
Composite x Support seeking	.09	.01	1.87	.17	.00	.08
Step 1						
Major stressful events						
Support seeking	.05			.16		
Step 2						
Major stress x Support seeking	.05	.00	.30	.16	.00	.72
Step 1						
Daily hassles						
Support seeking	.08			.10		
Step 2						
Daily hassles x Support seeking	.08	.00	.25	.11	.01	1.71

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

Table 9

Summary of Simple Slope Analyses for Bullying as A Function of Stress and Coping for Girls

Variable	Moderator level	Girls	
		β	Intercept
Distraction coping			
Major stressful events	High	.65**	1.33
	Medium	.12	1.32
	Low	.01	1.33

Note. Unstandardized coefficient (β) was used for the analyses according to the procedures outlined by Aiken and West (1991)

* $p < .05$. ** $p < .01$. *** $p < .001$

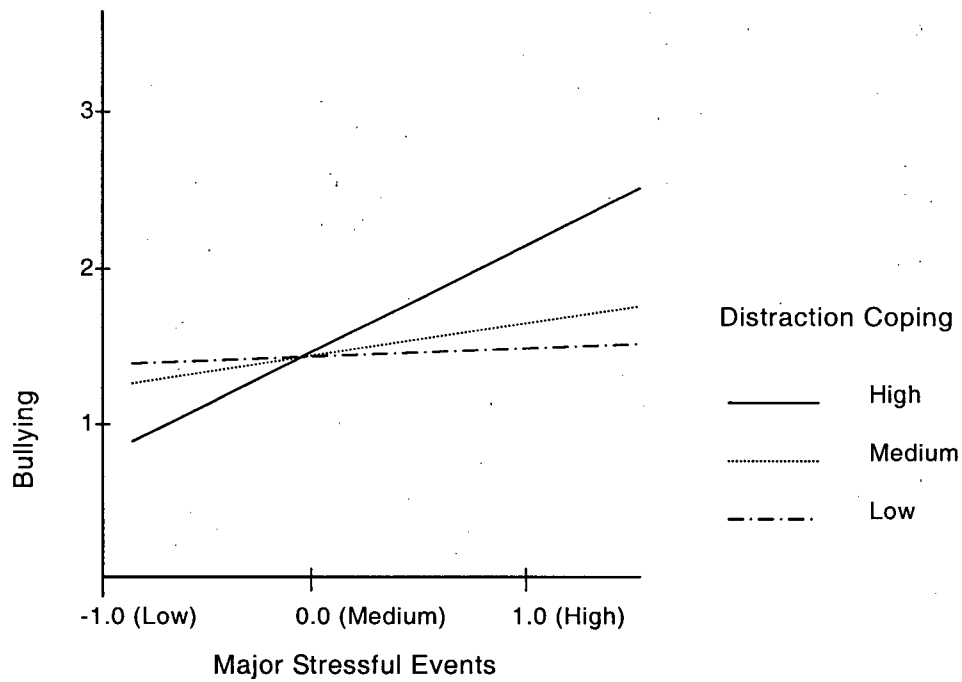


Figure 10. Plotted simple slopes for the relation of bullying to composite stress at 3 levels of distraction coping for girls.

Hypothesis 3: Levels of perceived social support will moderate the relation between stress and bullying behavior. Specifically, with low levels of perceived social support, positive relations between stress and bullying behavior are expected, whereas with high levels of perceived social support, weaker relations between stress and bullying behavior are expected.

Regression procedures were also used to evaluate the hypothesized moderation of perceived social support in the same manner as described for coping. Separate regressions were conducted for each of the three perceived social support subscales (i.e., perceived social support from friends, perceived social support from family, and perceived social support from teachers), with self-reported bullying behavior (composite measure) as the criterion variable and reported overall stress (composite measure) and perceived social support (from family, peers, and teachers) as predictors. Results indicated significant interactions between perceived social support from family and overall composite stress ($F\Delta = 6.48, p < .05$). Significant interactions were not observed for perceived social support from friends or from teachers (see Table 10). Thus, follow-up analyses (i.e., simple slope analyses) were conducted to test the significant relation between bullying and the composite stress as a function of different levels of family support.

As seen in Table 11 and Figure 11, simple slope analyses revealed the pattern of moderation effects of social support in the prediction of bullying behavior. Specifically, the positive relation between overall stress and overall bullying behavior was stronger for children who reported low levels of social support from family compared to children who reported high levels of social support from family (β s for low, medium, and high levels of

social support from family = .59, .34, and .17). These results for the overall composite index of bullying support the predicted moderation hypothesis for social support, specifically perceived social support from family. In other words, overall stress was more likely to be associated with increased bullying among children who perceived less family support relative to those who perceived stronger family support. This effect of social support from family was found for both major stressful events (β s for low, medium, and high levels of social support from family = .46, .26, and .14) and daily hassles (β s for low, medium, and high levels of social support from family = .53, .26, and .15) when different types of stressors were considered separately. In other words, greater major stressful events or daily hassles were associated with more bullying for those who reported low levels of perceived support from family relative to those who reported high levels of support. Family support seemed to serve as a buffer, decreasing the likelihood that major stressful events or daily hassles is associated with greater bullying among stressed children.

In separate regression analyses, considering the three forms of bullying separately (i.e., physical, verbal, and relational), once again, social support from family was found to have a significant impact on the stress-bullying relationship, but this relationship varied across the three forms of bullying (see Tables 12 and 13). Results indicated that the impact of social support from family was evident only for verbal and relational bullying ($F \Delta$ s = 5.50, $p < .05$; and 8.06, $p < .01$; respectively), not physical bullying. For physical bullying, however, perceived support from friends was found to have a significant impact on the stress-bullying relationship ($F \Delta = 4.72$, $p < .05$). Results of simple slope analyses (i.e., follow-up analyses) showed that social support from friends moderated the relation

between the composite stress measure and physical bullying (β s for low, medium, and high levels of social support from friends = .15, .24, and -.10). In other words, greater overall stress was associated with more physical bullying for those who reported low levels of perceived friend support relative to those who reported high levels of friend support. In contrast, social support from family moderated the relation between stress and verbal bullying (β s for low, medium, and high levels of social support from family = .72, .34, and .22) as well as relational bullying (β s for low, medium, and high levels of social support from family = .99, .38, and .27). That is, greater overall stress was associated with more verbal or relational (but not physical) bullying for those who reported low levels of perceived family support relative to those who reported high levels of perceived family support. Perceived support from family decreased the likelihood that stress is associated with verbal or relational bullying among highly stressed children.

A similar series of regression analyses were conducted to consider these relations for different types of stressors, evaluating major stressful events and daily hassles separately for these different forms of bullying. As seen in Tables 12, 13, Figures 16, 18, and 19, results showed that the moderation pattern of family support described above was evident for major stressful events for both verbal and relational bullying ($F \Delta$ s = 5.88, $p < .05$; and 7.73, $p < .01$; respectively). However, the pattern was evident for daily hassles only for relational bullying ($F \Delta$ = 5.82, $p < .05$), not verbal bullying. That is, greater major stressful events were associated with more verbal or relational bullying for those who reported low levels of perceived family support relative to those who reported high levels of family support. On the other hand, greater daily hassles were associated with more

relational bullying for those who reported low levels of perceived family support relative to those who reported high levels of family support. The nature of these interactions is graphically displayed in Figures 14 through 19.

Finally, in separate regression analyses for gender, results indicated that the moderating effect of social support from friends and family (not teachers) was significant for the overall composite stress measure only for girls ($F \Delta s = 4.47, p < .05; 4.19, p < .05$; respectively), not boys. Simple slope analyses and graphical displays revealed the impact of social support from friends and family on stress-bullying relationship only for girls (see Table 15, Figures 20, and 22). That is, greater overall stress was associated with more bullying for girls, not boys, who reported low levels of family support relative to those who reported high levels of family support.

A similar series of regression analyses was conducted to consider these relationships for different types of stressors, evaluating major stressful events and daily hassles separately. As seen in Tables 14 and 15, results indicated that the moderation pattern of friend support observed for overall composite stress was only evident for major stressful events, not daily hassles, and only for girls, not boys ($F \Delta = 4.29, p < .05$). The moderation pattern of family support observed for composite stress was only evident for major stressful events for boys ($F \Delta = 4.25, p < .05$), whereas the moderation effect was only evident for daily hassles for girls ($F \Delta = 4.38, p < .05$). In other words, greater major stressful events were associated with more bullying for girls (not boys) who reported low levels of perceived support from friends relative to those who reported high levels of friend support, whereas greater major stressful events were associated with more bullying

for boys (not girls) who reported low levels of perceived support from family relative to those who reported high levels of family support. Also, greater daily hassles were associated with more bullying only for girls (not boys) who reported low levels of perceived support from family relative to those who reported high levels of family support. These results supported the hypothesized moderation effects of social support from friends and family for girls and the effects of social support from family for boys.

In summary, the hypothesized moderation effect of perceived social support was generally supported, especially for family support. Perceived social support from family moderated the relation between overall composite stress and overall bullying behavior, and this was true for major stressful events, and daily hassles when considered separately. That is, greater stress (as assessed by composite stress indices as well as major stressful events and daily hassles) was associated with more bullying for children who reported low levels of perceived support from family relative to those who reported high levels of family support.

In terms of separate regression analyses for three forms of bullying, the moderation pattern of family support was only evident for verbal and relational bullying, not physical bullying. That is, greater stress was associated with more verbal or relational bullying, but not physical bullying, for children who reported low levels of perceived support from family relative to those who reported high levels of family support. However, greater stress was associated with more physical bullying for children who reported low levels of perceived support from friends relative to those who reported high levels of friend support. The moderation pattern of family support was found for major stressful

events for both verbal and relational bullying, and for daily hassles only for relational bullying. In other words, greater both major stressful events and daily hassles were associated with more relational bullying for children who reported low levels of perceived support from family relative to those who reported high levels of family support. Greater major stressful events were associated with more verbal bullying for children who reported low levels of perceived support from family relative to those who reported high levels of family support.

When analyses were conducted separately for each gender, the moderation effects of support from friends and family (not teachers) were observed for composite indices of stress only for girls, not boys. In other words, greater overall stress was associated with more bullying for only girls (not boys) who reported low levels of perceived support from friend or family relative to those who reported high levels of friend or family support.

Regarding different types of stressors (i.e., major stressful events and daily hassles), greater major stressful events, not daily hassles, were associated with more bullying for only girls (not boys) who reported low levels of perceived friend support relative to those who reported high levels of friend support. On the other hand, greater major stressful events were associated with more bullying for boys (not girls) who reported low levels of perceived family support relative to those who reported high levels of family support. And, greater daily hassles were associated with bullying for girls (not boys) who reported low levels of family support relative to those who reported high levels of family support.

Table 10

Summary of Regression Analysis for Bullying as A Function of Stress and Social Support

Variable	R^2	ΔR^2	ΔF
Perceived social support from friends (PSS-friends)			
Step 1			
Composite stress PSS-friends	.12		
Step 2			
Composite stress x PSS-friends	.13	.01	3.76
Step 1			
Major stressful events PSS-friends	.11		
Step 2			
Major stressful events x PSS-friends	.11	.01	3.02
Step 1			
Daily hassles PSS-friends	.10		
Step 2			
Daily hassles x PSS-friends	.10	.01	2.32
Perceived social support from family (PSS-family)			
Step 1			
Composite stress PSS-family	.19		
Step 2			
Composite stress x PSS-family	.20	.02	6.48*
Step 1			
Major stressful events PSS-family	.18		
Step 2			
Major stressful events x PSS-family	.19	.02	6.86**
Step 1			
Daily hassles PSS-family	.15		
Step 2			
Daily hassles x PSS-family	.17	.01	4.11*

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

(continued)

Table 10

Continued

Variable	R^2	ΔR^2	ΔF
Perceived social support from teachers (PSS-teachers)			
Step 1			
Composite stress PSS-teachers	.12		
Step 2			
Composite stress x PSS-teachers	.12	.01	1.71
Step 1			
Major stressful events PSS-teachers	.10		
Step 2			
Major stressful events x PSS-teachers	.11	.01	2.13
Step 1			
Daily hassles PSS-teachers	.09		
Step 2			
Daily hassles x PSS-teachers	.09	.00	.09

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

Table 11

Summary of Simple Slope Analyses for Bullying as A Function of Stress and Coping

Variable	Moderator level	β	Intercept
PSS-family Composite stress	High	.17*	1.20
	Medium	.34***	1.36
	Low	.59***	1.62
Major stressful events	High	.14*	1.20
	Medium	.26***	1.36
	Low	.46**	1.63
Daily hassles	High	.15*	1.21
	Medium	.26***	1.36
	Low	.53**	1.60

Note. Unstandardized coefficient (β) was used for the analyses according to the procedures outlined by Aiken and West (1991).

* $p < .05$. ** $p < .01$. *** $p < .001$.

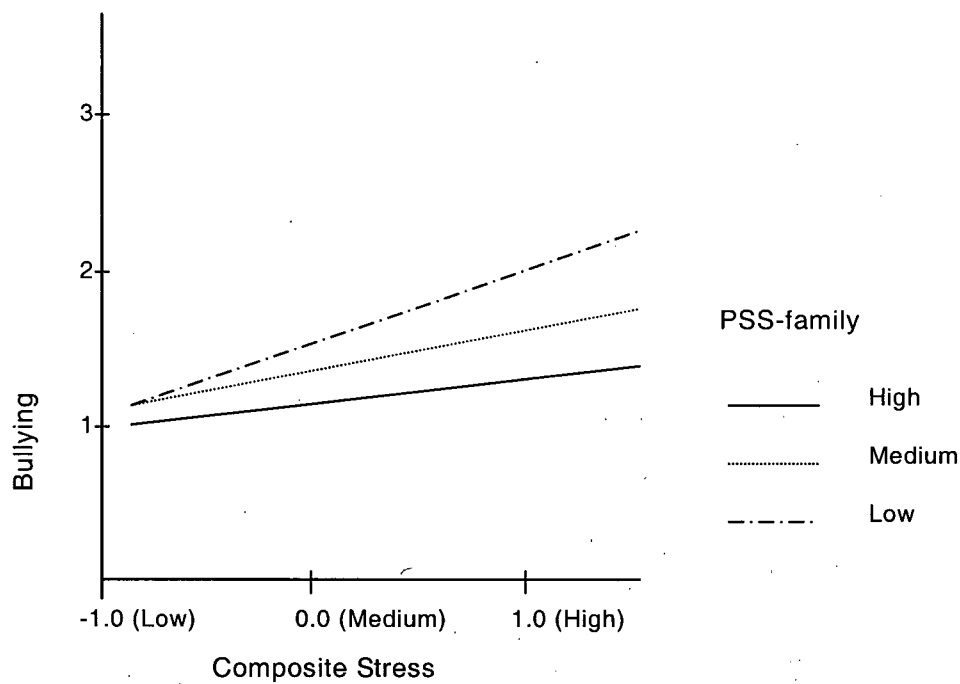


Figure 11. Plotted simple slopes for the relation of bullying to composite stress at 3 levels of PSS-family.

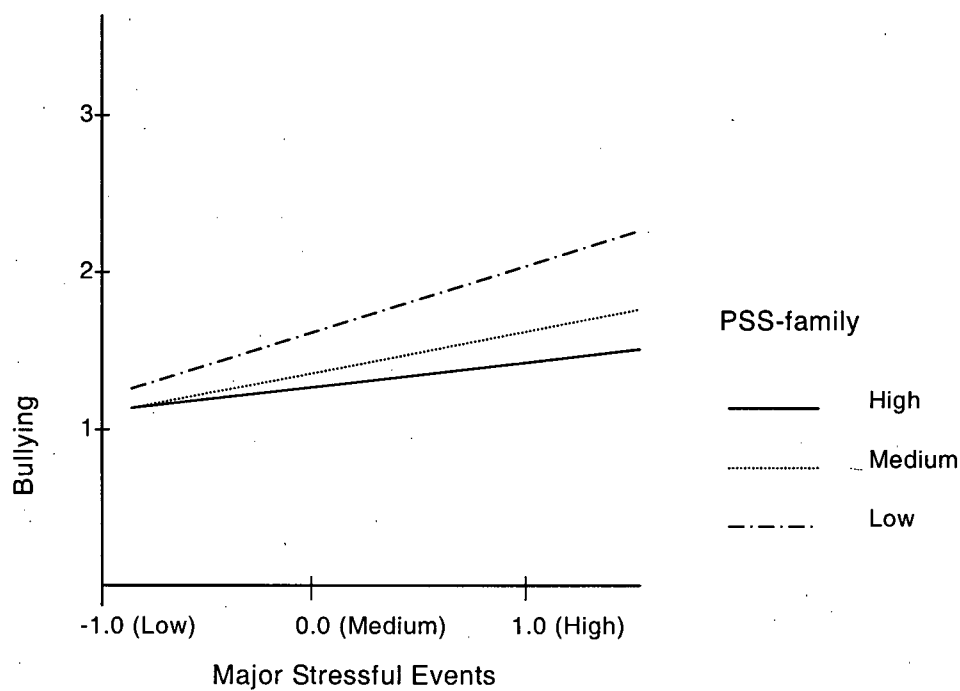


Figure 12. Plotted simple slopes for the relation of bullying to major stressful events at 3 levels of PSS-family.

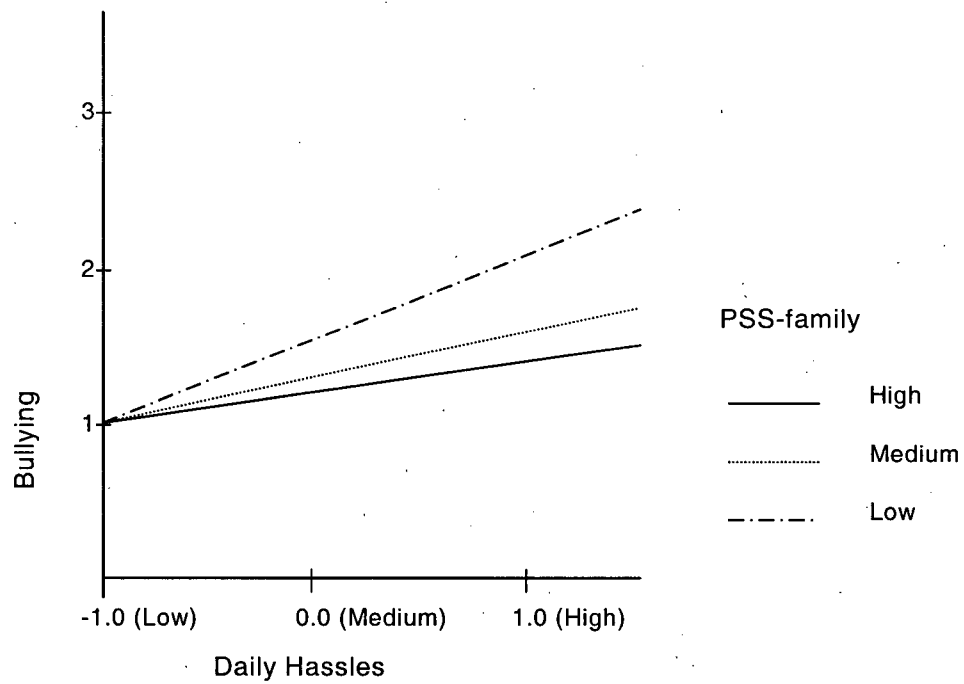


Figure 13. Plotted simple slopes for the relation of bullying to daily hassles at 3 levels of PSS-family.

Table 12

Summary of Regression Analyses for Different Forms (i.e., Physical, Verbal, and Relational) of Bullying with Social Support

Variable	R^2	ΔR^2	ΔF
Physical bullying			
PSS-friends			
Step 1			
Composite stress			
PSS-friends	.05		
Step 2			
Composite stress x PSS-friends	.06	.01	4.72*
Step 1			
Major stressful events			
PSS-friends	.04		
Step 2			
Major stressful events x PSS-friends	.06	.01	3.68
Step 1			
Daily hassles			
PSS-friends	.04		
Step 2			
Daily hassles x PSS-friends	.05	.01	3.42
PSS-family			
Step 1			
Composite stress			
PSS-family	.05		
Step 2			
Composite stress x PSS-family	.05	.00	.20
Step 1			
Major stressful events			
PSS-family	.05		
Step 2			
Major stressful events x PSS-family	.05	.00	.07
Step 1			
Daily hassles			
PSS-family	.04		
Step 2			
Daily hassles x PSS-family	.04	.00	.28

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

(continued)

Table 12

Continued

Variable	R^2	ΔR^2	ΔF
Physical bullying (continued)			
PSS-teachers			
Step 1			
Composite stress			
PSS-teachers	.03		
Step2			
Composite stress x PSS-teachers	.03	.00	.06
Step 1			
Major stressful events			
PSS-teachers	.03		
Step 2			
Major stressful events x PSS-teachers	.03	.00	.40
Step1			
Daily hassles			
PSS-teachers	.02		
Step 2			
Daily hassles x PSS-teachers	.02	.00	.25
Verbal bullying			
PSS-friends			
Step 1			
Composite stress			
PSS-friends	.07		
Step2			
Composite stress x PSS-friends	.07	.00	.75
Step 1			
Major stressful events			
PSS-friends	.06		
Step 2			
Major stressful events x PSS-friends	.06	.00	.91
Step1			
Daily hassles			
PSS-friends	.06		
Step 2			
Daily hassles x PSS-friends	.06	.00	.22

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

(continued)

Table 12

Continued

Variable	R^2	ΔR^2	ΔF
Verbal bullying			
PSS-family			
Step 1			
Composite stress			
PSS-family	.14		
Step 2			
Composite stress x PSS-family	.16	.02	5.50*
Step 1			
Major stressful events			
PSS-family	.14		
Step 2			
Major stressful events x PSS-family	.15	.02	5.88*
Step 1			
Daily hassles			
PSS-family	.12		
Step 2			
Daily hassles x PSS-family	.13	.01	3.45
PSS-teachers			
Step 1			
Composite stress			
PSS-teachers	.09		
Step 2			
Composite stress x PSS-teachers	.09	.00	1.36
Step 1			
Major stressful events			
PSS-teachers	.08		
Step 2			
Major stressful events x PSS-teachers	.09	.01	2.26
Step 1			
Daily hassles			
PSS-teachers	.07		
Step 2			
Daily hassles x PSS-teachers	.07	.00	.02

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

(continued)

Table 12

Continued

Variable	R^2	ΔR^2	ΔF
Relational bullying			
PSS-friends			
Step 1			
Composite stress			
PSS-friends	.09		
Step2			
Composite stress x PSS-friends	.10	.01	2.20
Step 1			
Major stressful events			
PSS-friends	.07		
Step 2			
Major stressful events x PSS-friends	.08	.00	1.41
Step1			
Daily hassles			
PSS-friends	.07		
Step 2			
Daily hassles x PSS-friends	.07	.01	1.72
PSS-family			
Step 1			
Composite stress			
PSS-family	.13		
Step2			
Composite stress x PSS-family	.15	.02	8.06**
Step 1			
Major stressful events			
PSS-family	.11		
Step 2			
Major stressful events x PSS-family	.13	.02	7.73**
Step1			
Daily hassles			
PSS-family	.10		
Step 2			
Daily hassles x PSS-family	.12	.02	5.82*

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

(continued)

Table 12

Continued

Variable	R^2	ΔR^2	ΔF
Relational bullying (continued)			
PSS-teachers			
Step 1			
Composite stress			
PSS-teachers	.09		
Step2			
Composite stress x PSS-teachers	.09	.00	1.50
Step 1			
Major stressful events			
PSS-teachers	.07		
Step 2			
Major stressful events x PSS-teachers	.07	.00	.88
Step1			
Daily hassles			
PSS-teachers	.07		
Step 2			
Daily hassles x PSS-teachers	.07	.00	.58

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

Table 13

Summary of Simple Slope Analyses for Interactions (with Social Support) for Different Forms of Bullying

Variable	Moderator level	β	Intercept
Physical bullying			
PSS-friends Composite stress	High	-.10	1.08
	Medium	.24	1.20
	Low	.15**	1.22
Verbal bullying			
PSS-family Composite stress	High	.22	1.23
	Medium	.34**	1.43
	Low	.72**	1.91
Major stressful events	High	.16	1.28
	Medium	.27**	1.43
	Low	.57**	1.92
Relational bullying			
PSS-family Composite stress	High	.27	1.24
	Medium	.38**	1.47
	Low	.99**	1.64
Major stressful events	High	.23	1.22
	Medium	.28**	1.47
	Low	.75***	1.67
Daily hassles	High	.21	1.25
	Medium	.30**	1.47
	Low	.93***	1.60

Note. Unstandardized coefficient (β) was used for the analyses according to the procedures outlined by Aiken and West (1991)

* $p < .05$. ** $p < .01$. *** $p < .001$

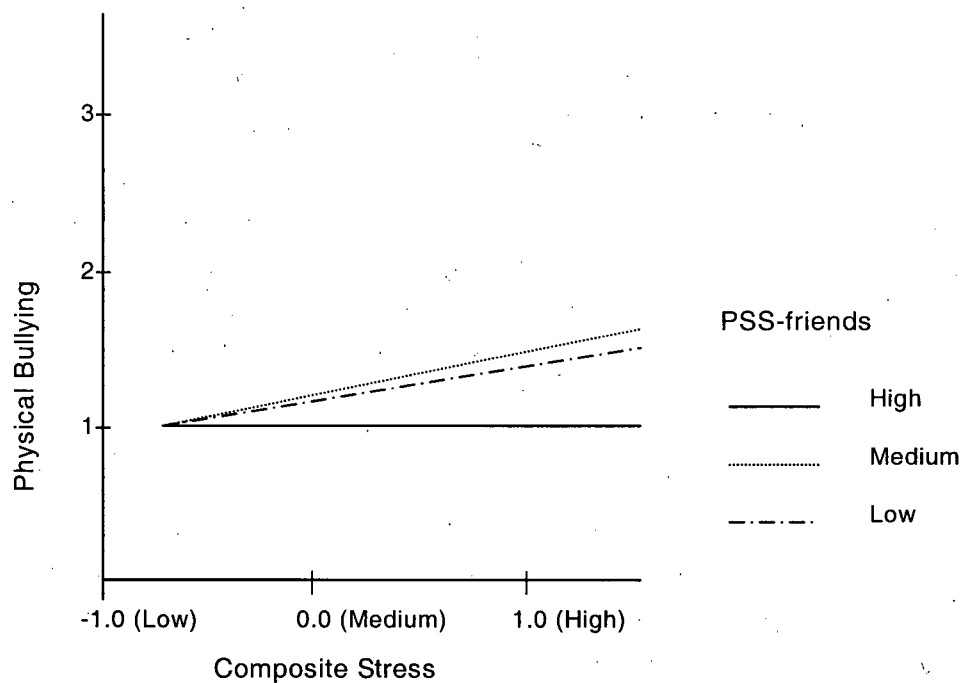


Figure 14. Plotted simple slopes for the relation of physical bullying to composite stress at 3 levels of PSS-friends.

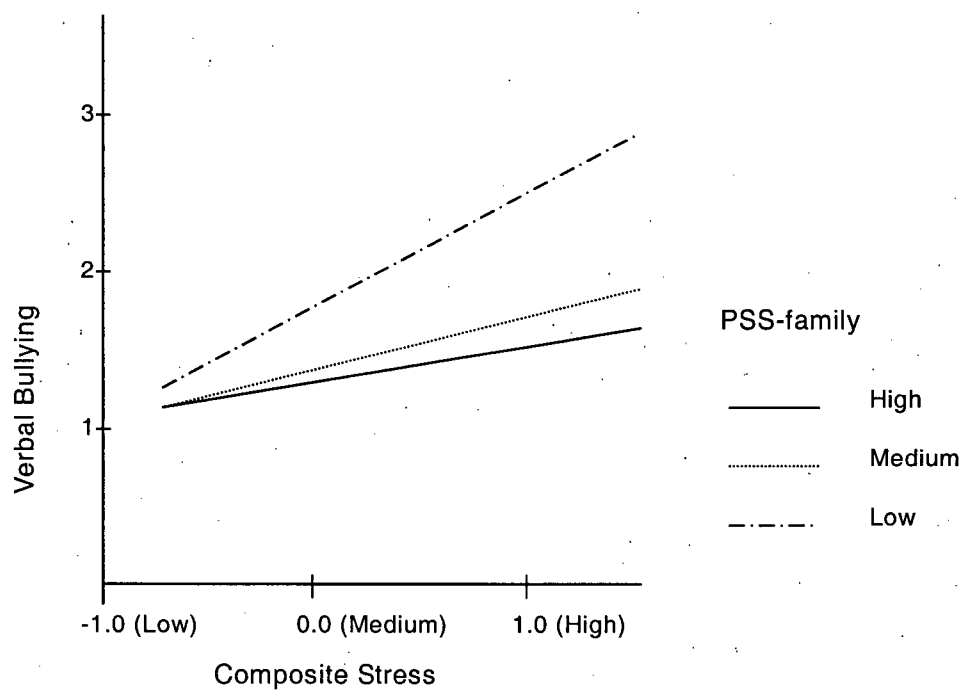


Figure 15. Plotted simple slopes for the relation of verbal bullying to composite stress at 3 levels of PSS-family.

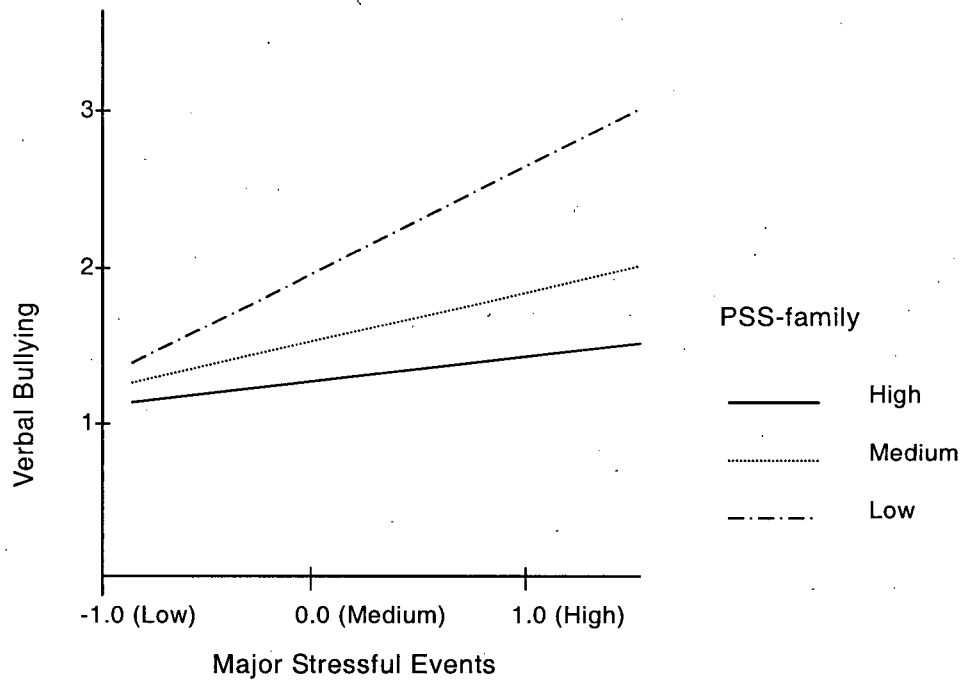


Figure 16. Plotted simple slopes for the relation of verbal bullying to major stressful events at 3 levels of PSS-family.

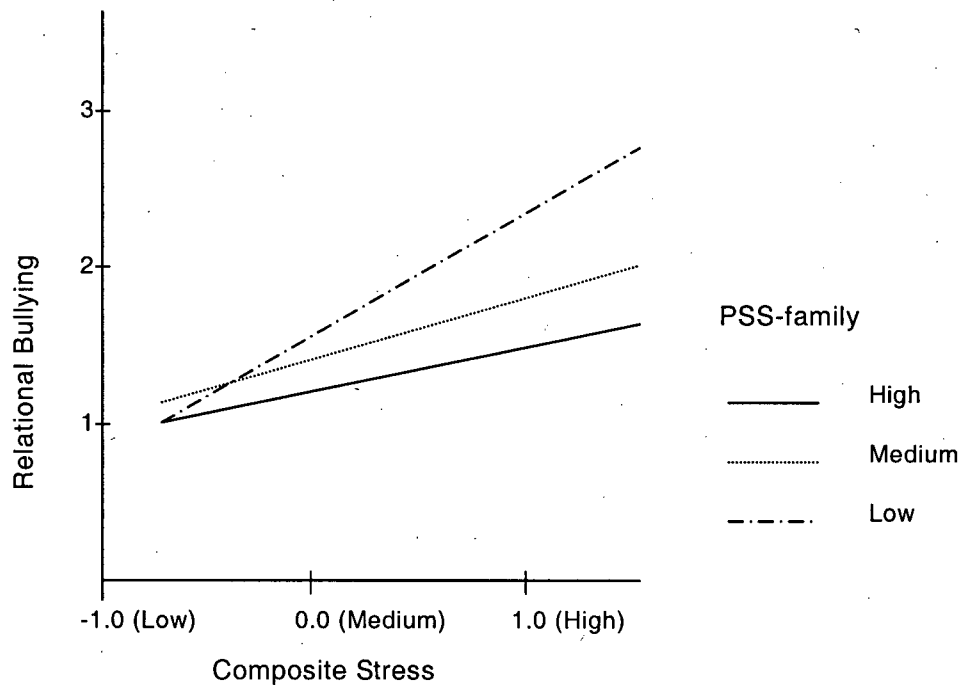


Figure 17. Plotted simple slopes for the relation of relational bullying to composite stress at 3 levels of PSS-family.

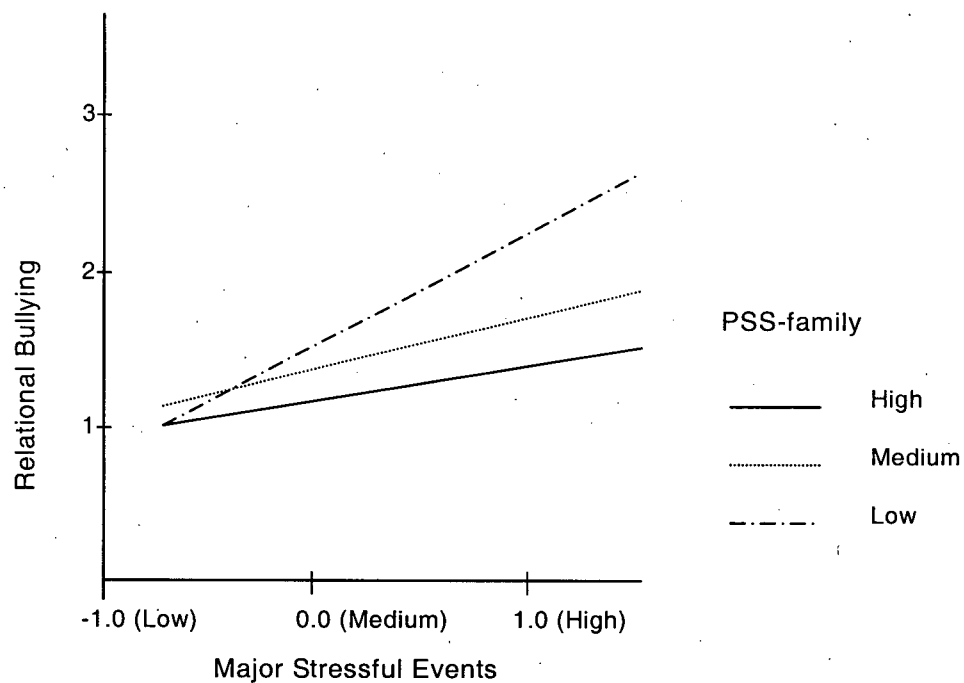


Figure 18. Plotted simple slopes for the relation of relational bullying to major stressful events at 3 levels of PSS-family.

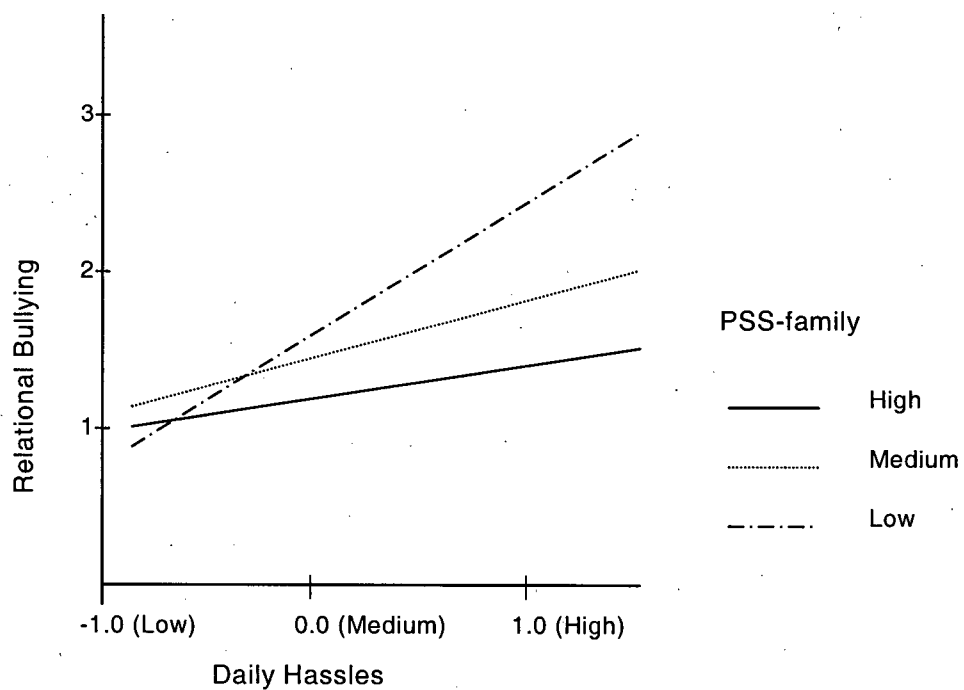


Figure 19. Plotted simple slopes for the relation of relational bullying to daily hassles at 3 levels of PSS-family.

Table 14

*Summary of Regression Analysis for Bullying as A Function of Stress and Social Support
by Gender*

Variable	Girls			Boys		
	R^2	ΔR^2	ΔF	R^2	ΔR^2	ΔF
PSS-friends						
Step 1						
Composite stress						
PSS-friends	.09			.16		
Step 2						
Composite stress x PSS-friends	.12	.03	4.47*	.16	.00	.20
Step 1						
Major stressful events						
PSS-friends	.07			.15		
Step 2						
Major stressful events x PSS-friend	.09	.02	4.29*	.15	.00	.01
Step 1						
Daily hassles						
PSS-friends	.09			.10		
Step 2						
Daily hassles x PSS-friends	.10	.01	1.83	.11	.01	.76
PSS-family						
Step 1						
Composite stress						
PSS-family	.23			.18		
Step 2						
Composite stress x PSS-family	.25	.02	4.19*	.19	.01	2.21
Step 1						
Major stressful events						
PSS-family	.21			.18		
Step 2						
Major stressful events x PSS-family	.22	.02	3.18	.20	.02	4.25*
Step 1						
Daily hassles						
PSS-family	.23			.10		
Step 2						
Daily hassles x PSS-family	.25	.02	4.38*	.11	.01	.81

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

(continued)

Table 14

Continued

Variable	Girls			Boys		
	R^2	ΔR^2	ΔF	R^2	ΔR^2	ΔF
PSS-teachers						
Step 1						
Composite stress						
PSS-teachers	.08			.17		
Step 2						
Composite stress x PSS-teachers	.08	.00	.60	.18	.01	.92
Step 1						
Major stressful events						
PSS-teachers	.06			.17		
Step 2						
Major stress x PSS-teachers	.06	.00	.13	.18	.01	2.01
Step 1						
Daily hassles						
PSS-teachers	.08			.10		
Step 2						
Daily hassles x PSS-teachers	.09	.00	.72	.10	.00	.11

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

Table 15

*Summary of Simple Slope Analyses for Bullying as A Function of Stress and Social Support
for Girls & Boys*

Variable	Moderator level	Girls β	Intercept	Boys β	Intercept
PSS-friends					
Composite stress	High	.06	1.29		
	Medium	.25**	1.32		
	Low	.85**	1.57		
Major stressful events	High	-.01	1.29		
	Medium	.18*	1.32		
	Low	.75**	1.65		
PSS-family					
Composite stress	High	.14	1.18		
	Medium	.24**	1.29		
	Low	.56*	1.70		
Major stressful events	High			.21*	1.23
	Medium			.37***	1.43
	Low			.50**	1.57
Daily hassles	High	.17	1.19		
	Medium	.21*	1.30		
	Low	.58*	1.69		

Note. Unstandardized coefficient (β) was used for the analyses according to the procedures outlined by Aiken and West (1991)

* $p < .05$. ** $p < .01$. *** $p < .001$

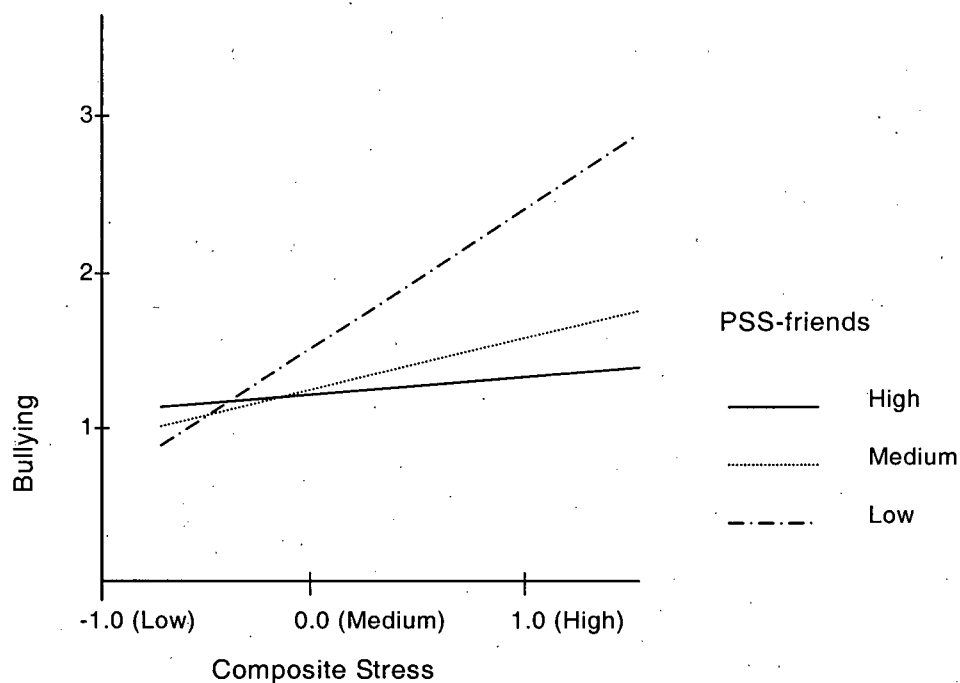


Figure 20. Plotted simple slopes for the relation of bullying to composite stress at 3 levels of PSS-friends for girls.

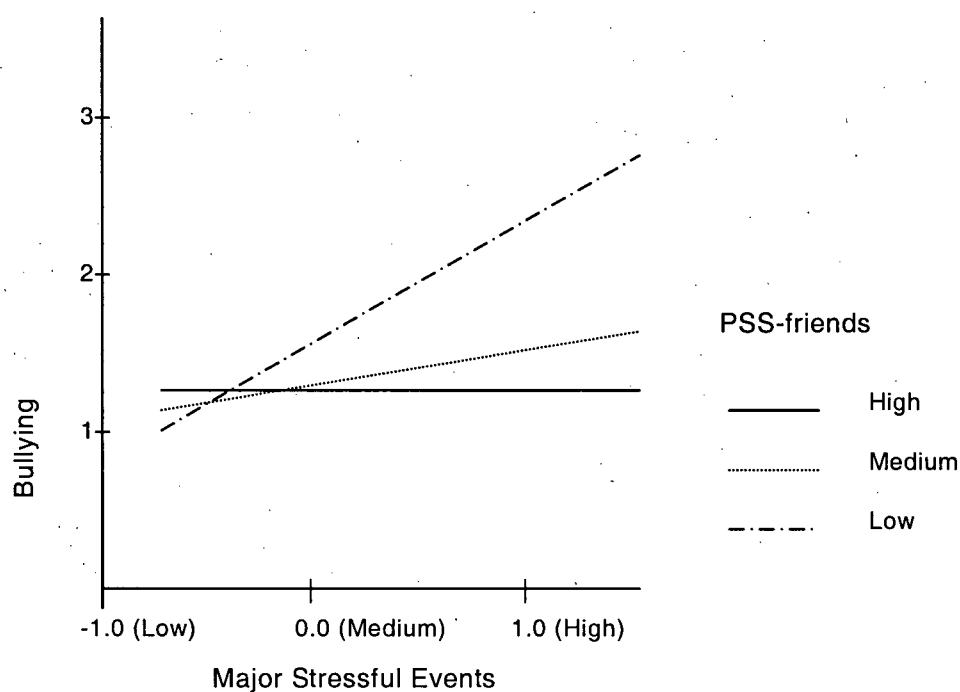


Figure 21. Plotted simple slopes for the relation of bullying to major stressful events at 3 levels of PSS-friends for girls.

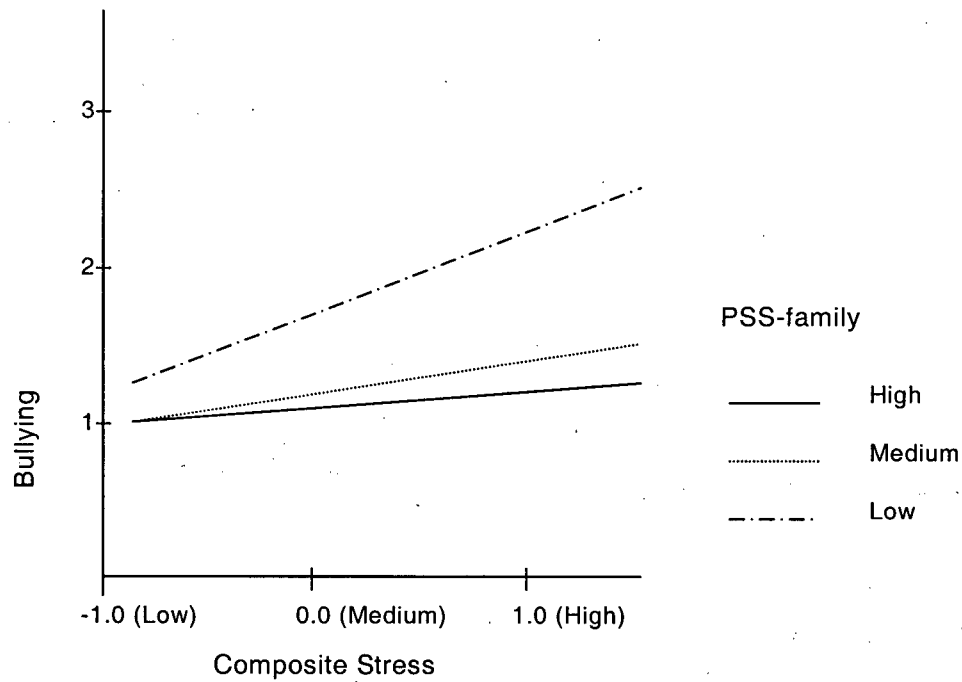


Figure 22. Plotted simple slopes for the relation of bullying to composite stress at 3 levels of PSS-family for girls.

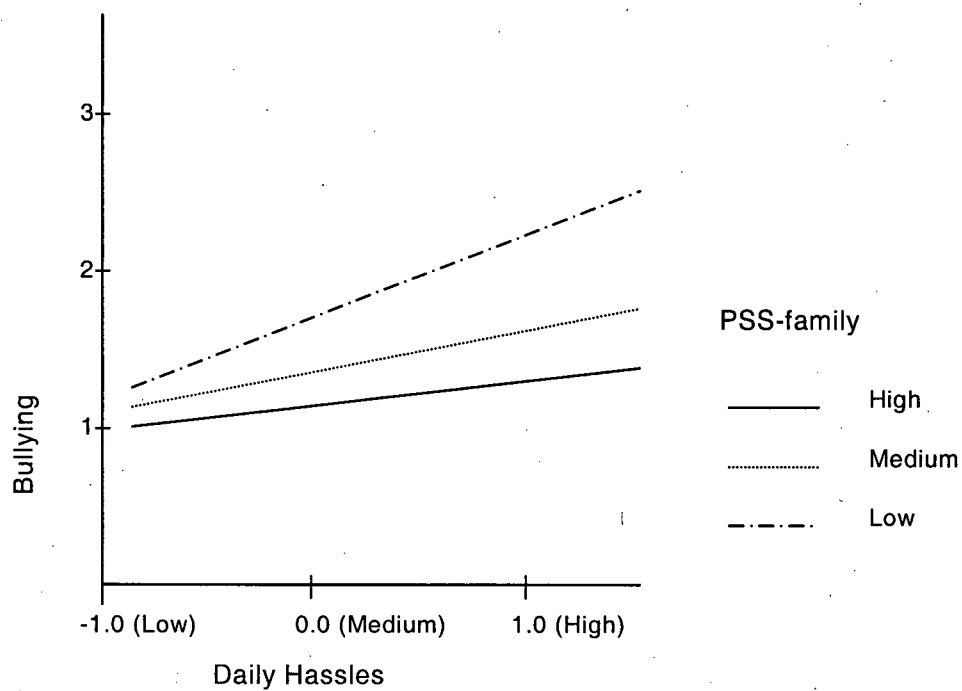


Figure 23. Plotted simple slopes for the relation of bullying to daily hassles at 3 levels of PSS-family for girls.

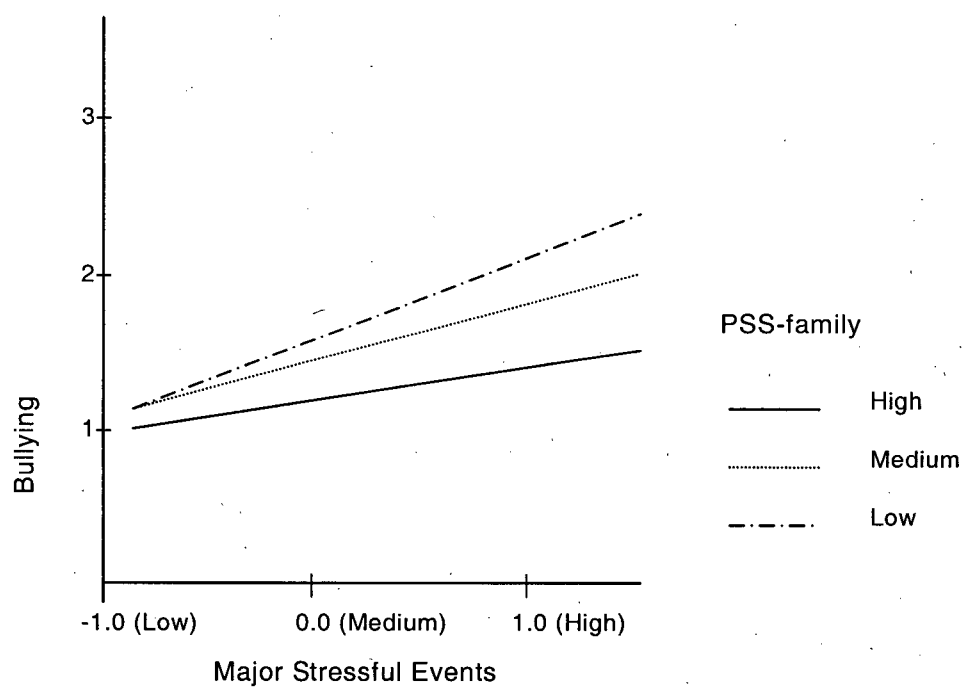


Figure 24. Plotted simple slopes for the relation of bullying to major stressful events at 3 levels of PSS-family for boys.

Discussion

The purpose of the present study was to explore three primary hypotheses. First, it was expected that the levels of stress children experience would be significantly and positively but modestly related to their bullying behavior. Second, I hypothesized that use of active coping and distraction coping would moderate the positive relation between stress experiences and bullying behavior. Third, I also expected that perceived social support would moderate the relation between stress and bullying. The results of the present investigation provided supportive evidence for the significant but modest relation between stress and bullying behavior (the first hypothesis), for the moderation effect of distraction (but not active) coping (the second hypothesis), and for the moderation effect of social support from friends and family (the third hypothesis). How do the findings of the present study fit with or diverge from earlier studies? How do the present results contribute to and extend the extant literature? These are discussed below in order of the three hypotheses.

First, in terms of the relation between stress and bullying (the first hypothesis), there was indeed a significant, positive association between stress and self-reported bullying, and this was true for the composite stress index, major stressful events, and daily hassles. Specifically, the results of the present investigation indicated that children who reported high levels of stress (i.e., composite stress, major stressful events, or daily hassles) were more likely to report bullying behavior. However, as expected, the relation was modest, which suggests the presence of other factors in moderating or amplifying the relation between stress and bullying.

The observed association between stress and bullying in the present study was

consistent with previous studies that have demonstrated positive but modest relations between high levels of stress experiences and bullying behavior among children in other countries (Bru et al., 2001; Okayasu & Takano, 2000; Taki, 1992). In the present sample, results indicated that stress arising from major stressful events as well as daily hassles was associated with higher levels of bullying behavior, when bullying was assessed via self-report measures. Moreover, the observed links between stress and self-reported bullying were evident for all forms of bullying (physical, verbal and relational), although the magnitude of these correlations was lowest for physical bullying and highest for relational bullying. Similar associations between stress and self-reported bullying were observed for boys and girls, with one exception – the link between stress and physical bullying was only significant for boys, not girls. The failure to observe such a relationship for girls may simply reflect the low frequencies of physical bullying among girls.

In contrast, there was no significant relation observed in the present study between reported stress and peer assessments of bullying. Previous studies of stress and bullying (Bru et al., 2001; Okayasu & Takano, 2000; Taki, 1992) were based solely on self-reports. As a result of this single method being used, it might have been possible that all we have is evidence that children who felt that they were stressed claimed that they engaged in more bullying. Given that no significant relations emerged between peer-assessed bullying and stress, the present results call into question the validity of previous studies as well as the present one, with concerns that the effects obtained are primarily the result of shared method variance.

However, it is important to recall that, in the present study peer-assessment and

self-report indices of bullying were significantly but only minimally related ($r = .23$), a finding that has emerged in other research as well (e.g., Pellegrini & Bartini, 2000).

Further research is needed to determine whether these two distinct sources of information are actually tapping different constructs.

The second hypothesis of the present study examined the potential stress-buffering effects of coping on the observed stress-bullying link. Specifically, based on Gonzales et al.'s research (2001), I expected that greater use of active coping (i.e., efforts either to change the situation or to think about it more positively) or distraction coping (i.e., attempts to engage in an alternative activity to avoid thinking the problem) would moderate the relation between stress and bullying behavior, with less bullying evident when such strategies are employed. Results of the present study revealed the remarkable but complicated effect of distraction coping on the stress-bullying link. Specifically, at low levels of stress (overall composite stress measure), bullying behavior (overall index of bullying) was lower for children who reported using high levels of distraction coping relative to those who reported using low levels of distraction for the entire sample, as predicted. However, as levels of stress increased, the effect of distraction coping reversed; that is, those who reported high levels of distraction coping had higher scores on bullying than those who reported lower levels of distraction coping. This pattern was predominantly evident among girls, not boys. Gonzales et al. also found that the moderating effect of stress (on acting-out behavior – conduct disorder) was evident only for girls. In the present study, although at high levels of stress, greater stress was associated with more bullying for girls who relied on distraction coping, at low levels of stress, the opposite pattern was

evident. This moderation pattern of distraction coping was observed for overall stress as well as for the stress associated with major life events, not daily hassles. Previous research (i.e., Gonzales et al., 2001) showed “a classic” stress-buffering effect whereby the effects of stress (major stressful events) was mitigated by coping, specifically distraction coping. The crossover interaction observed in the present study did not appear in their study (i.e., Gonzales et al., 2001) in terms of distraction coping. This discrepancy between Gonzales et al.’s study and the present study might be attributable to use of a general coping measure in the present study rather than use of a measure of strategies used to cope with specific stressful events. In fact, Gonzales et al. conducted their study in inner-city schools located in a high-stress urban context which is quite different from the environment where I took my study (middle-class school settings). Different types and levels of stressors might be typical in these different environments, yielding the different results. Further research is needed to determine if this difference is evident again. Further research is also needed to consider why these patterns are evident primarily for girls and not boys.

With respect to the result that the moderation pattern of distraction coping was observed only for major life events (not daily hassles) when different types of stressors were considered separately, the shorter time range (“during one month”) which was given for the hassles’ questionnaire might have minimized its possible association with the moderation effect of distraction. Specifically, in the hassles scale, children chose stress events that happened in the period of “during the last month” while children chose major stressful events that happened “during the last year”. These different time periods might account for the different results. Nevertheless, further study is needed to re-examine if these

different stress measures are assessing their own constructs.

With respect to different forms of bullying, the moderating effect of distraction coping was observed only for physical and relational bullying, not verbal bullying. That is, high levels of stress were more likely to be associated with increased physical or relational bullying, among children who relied on more distraction coping. At low levels of stress, children who relied on distraction coping were less likely to report increased physical and relational bullying under stress. When different types of stressors were considered, follow-up analyses indicated that this moderation pattern of distraction coping was found only for major stressful events for relational bullying and for both major stressful events and daily hassles for physical bullying. Given the lack of previous work addressing the bullying form differences, the findings of the effect of distraction coping regarding differences of bullying form may have to be viewed as preliminary. Further studies are needed to replicate this finding and to determine whether the finding is evident again.

Distraction coping (i.e., attempts to engage in an alternative activity [e.g., listening to music, doing exercise] to avoid thinking the problem) may be a reasonable and adaptive strategy for children who are exposed to relatively low levels of major stressful events or daily hassles in order to protect children from the effects of these stress on bullying behavior. However, distraction may not be efficacious in the presence of high levels of stress. It may be that high levels of major stressful events are uncontrollable stressors for which distraction coping cannot function to reduce the positive relation between the stress and bullying.

Earlier research by Gonzales et al. (2001) demonstrated the stress-buffering effect

of active coping on conduct problems. Specifically, they found that the moderation effect of active coping moderated the positive relation between family stress and conduct problems for girls. Extending this research to bullying, a unique form of aggressive behaviour, a similar pattern of moderation was anticipated in the present study. Results, however, did not confirm the hypothesis. Use of active coping strategies had no moderating effect on the link between stress and bullying. Conduct disorder and bullying behavior share broad characteristics of aggressive behavior. However, they are distinguished in narrow characteristics that conduct disorder is characterized with overt aggression whereas bullying shares a large proportion of variance with the psychological side of aggression. This distinction may affect the impact of active coping on these different outcome variables. Specifically, active coping may be effective in reducing the likelihood that stress leads to more overt type of aggression such as conduct disorder but not be effective to decreased the likelihood that stress leads to more the psychological type of aggression such as bullying. Further research is needed to replicate this finding.

Finally, the findings of the present study contributes to our theoretical understanding of how and under what conditions social support may protect children from the negative effects of stress on bullying behavior. Results of the present study demonstrated that social support, particularly that students perceived to be available from family members, was effective in reducing the likelihood that stress (especially major stressful events) would lead to increased bullying. Earlier studies have demonstrated the stress-buffering effects of social support on school adjustment problems (Dubow & Tisak, 1989; Pryor-Brown & Cowen, 1989). These studies showed that perceived social support

from friends or family moderated the positive relation between major stressful events and teacher-rated school problems. In the present study, perceived support from family appeared to serve as a buffer, reducing the likelihood that stress leads to bullying among highly stressed children. This was true for both major stressful events and daily hassles, when the different types of stressors were considered separately and the effect was primarily observed for more psychological (verbal, relational) forms of bullying, not physical bullying. This (i.e., the moderation effect of social support was observed for verbal or relational, not physical bullying) might be due to the finding that these psychological forms (verbal, relational) of bullying share substantial proportion of variance with overall bullying relative to physical bullying. Further study is needed to replicate this finding.

Overall, these findings suggest that social support from family could be one resource protecting children from the negative effects of stress on bullying behavior. It may be speculated that feelings of love, intimacy, trust, and security within family help reduce bullying behavior in the face of major stressful events and daily hassles, by, perhaps, enhancing children's self-esteem or self-worth. In fact, Harter (1988) found that social acceptance by parents and peers were important contributors to self-worth. Further, previous bullying studies (e.g., Dueholm, 1999; Smith, 1999) indicate links between low self-esteem and bullying behavior. For physical bullying, in contrast, it was support from friends that was found to have a significant impact on the stress-bullying relationship. That is, friend support seemed to serve as a buffer, decreasing the likelihood stress leads to bullying, specifically physical bullying, among stressed children. Given the lack of earlier

work indicating the friend support for physical bullying, the finding of the effect in the present study have to be viewed as preliminary. Further research is needed to determine whether these findings are evident.

Is the buffering effect of social support similar for boys and girls? Results of the present study suggest that it may not be. For girls, perceived support from friends moderated the stress-bullying relationship when stress emanated from major stressful events, but it was perceived family support that moderated the stress-bullying relationship when stress emanated from daily hassles. For boys, perceived family support moderated the stress-bullying relationship in response to major stressful events. Thus, different types of social support serve as protective factors in children's lives, depending on gender and the type of stress experienced. These findings regarding differences as a function of stress type and gender are considered preliminary because of the lack of prior work addressing these differences. Further research is needed to investigate to whether these findings can be reliably replicated. The results, however, underscore the importance of paying attention to the contribution of friend support in facilitating positive behavioral outcomes in relation to major stressful events for girls, and the contribution of family support in facilitating positive behavioral outcomes in relation to major stressful events for boys and in relation to daily hassles for girls.

Implications of Findings

The results of the present study are consistent with arguments that stress brought on by major stressful events and daily hassles may well contribute to the likelihood of bullying behavior (Bru et al., 2001; Okayasu & Takano, 2000; Taki, 1992). However, the

present results also suggest factors which may serve to protect children from such effects. When establishing or implementing an anti-bullying program, it may be worthwhile for families and schools to consider the issues of these risk and protective factors to be included in such a program. While it is important to underscore the correlational nature of the present findings, they do suggest possible protective factors that might help children to minimize the likelihood of bullying under conditions of stress, including the potential buffering effect of social support, especially from family and friends. At the same time, the present results suggest that considerable caution should be exercised in helping children find effective ways to cope with stress. For example, the present results demonstrate that at least one form of coping, distraction, may be a protective factor under some conditions but a risk factor under other conditions. Moreover, results of the present study, or lack thereof, also raise questions about whether particular coping strategies (e.g., active coping) are equally effective in all situations. Future research is needed to examine whether strategies used to cope vary depending on situations.

Limitations

There are several limitations in the present study that must be noted. First, the design of this study was correlational, with all variables assessed at one point in time. This precludes statements regarding temporal or causal relationships among the variables. It is still not clear whether stress leads to bullying, or bullying leads to stress in the present study. This is true for other variables such as coping strategies and social support. By examining change over several points in time, we would be able to see how bullying changes as a function of changes in stress. Also, by experimentally manipulating

independent variables such as stress, we may be able to see the effects of the manipulations on the dependent variable (i.e., bullying behavior). Accordingly, longitudinal and experimental studies are needed to address the causal relations between stress and bullying behavior as well as to identify mechanisms in which protective factors exert their stress-reducing influence on bullying behavior.

The second limitation is related to external validity issues. According to conversations with one of the participating teachers, there were students who claimed to be victims being bullied by peers who did not participated in the present research. As a result, the students could not write down the names of the peers who have bullied them for the question, "Who bullies others?" in the peer assessment questionnaire (i.e., A Class Play). This might have diminished the reliability of the peer assessment.

Finally, measurement issues have to be raised. The present study utilized a measure of the general coping strategies rather than a measure of strategies used to cope with specific stress situations or peer-related problems per se. Assessing how well specific coping strategies match specific stressors might have been important. Use of a general coping measure may have underestimated the effects of coping strategies. In addition, the use of a single item of bullying in the peer assessment (i.e., "Who bullies others?") may have to be noted as another limitation. Presenting the single item in order to have children identify bullies would result in underestimations of the phenomenon. In fact, in the self-report of bullying in this study, there were a number of students who marked "Not at all" for the general bullying item (i.e., "How often have you taken part in bullying another students?"), although they marked either "Only a few times", "Every month", "Every

week”, or “Many times a week” for other more concrete bullying items (i.e., “How often have you taken in part in physically bullying others by hitting, kicking, shoving, etc.?”), “How often have you taken part in verbally bullying other by insults, put downs, or threats?”, and “How often have you taken part in bullying others by exclusion, rumours, or making someone look bad?”). Adding more concrete items which depict bullies such as “Who makes someone feel bad or look bad by making a face, or turning away, rolling their eyes?”, Who spreads mean rumours about someone to get others to stop liking the person?” (Vaillancourt, 2001), etc. may be necessary to reduce underestimations of the behavior.

Despite these limitations, the present study sheds new light on a unique contribution to our understanding of bullying in that there may be possible risk and protective factors that families and schools might consider in helping children to minimize the likelihood of bullying.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Aldwin, C. M. (2000). *Stress, coping, and development: An integrative perspective*. New York: Guilford Press.
- Andreou, E. (2001). Bully/victim problems and their association with coping behavior in conflictual peer interventions among school-age children. *Educational Psychology*, 21 (1), 59-66.
- Atter, B. K., Guerra, N. G., & Tolan, P. H. (1994). Neighborhood disadvantage, stressful life events, and adjustment in urban elementary-school children. *Journal of Clinical Child Psychology*, 23 (4), 391-400.
- Austin, S., & Joseph, S. (1996). Assessment of bully/victim problems in 8 to 11 year-olds. *British Journal of Educational Psychology*, 66, 447-456.
- Ayers, T. S., Sandler, I. N., & Twohey, J. L. (1998). Conceptualization and measurement of coping in children and adolescents. In T. H. Ollendick & R. J. Prinz (Eds.), *Advances in clinical child psychology* (Vol. 20, pp. 243-301). New York: Plenum Press.
- Ayers, T. S., Sandler, I. N., West, S. G., & Roosa, M. W. (1996). A dispositional and situational assessment of children's coping: Testing alternative models of coping. *Journal of Personality*, 64 (4), 923-958.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in

social psychological research: Conceptual, strategic, and statistical considerations.

Journal of Personality and Social Psychology, 51(6), 1173-1182.

Baron, R. A., & Richardson, D. (1994). *Human aggression*. New York: Plenum Press.

Bennett, D. S., & Bates, J. E. (1995). Prospective models of depressive symptoms in early adolescence. *Journal of Early Adolescence*, 15 (3), 299-315.

Berkwitz, L. B. (1993). *Aggression: Its causes, consequences, and control*. New York: McGraw-Hill.

Besag, V. (1989). *Bullies and victims in schools*. Philadelphia, PA: Open University Press.

Billings, A. G., & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of Behavioral Medicine*, 4, 139-157.

Boivin, M., Hymel, S., & Hodges, E. V. E. (2001). Toward a process view of peer rejection and harassment. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 265-309). New York: Guilford Press.

Borg, W. R., & Gall, M. D. (1989). *Educational research: Introduction* (4th ed.). White Plains, NY: Longman.

Bru, E., Murberg, T. A., & Stephens, P. (2001). Social support, negative life events and pupil misbehaviour among young Norwegian adolescents. *Journal of Adolescence*, 24, 715-727.

Cauce, A. M., Mason, C., Gonzales, N., Hiraga, Y., & Liu, G. (1994). Social support during adolescence: Methodological and theoretical considerations. In F. Nestman

- & K. Hurrelmann (Eds.), *Social networks and social support in childhood and adolescence*. Berlin: de Gruyter.
- Causey, D. L., & Dubow, E. F. (1992). Development of a self-report coping measure for elementary school children. *Journal of Clinical Child Psychology*, 21 (1), 47-59.
- Cloud, J., & Barovick, H. (1999, May 31). Just a routine school shooting. *Time*, 153, 34-39.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Cohen, L. H. (Ed.). (1988). *Life events and psychological functioning: Theoretical and methodological issues*. Newbury Park, CA: Sage.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 310-357.
- Compas, B. E. (1987). Stress and life events during childhood and adolescence. *Clinical Psychology Review*, 7, 275-302.
- Compas, B. E., Davis, G. E., Forythe, C. J., & Wagner, B. M. (1987). Assessment of major and daily stressful events during adolescence: The Adolescent Perceived Events Scale. *Journal of Consulting and Clinical Psychology*, 55 (4), 534-541.
- Compas, B. E., Howell, D. C., Phares, V., Williams, R. A., & Giunta, C. T. (1989). Risk factor for emotional/behavioral problems in young adolescents: A prospective analysis of adolescent and parental stress and symptoms. *Journal of Consulting and Clinical Psychology*, 57 (6), 732-740.

- Compas, B. E., Malcarne, V. L., & Fondacaro, K. M. (1988). Coping with stressful events in older children and young adolescents. *Journal of Consulting and Clinical Psychology, 56* (3), 405-411.
- Compas, B. E., & Phares, V. (1991). Stress during childhood and adolescence: Sources of risk and vulnerability. In M. Cummings, A. L. Greene, & K. Karraker (Eds.), *Life-span developmental psychology*. Hillsdale, NJ: Erlbaum.
- Compas, B. E., Wagner, B. M., Slavin, L. A., & Vannatta, K. (1986). A prospective study of life events, social support, and psychological symptomatology during the transition from high school to college. *American Journal of Community Psychology, 14* (3), 241-257.
- Connor-Smith, J. K., Compas, B. E., Wadsworth, M. E., Thomsen, A. H., & Saltzman, H. (2000). Responses to stress in adolescence: Measurement of coping and involuntary stress responses. *Journal of Consulting and Clinical Psychology, 68* (6), 976-992.
- Costa, P. T., Jr. & McCrae, R. R. (1990). Personality: Another "hidden factor" in stress research. *Psychological Inquiry, 1*, 22-24.
- Craig, W. M., Peter, R. D., & Konarski, R. (1998). *Bullying and victimization among Canadian school children*. Applied Research Branch Strategic Policy, Human Resources Development Canada.
- DeLongis, A., Coyne, J. C., Dakof, G., Folkman, S., & Lazarus, R. S. (1982). Relationship of daily hassles, uplifts, and major life events to health status. *Health Psychology, 1*, 119-136.

- Dollard, J., Doob, L. W., Miller, N. E., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression*. New Haven, CT: Yale University Press.
- Dueholm, N. (1999). Denmark. In P. K. Smith, Y. Morita, J. Junger-tas, D. Olweus, R. Catalano, & P. Slee (Eds.), *The nature of school bullying: A cross-national perspective*. London: Routledge.
- DuBois, D. L., Felner, R. D., Brand, S., Adan, A. M., & Evans, E. G. (1992). A prospective study of life stress, social support, and adaptation in early adolescence. *Child Development, 63*, 542-557.
- Dubow, E. F., & Tisak, J. (1989). The relation between stressful life events and adjustment in elementary school children: The role of social support and social problem-solving skills. *Child Development, 60*, 1412-1423.
- Ebata, A. T., & Moos, R. H. (1991). Coping and adjustment in distressed and healthy adolescents. *Journal of Applied Developmental Psychology, 12*, 33-54.
- Elwood, S. W. (1987). Stressor and coping response inventories for children. *Psychological Reports, 931-947*.
- Farrington, D. P. (1993). Understanding and preventing bullying. In M. Tonry (Ed.), *Crime and Justice* (Vol. 17). Chicago: University of Chicago Press.
- Gamble, W. C. (1994). Perceptions of controllability and other stressor event characteristics as determinants of coping among young adolescents and young adults. *Journal of Youth and Adolescence, 23* (1), 65-84.
- Garmezy, N. (1983). Stress of childhood. In N. Garmezy & M. Rutter (Eds.), *Stress, coping, and development in children* (pp. 43-84). New York: McGraw-Hill.

- Garrett, H. E. (1966). *Statistics in psychology and education* (6th ed.). New York: David McKay.
- Gonzales, N. A., Tein, J., Sandler, I. N., & Friedman, R. J. (2001). On the limits of coping: Interaction between stress and coping for inner-city adolescents. *Journal of Adolescent Research, 16* (4), 372-395.
- Grant, K. E., Compas, B. E., & Stuhlmacher, A. F. (2003). Stressors and child and adolescent psychopathology: Moving from makers to mechanisms of risk. *Psychological Bulletin, 129*, 447-466.
- Guerra, N. G., Huesmann, L. R., Tolan, P. H., van Acker, R., & Eron, L. D. (1995). Stressful life events and individual beliefs as correlates of economic disadvantage and aggression among urban children. *Journal of Consulting and Clinical Psychology, 64* (4), 518-528.
- Harter, S. (1988). Causes, correlates and the functional role of global self-worth: A life span perspective. In J. Kolligian & R. Sternberg (Eds.), *Perceptions of competence and incompetence across the life span*. New Haven, CT: Yale University Press.
- Hayden Thomson, L. K. (1989). *The development of the Relational Provision Loneliness Questionnaire for Children*. Unpublished doctoral dissertation, University of Waterloo, Ontario, Canada.
- Hymel, S., Bonanno, R. A., & Rocke Henderson, N. (2002). *Bullying and peer harassment in schools: The perspective of secondary students*. Paper presented at the second annual BC Ministry of Education Research Symposium, Vancouver, BC, Canada.
- Johnson, J. H. (1986). *Life events as stressors in childhood and adolescence*. Beverly

Hills, CA: Sage.

Johnson, J. H., & Bradlyn, A. S. (1988). Life events and adjustment in childhood and adolescence: Methodological and conceptual issues. In L. H. Cohen (Ed.), *Life events and psychological functioning: Theoretical and methodological issues* (pp. 64-95). Newbury Park, CA: Sage.

Jose, P. E., D'Anna, C. A., Cafasso, L. L., Bryant, F. B., Chiker, V., Gein, N., & Zhezmer, N. (1998). Stress and coping among Russian and American early adolescents. *Developmental Psychology*, 34 (4), 757-769.

Juvonen, J., & Graham, S. (Ed.). (2001). *Peer harassment in school: The plight of the vulnerable and victimized*. New York: Guilford Press.

Juvonen, J., Nishina, A., & Graham, S. (2001). Self-views versus peer perceptions of victim status among early adolescents. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 105-124). New York: Guilford Press.

Kaltiala-Heino, R., Rimpelä, M., Marttunen, M., Rimpelä, A., & Rantanen, P. (1999). Bullying, depression, and suicidal ideation in Finish adolescents: School survey. *British Medical Journal*, 319, 348-351.

Kaltiala-Heino, R., Rimpelä, M., Rantanen, P., & Rimpelä, A. (2000). Bullying at school: An indicator of adolescents at risk for mental disorders. *Journal of Adolescence*, 23, 661-674.

Kanner, A. D., Coyne, J. C., Schaefer, C., & Lazarus, R. S. (1981). Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events.

Journal of Behavioral Medicine, 4 (1), 1-39.

- Kanner, A. D., Feldman, Weinberger, D. A., & Ford, M. E. (1987). Uplifts, hassles, and adaptational outcomes in early adolescents. *Journal of Early Adolescence*, 7 (4), 371-394.
- Krohne, H. W. (1990). Personality as mediator between objective events and their subjective representation. *Psychological Inquiry*, 1, 26-29.
- Lazarus, R. S. (1990). Theory-based stress measurement. *Psychology Inquiry*, 1, 3-13.
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York: Springer.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- MacKinnon-Lewis, C., Volling, B. L., Lamb, M. E., Dechman, K., Rabiner, D., & Curtner, M. E. (1994). A cross-contextual analysis of boys' social competence: From family to school. *Developmental Psychology*, 30 (3), 325-333.
- Matthews, K. A. & Angulo, J. (1980). Measurement of the Type A behavior pattern in children: Assessment of children's competitiveness, impatience-anger, and aggression. *Child Development*, 51, 466-475.
- Menesini, E., Elsea, M., Smith, P. K., Genta, M. L., Giannetti, E., Fonzi, A., & Costabile, A. (1997). Cross-national comparison of children's attitudes toward bully/victim problems in school. *Aggressive Behavior*, 23, 245-257.
- Miller, N. E. (1941). The frustration-aggression hypothesis. *Psychological Review*, 48, 337-342.
- Morita, Y. & Kiyonaga, K. (1996), *Ijime: Kyoushitsu no yamai* [Ailing classrooms]. Tokyo: Kaneko Shobo.

- Morita, Y. (Ed.). (1999). *Sekai no ijime* [Bullying of the world]. Tokyo: Kaneko Shobo.
- Morita, Y., Taki, M., Hata, M., Hoshino, S., & Iwai, Y. (1999). *Nihon no ijime: Yobo taiou ni ikasu deta shuu* [Bullying of Japan: Data for prevention and intervention]. Tokyo: Kaneko Shobo.
- Nancel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association*, 285, 2094-2100.
- Naylor, P., & Cowie, H. (1999). The effectiveness of peer support systems in challenging school bullying: The perspectives and experiences of teachers and pupils. *Journal of Adolescence*, 22, 467-479.
- Nestman, F., & Hurrelmann, K. (1994). Child and adolescent research as a challenge and opportunity for social support theory, measurement, and intervention: And vice versa. In F. Nestman & K. Hurrelmann (Eds.), *Social networks and social support in childhood and adolescence*. Berlin: de Gruyter.
- Okayasu, T., & Takano, I. (2000). Psychological stress of victims and bullies in junior high school. *Japanese Journal of Educational Psychology*, 48, 410-421.
- Olafsen, R. M., & Viemerö, V. (2000). Bully/victim problems and coping with stress in school among 10- to 12- year-old pupils in Åland, Finland. *Aggressive Behavior*, 26, 57-65.
- Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys*. Washington, DC: Hemisphere.

- Olweus, D. (1987). Schoolyard bullying: Grounds for intervention. *School Safety*, 6, 4-11.
- Olweus, D. (1991). Bullying/victim problems among schools children: Basic facts and effects of a school based intervention program. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 411-448). Hillsdale, NJ: Erlbaum.
- Olweus, D. (1992). Victimization by peers: Antecedents and long-term outcomes. In K. H. Rubin & J. B. Asendorpf (Eds.), *Social withdrawal, inhibition, and shyness in childhood* (pp. 315-341). Hillsdale, NJ: Erlbaum.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford, UK: Blacwell.
- Olweus, D. (1999). Sweden. In Y. Morita (Ed.), *Sekai no ijime* [Bullying of the world] (pp. 90-117). Tokyo: Kaneko Shobo.
- Paschall, M. J., Ennett, S. T., & Flewelling, R. L. (1996). Relationships among family characteristics and violent behavior by Black and White male adolescents. *Journal of Youth and Adolescence*, 25 (2), 177-197.
- Pedhazur, E. J. (1997). *Multiple regression in behavioral research: Explanation and prediction* (3rd ed.). Orlando, FL: Harcourt Brace College Publishers.
- Pellegrini, A. D. (2001). Sampling instances of victimization in middle school: A methodological comparison. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 125-144). New York: Guilford Press.
- Pellegrini, A. D., & Bartini, M. (2000). An empirical comparison of methods of sampling

- aggression and victimization in school settings. *Journal of Educational Psychology*, 92 (2), 360-366.
- Perry, D. G., Kusel, S. J., & Perry, L. C. (1988). Victims of peer aggression. *Developmental Psychology*, 24 (6), 807-814.
- Peterson, L. & Rigby, K. (1999). Countering bullying at an Australian secondary school with students as helpers. *Journal of Adolescence*, 22, 481-492.
- Pryor-Brown, L., & Cowen, E. L. (1989). Stressful life events, support, and children's school adjustment. *Journal of Clinical Psychology*, 18 (3), 214-220.
- Reid, M., Landesman, S., Treder, R., & Jaccard, J. (1989). My family and friends: Six to twelve year old children's perceptions of social support. *Child Development*, 60, 896-910.
- Rigby, K. (1998). Peer victimization at school and the health of secondary students. *British Journal of Educational Psychology*, 22 (2), 28-34.
- Rigby, K. (2000). Effects of peer victimization in schools and perceived social support on adolescent well-being. *Journal of Adolescence*, 23, 57-68.
- Rigby, K., & Slee, P. (1999). Suicidal ideation among adolescent school children, involvement in bully-victim problems, and perceived social support. *Suicide and Life-Threatening Behavior*, 29 (2), 119-130.
- Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with distress. *American Psychologist*, 41, 813-819.
- Rutter, M. (1983). Stress, coping, and development: Some issues and some questions. In N. Garnezy & M. Rutter (Eds.), *Stress, coping, and development in children* (pp.

- 1-42). New York: McGraw-Hill.
- Seiffge-Krenke, I. (1995). *Stress, coping, and relationships in Adolescence*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Sharp, S. (1995). How much does bullying hurt?: The effects of bullying on the personal wellbeing and educational progress of secondary aged students. *Educational Child Psychology, 12* (2), 81-88.
- Shimada, H. (1997). School stress and school bullying. *Journal of Educational Research in School Bullying* (Hiroshima University), 2, 43-53.
- Smith, P. K. (1999). The UK and Ireland. In P. K. Smith, Y. Morita, J. Junger-tas, D. Olweus, R. Catalono, & P. Slee (Eds.), *The nature of school bullying: A cross-national perspective*. London: Routledge.
- Sterling, S., Cowen, E. L., Weissberg, R. P., Lotyczewski, B. S., & Boike, M. (1985). Recent stressful life events and young children's school adjustment. *American Journal of Community Psychology, 13* (1), 87-98.
- Swearingen, E. M., & Cohen, L. H. (1985). Measurement of adolescents' life events: The junior high life experiences survey. *American Journal of Community Psychology, 13* (1), 69-85.
- Taki, M. (1992). Ijime koui no hassei youin ni kansuru jisshouteki kenkyu [Empirical research in investigation of causal factors of bullying behavior]. *Kyoiku Shakaigaku Kenkyu, 50*, 366-388.
- Tolan, P. (1988). Socioeconomic, family, and social stress correlates of adolescent antisocial and delinquent behavior. *Journal of Abnormal Child Psychology, 16* (3),

317-331.

- Vaillancourt, T. (2001). *Competing for hegemony during early and middle adolescence: A link between aggression and social status*. Unpublished doctoral dissertation, University of British Columbia, BC, Canada.
- Vaux, A., & Ruggiero, M. (1983). Stressful life change and delinquent behavior. *American Journal of Community Psychology*, 11(2), 169-183.
- Walker, L. S., Smith, C. A., Garber, J., & van Slyke, D. A. (1997). Development and validation of the Pain Response Inventory for Children. *Psychological Assessment*, 9, 392-405.
- Whitney, I., & Smith, P. K. (1993). Survey of the nature and extent of bullying in junior/middle and secondary schools. *Educational Research*, 35 (1), 3-25.
- Windle, M., & Windle, R. (1996). Coping strategies, drinking motives, and stressful life events among middle adolescents: Associations with emotional and behavioral problems and with academic functioning. *Journal of Abnormal Psychology*, 105, 551-560.

Appendix A

Testing Questionnaires

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Appendix A-1: Demographic Information Questionnaire

ABOUT YOU

We are interested in learning about your background. Please answer all of the questions as honestly as you can. REMEMBER, ALL OF YOUR ANSWERS WILL REMAIN PRIVATE AND CONFIDENTIAL, AND WILL ONLY BE SEEN BY THE RESEARCHERS.

1. Are you female or male? (Check one) Female _____ Male _____
2. How old are you? _____ Years
3. When were you born? DAY: _____ MONTH _____ YEAR _____
4. What grade are you in now? (Check one) _____ 5th _____ 6th _____ 7th
5. How do you describe yourself in terms of ethnic or cultural heritage? (Check one)

- _____ White (Anglo, Caucasian, European descent, etc.)
- _____ First Nations (Native Canadian)
- _____ Asian (Chinese, Japanese, Korean, etc.)
- _____ Black (African, Haitian, Jamaican, etc.)
- _____ Indo Canadian (East Indian)
- _____ Latin (Spanish, Mexican, South American, etc.)
- _____ Other (If you would describe your ethnic or cultural heritage in some way that is not listed above, please describe your ethnic or heritage on the line below.)

Thank you!

For the following pages, please be sure to read all of the instructions before starting

Appendix A-2: Bullying Survey Questionnaire
BULLYING AND HARASSMENT AT SCHOOL

Instructions: We want to know about bullying in your school, and we want to know what you think. The questions below ask about your experience with bullying at school. This is a chance for students to give us some honest feedback about what things are like at the school. Remember that your answers are confidential.

There are lots of different ways to bully someone, but a bully wants to hurt the other person (it's not an accident), and does so unfairly (the bully has some advantage over the victim). Most people think of bullying when someone hits, pushes, shoves, kicks, spits or beats up on others. You can also bully by damaging or stealing other people's property. Bullying can be verbal, including such things as name-calling, mocking others, hurtful teasing, humiliating someone, threatening someone, making people do things they don't want to do and things like that. Some people bully by excluding others from the group, by gossiping about them, setting them up to look foolish, spreading rumours about them, or making sure others don't associate with the person. When you are answering the questions, remember that bullying can take many different forms.

Please indicate your answer by circling the number of the answer that suits you best.

	Not at all	Only a few times this year	Every month	Every week	Many times a week
1. How often have you been bullied or harassed?	0	1	2	3	4
a) How often have you been physically bullied or harassed by being hit, kicked, shoved, etc.?	0	1	2	3	4
b) How often have you been verbally bullied by insults, put downs or threats at school?	0	1	2	3	4
c) How often have you been bullied by exclusion, rumours or someone making you look bad?	0	1	2	3	4
2. How often have you taken part in bullying or harassing another student?	0	1	2	3	4
a) How often have you taken part in physically bullying others by hitting, kicking, shoving, etc.?	0	1	2	3	4
b) How often have you taken part in verbally bullying others by insults, put downs, or threats?	0	1	2	3	4
c) How often have you taken part in bullying others by exclusion, rumours, or making someone look bad?	0	1	2	3	4
3. How often have you seen other students being bullied or harassed?	0	1	2	3	4
a) How often have you seen students physically bullying others by hitting, kicking, shoving, etc.?	0	1	2	3	4
b) How often have you seen students verbally bullying others by insults, put downs, or threats?	0	1	2	3	4
c) How often have you seen students bullying others by exclusion, rumours, or making someone look bad?	0	1	2	3	4

Appendix A-3: Peer Assessment Questionnaire

A CLASS PLAY

Instructions: Pretend that you are the DIRECTOR of a play that will be put on in your class. As the director, you have many jobs to do, but one thing you must do is to decide who could play each of the characters in your play. For each of the roles listed on the next page, please write down the names of the people in your class who you feel would best fit each role. You can name as many people as you can think of for each role and people can be named for more than one role, in case someone might be good for more than one part. You must identify at least one boy and one girl for each part in the play.

The yellow sheet of paper is a list of the students in your class that are part of this project, and you can use this sheet to help remember all the possible actors to choose from. Be sure to put down both first and last names for each one.

For example, suppose that in your play there is one character that is a giant. Who in your class could perhaps play the part of a giant? Who in your class is very tall? Write down the names of classmates who are very tall and could play the part of a giant in the box below. Write down more than one name in case someone might be good for more than one part.

EXAMPLE

	BOYS	GIRLS
Who is very tall?		

REMEMBER, YOUR ANSWERS ARE CONFIDENTIAL.

DO NOT DISCUSS YOUR ANSWERS WITH ANYONE (NOT YOUR FRIENDS, TEACHERS, ETC.).

1. Who always gets along well with other people?	BOYS:	GIRLS:
2. Who is competitive?	BOYS:	GIRLS:
3. Who bullies others?	BOYS:	GIRLS:
4. Who has a good sense of humor and can make people laugh?	BOYS:	GIRLS:
5. Who is bullied a lot?	BOYS:	GIRLS:
6. Who is kind and nice to others?	BOYS:	GIRLS:
7. Who is popular at school?	BOYS:	GIRLS:

Appendix A-4: Children's Hassles Scale
HASSLES CHECKLIST

Instructions: Here is a list of things that sometimes make students feel bothered or upset. We want to know if any of these things have happened to you during the last month and, if they did happen, how you felt about them. Please indicate answers by circling the number that suits you best.

	Didn't happen	It did happen in the past month... And here is how I felt:		
		Didn't feel bad	Felt sort of bad	Felt very bad
1. Kids at school teased me.	0	1	2	3
2. I had to clean up my room.	0	1	2	3
3. I was punished for something I didn't do.	0	1	2	3
4. I got punished when I did something wrong.	0	1	2	3
5. My pet died.	0	1	2	3
6. My best friend didn't want to be my best friend anymore.	0	1	2	3
7. My mother or father wasn't home when I expected them.	0	1	2	3
8. I lost something.	0	1	2	3
9. My mother or father got sick.	0	1	2	3
10. My mother or father was mad at me for getting a bad school report.	0	1	2	3
11. My teacher was mad at me because of my behavior.	0	1	2	3
12. My schoolwork was too hard.	0	1	2	3
13. I got into a fight with another kid.	0	1	2	3

	Didn't happen	It did happen in the past month... And here is how I felt:		
		Didn't feel bad	Felt sort of bad	Felt very bad
14. I didn't do well at sports.	0	1	2	3
15. I had to go to bed when I didn't feel like it.	0	1	2	3
16. My mother or father didn't have enough time to do something with me.	0	1	2	3
17. I didn't know the answer when the teacher called on me.	0	1	2	3
18. When the kids were picking teams I was one of the last ones to be picked.	0	1	2	3
19. My mother and father were fighting.	0	1	2	3
20. My mother or father forgot to do something they said they would do.	0	1	2	3
21. I felt bored and wished there was something interesting to do.	0	1	2	3
22. My brothers and sisters bugged me.	0	1	2	3
23. I didn't like the way I looked and wished I could be different (e.g., taller, stronger, better-looking).	0	1	2	3
24. Another kid could do something better than I could.	0	1	2	3
25. I didn't have enough privacy (a time and place to be alone) when I wanted it.	0	1	2	3

Appendix A-5: Major Event Inventory
LIFE EVENTS CHECKLIST

Instructions: Some really big things that can sometimes happen to young people your age are listed below. Read each one. Has it happened to you during the last year?

If it has not happened during the last year, circle the "0", but if it has happened to you during the last year, decide how stressed it made you feel when it happened and also how stressed you feel about it now. If it is very stressful, circle "4"; if it is somewhat stressful, circle "3". If it is simply bothersome, circle "2", if it is no trouble at all, circle "1". If some major thing happened during the year that was stressful but is not on this list, write it on the blank of Number 8. Circle "1", "2", "3", or "4" to tell how stressful it is now and how stressful it was at the time.

		Has not happened	It has happened in the past year... And here is how I felt then and now			
			No trouble	Bother-some	Stressful	Very stressful
1. I started in a new school.	When it happened	0	1	2	3	4
	How I feel about it now	0	1	2	3	4
2. One of my parents started or stopped working.	When it happened	0	1	2	3	4
	How I feel about it now	0	1	2	3	4
3. Someone important to me started to care for someone else.	When it happened	0	1	2	3	4
	How I feel about it now	0	1	2	3	4
4. Someone important to me was very sick or died.	When it happened	0	1	2	3	4
	How I feel about it now	0	1	2	3	4
5. My parents separated or got a divorce.	When it happened	0	1	2	3	4
	How I feel about it now	0	1	2	3	4
6. I got hurt or was very sick.	When it happened	0	1	2	3	4
	How I feel about it now	0	1	2	3	4
7. I was touched by someone in a way I didn't like.	When it happened	0	1	2	3	4
	How I feel about it now	0	1	2	3	4
8. Another life event that happened to me (please describe):	When it happened	0	1	2	3	4
	How I feel about it now	0	1	2	3	4

Appendix A-6: Children's Coping Strategies Checklist
STRATEGIES FOR DEALING WITH STRESS AND PROBLEMS

Instructions: When faced with a problem or stress, students do different things to solve the problem or to make themselves feel better. Below is a list of things students may do when faced with a problem or when feeling stressed. For each item, select the response that best describes how often you do this when you have a problem. There are no right or wrong answers, just say how often you do each thing in order to solve the problem or to make yourself feel better.

	Never	Sometimes	Often	Most of the time
WHEN I HAVE A PROBLEM, I ...				
1. Listen to music.	0	1	2	3
2. Think about what I could do before I do something.	0	1	2	3
3. Write down my feelings.	0	1	2	3
4. Do something to make things better.	0	1	2	3
5. Try to notice or think about only the good things in life.	0	1	2	3
6. Go bicycle riding.	0	1	2	3
7. Try to stay away from the problem.	0	1	2	3
8. Try to put it out of my mind.	0	1	2	3
9. Figure out what I can do by talking with one of my friends.	0	1	2	3
10. Think about why it has happened.	0	1	2	3
11. Think about what would happen before I decide what to do.	0	1	2	3
12. Try to make things better by changing what I do.	0	1	2	3

	Never	Sometimes	Often	Most of the time
WHEN I HAVE A PROBLEM, I ...				
13. Talk about how I am feeling with my mother or father.	0	1	2	3
14. Tell myself it will be over in a short time.	0	1	2	3
15. Play sports.	0	1	2	3
16. Talk about how I am feeling with some adult who is not in my family.	0	1	2	3
17. Ask God to help me understand it.	0	1	2	3
18. Cry by myself.	0	1	2	3
19. Go walking.	0	1	2	3
20. Imagine how I'd like things to be.	0	1	2	3
21. Talk to my brother or sister about how to make things better.	0	1	2	3
22. Try to understand it better by thinking more about it.	0	1	2	3
23. Read a book or magazine.	0	1	2	3
24. Try to stay away from things that make me feel upset.	0	1	2	3
25. Try to solve the problem by talking with my mother or father.	0	1	2	3
26. Think about what I can learn from the problem.	0	1	2	3
27. Let out feelings to my pet or stuffed animal.	0	1	2	3
28. Think about which things are best to do to handle the problem.	0	1	2	3

	Never	Sometimes	Often	Most of the time
29. Talk with my brother or sister about my feelings.	0	1	2	3
30. Wait and hope that things will get better.	0	1	2	3
31. Think about what I need to know so I can solve the problem.	0	1	2	3
32. Go skateboard riding or roller skating.	0	1	2	3
33. Talk with one of my friends about my feelings.	0	1	2	3
34. Watch TV.	0	1	2	3
35. Avoid the people that make me feel bad.	0	1	2	3
36. Do something to solve the problem.	0	1	2	3
37. Remind myself that things could be worse.	0	1	2	3
38. Do some exercise.	0	1	2	3
39. Try to figure out what I can do by talking to an adult who is not in my family.	0	1	2	3
40. Avoid it by going to my room.	0	1	2	3
41. Try to figure out why things like this happen.	0	1	2	3
42. Wish that things were better.	0	1	2	3
43. Tell myself it's not worth getting upset about.	0	1	2	3
44. Do something like video games or hobby.	0	1	2	3
45. Do something in order to get something good out of it.	0	1	2	3

Appendix A-7: Relational Provisions Loneliness Questionnaire

THE PEOPLE IN MY LIFE

Instructions: The sentences below ask about the people in your life, including kids your age, family members and teachers and how much they are there for you when you need help. Read each sentence and decide whether it is true or not true for you.

- Circle the big "YES" if the sentence is really true for you
 Circle the little "yes" if the sentence is kind of true for you
 Circle "sometimes" if the sentence is true for you some of the time
 Circle the little "no" if the sentence is kind of not true for you
 Circle the big "NO" if the sentence is really not true for you

ABOUT KIDS IN MY LIFE

1. There is someone my age I can turn to.	YES	yes	sometimes	no	NO
2. There is someone my age I could go to if I were feeling down.	YES	yes	sometimes	no	NO
3. I have at least one really good friend I can talk to when something is bothering me.	YES	yes	sometimes	no	NO
4. I have a friend who is really interested in hearing about my private thoughts and feelings.	YES	yes	sometimes	no	NO
5. I have a friend I can tell everything to.	YES	yes	sometimes	no	NO
6. There is somebody my age who really understands me.	YES	yes	sometimes	no	NO
7. There is a friend I feel close to.	YES	yes	sometimes	no	NO

ABOUT FAMILY MEMBERS IN MY LIFE

1. There is someone in my family I can turn to.	YES	yes	sometimes	no	NO
2. There is someone in my family I could go to if I were feeling down.	YES	yes	sometimes	no	NO
3. I have at least one person in my family I can talk to when something is bothering me.	YES	yes	sometimes	no	NO
4. I have someone in my family who is really interested in hearing about my private thoughts and feelings.	YES	yes	sometimes	no	NO
5. I have someone in my family I can tell everything to.	YES	yes	sometimes	no	NO
6. There is someone in my family who really understands me.	YES	yes	sometimes	no	NO
7. There is someone in my family I feel close to.	YES	yes	sometimes	no	NO

ABOUT TEACHERS IN MY LIFE

1. There is a teacher I can turn to.	YES	yes	sometimes	no	NO
2. There is a teacher I could go to if I were feeling down.	YES	yes	sometimes	no	NO
3. I have at least one teacher I can talk to when something is bothering me.	YES	yes	sometimes	no	NO
4. I have a teacher who is really interested in hearing about my private thoughts and feelings.	YES	yes	sometimes	no	NO
5. I have a teacher I can tell everything to.	YES	yes	sometimes	no	NO
6. There is a teacher who really understands me.	YES	yes	sometimes	no	NO
7. There is a teacher I feel close to.	YES	yes	sometimes	no	NO

THANK YOU VERY MUCH FOR HELPING US WITH THIS RESEARCH PROJECT!

Appendix B
Consent Form

B-1: Parental consent: pp.130-131

B-2: Student consent: pp.132-133



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PARENT/GUARDIAN CONSENT FORM

Study Title: "Social relationships and stress in early adolescents"
Principal Investigator: Shelley Hymel, Ph.D.
Professor
University of British Columbia
Co-Investigator: Chiaki Konishi, M.Ed.
Master's Candidate
University of British Columbia

Consent:

I have read and understood the information presented about the study entitled, "Social relationships and stress in early adolescents".

I understand that my child's participation in the study is entirely voluntary, and that she/he may withdraw from the study at any time without any consequences or impact on her/his class standing or schoolwork.

I have received a copy of this consent form for my own records.

My decision regarding my child's participation in the study is indicated below (please check one):

_____ YES, I consent to my child's participation in this study.

_____ NO, I do not consent to my child's participation in this study.

***** PLEASE KEEP THIS PORTION FOR YOUR RECORDS *****

***** PLEASE RETURN THIS FORM TO THE SCHOOL *****

PARENT/GUARDIAN CONSENT FORM

Consent:

I have read and understood the information presented about the study entitled "Social relationships and stress in adolescents".

I understand that my child's participation in the study is entirely voluntary, and that she/he may withdraw from the study at any time without any consequences or impact on her/his class standing or schoolwork.

I have received a copy of this consent form for my own records.

My decision regarding my child's participation in the study is indicated below (please check one):

_____ YES, I consent to my child's participation in this study.

_____ NO, I do not consent to my child's participation in this study.

SON / DAUGHTER (please circle) will participate.

Son/daughter's Name (please print): _____

Son/daughter's Grade: _____

Parent/Guardian Signature: _____

Date: _____



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PARTICIPANT ASSENT FORM

I have read and understood the description of the study "Social relationships and stress in early adolescents."

I understand that my participation in this study is entirely voluntary and that I can refuse to participate or withdraw from the study at any time without my class standing or grades being affected.

Please check one below:

_____ Yes, I agree to participate.

_____ No, I do not agree to participate.

Name (Please print): _____

Signature: _____

Grade: _____

Date: _____