

8-9-2006

## Coping with Peer Victimization in Middle Childhood

Andrew Terranova Jr.  
*University of New Orleans*

Follow this and additional works at: <https://scholarworks.uno.edu/td>

---

### Recommended Citation

Terranova, Andrew Jr., "Coping with Peer Victimization in Middle Childhood" (2006). *University of New Orleans Theses and Dissertations*. 423.  
<https://scholarworks.uno.edu/td/423>

This Dissertation is protected by copyright and/or related rights. It has been brought to you by ScholarWorks@UNO with permission from the rights-holder(s). You are free to use this Dissertation in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/or on the work itself.

This Dissertation has been accepted for inclusion in University of New Orleans Theses and Dissertations by an authorized administrator of ScholarWorks@UNO. For more information, please contact [scholarworks@uno.edu](mailto:scholarworks@uno.edu).

# COPING WITH PEER VICTIMIZATION IN MIDDLE CHILDHOOD

A Dissertation

Submitted to the Graduate Faculty of the  
University of New Orleans  
in partial fulfillment of the  
requirements for the degree of

Doctor of Philosophy  
in  
Psychology

by

Andrew Terranova Jr.

B.A. Southeastern Louisiana University, 2000  
M.S. University of New Orleans, 2003

August 2006

## Acknowledgments

I would like to thank everyone who helped me with this project. First, I would like to thank my advisor Dr. Amanda Morris. Even with all that has happened in the past year, your guidance over the past few years has been a key ingredient in all I have been able to accomplish. I would also like to thank all of my committee members: Dr. Paul Boxer, Dr. Paul Frick, Dr. Laura Scaramella, and Dr. Carl Weems. Your input has helped make this and other projects I have started better. I would like to thank the American Psychological Foundation for providing me the funding to complete this project and embark on several new projects. I would like to thank all the undergraduate research assistants who have assisted me in collecting and entering my data. I know that some of this work can become quite tedious. Most importantly, I would like to thank my wife and the rest of my family for your understanding and encouragement as I pursued my goals.

## Table of Contents

Acknowledgement .....	ii
List of Tables .....	iv
Abstract .....	vi
Introduction .....	1
Bullying and Victimization: Background and Descriptive Findings .....	2
Peer Victimization and the Easy Targets .....	5
Coping Responses and Peer Victimization .....	7
Aims and Hypotheses .....	15
Aim 1: Direct Associations between Coping and Victimization .....	16
Aim 2: Group Differences in the Use of Coping Responses .....	16
Aim 3: Factors that Impact the Associations between Coping and Victimization .....	19
Aim 4: Longitudinal Associations between Coping Responses and Victimization .....	20
Method .....	22
Participants .....	22
Procedures .....	22
Student Procedures .....	23
Teacher Procedures .....	24
Measures .....	25
Peer Victimization .....	25
Receipt of Prosocial Behavior .....	28
Bullying .....	28
Role in Bullying .....	30
Coping Responses .....	31
Results .....	34
Descriptive Statistics .....	34
Attrition .....	34
Treatment Effects .....	37
Sex Differences .....	39
Associations between Coping Responses and Victimization .....	41
Group Differences in the Use of Coping and Victimization .....	48
Factors that Impact the Associations between Coping and Victimization .....	52
Longitudinal Associations between Coping Responses and Victimization .....	53
Coping Responses and Future Victimization .....	53
Victimization and Future Coping Responses .....	60
Discussion .....	69
References .....	80
Appendix A: Measures .....	89
Appendix B: Institutional Review Board Approval .....	93
Vita .....	96

## List of Tables

Table I: Aims and Hypotheses.....	17
Table II: Descriptive Statistics.....	35
Table III: Descriptive Statistics Separately by Sex.....	40
Table VI: Concurrent Partial Correlations for Times 1 and 2 .....	43
Table V: Time 3 Partial Correlations.....	44
Table VI: Longitudinal Partial Correlations for Times 1 and 2.....	45
Table VII: Longitudinal Partial Correlations for Times 1 and 3 .....	46
Table VIII: Longitudinal Partial Correlations for Times 2 and 3 .....	47
Table IX: Numbers of Bullies, Victims, Bully-Victims, and Noninvolved Participants...	49
Table X: Mean Coping Scores for Bullies, Victims, Bully-Victims, and Noninvolved Participants.....	50
Table XI: Planned Comparisons for Group Differences in Internalized Coping.....	51
Table XII: Summary of Hierarchical Regression Analysis for Time 1 Externalized Coping Predicting Time 2 Victimization .....	53
Table XIII: Summary of Hierarchical Regression Analysis for Time 1 Internalized Coping Predicting Time 2 Victimization .....	54
Table XIV: Summary of Hierarchical Regression Analysis for Time 1 Problem Solving Coping Predicting Time 2 Victimization.....	54
Table XV: Summary of Hierarchical Regression Analysis for Time 1 Support Seeking Coping Predicting Time 2 Victimization .....	55
Table XVI: Summary of Hierarchical Regression Analysis for Time 1 Avoidant Coping Predicting Time 2 Victimization .....	55
Table XVII: Summary of Hierarchical Regression Analysis for Times 1 and 2 Externalized Coping Predicting Time 3 Victimization.....	57
Table XVIII: Summary of Hierarchical Regression Analysis for Times 1 and 2 Internalized Coping Predicting Time 3 Victimization .....	58
Table XIX: Summary of Hierarchical Regression Analysis for Times 1 and 2 Problem Solving Coping Predicting Time 3 Victimization.....	58
Table XX: Summary of Hierarchical Regression Analysis for Times 1 and 2 Support Seeking Coping Predicting Time 3 Victimization .....	59
Table XXI: Summary of Hierarchical Regression Analysis for Times 1 and 2 Avoidant Coping Predicting Time 3 Victimization .....	60
Table XXII: Summary of Hierarchical Regression Analysis for Time 1 Victimization Predicting Time 2 Externalized Coping.....	61
Table XXIII: Summary of Hierarchical Regression Analysis for Time 1 Victimization Predicting Time 2 Internalized Coping .....	61
Table XXIV: Summary of Hierarchical Regression Analysis for Time 1 Victimization Predicting Time 2 Problem Solving Coping .....	62
Table XXV: Summary of Hierarchical Regression Analysis for Time 1 Victimization Predicting Time 2 Support Seeking Coping.....	62
Table XXVI: Summary of Hierarchical Regression Analysis for Time 1 Victimization Predicting Time 2 Avoidant Coping .....	63
Table XXVII: Summary of Hierarchical Regression Analysis for Times 1 and 2 Victimization Predicting Time 3 Externalized Coping.....	64

Table XXVIII: Summary of Hierarchical Regression Analysis for Times 1 and 2	
Victimization Predicting Time 3 Internalized Coping.....	65
Table XXIX: Summary of Hierarchical Regression Analysis for Times 1 and 2	
Victimization Predicting Time 3 Problem Solving Coping.....	66
Table XXX: Summary of Hierarchical Regression Analysis for Times 1 and 2	
Victimization Predicting Time 3 Support Seeking Coping.....	67
Table XXXI: Summary of Hierarchical Regression Analysis for Times 1 and 2	
Victimization Predicting Time 3 Avoidant Coping .....	68

## Abstract

Currently, there are competing theories on whether children's coping responses are important determinants of future victimization (Perry citations; Limber, 2004), but little longitudinal research has been conducted to test the competing theories. Utilizing student and teacher reports, the current project examined the associations between children's responses to being bullied and victimization rates over a 12-month period in a sample of 296 middle school students. Broadly, the findings indicate that the ways youth respond to being bullied do not influence future victimization rates for most children. In fact, quite the opposite relationship was found. Higher levels of victimization at the beginning of the school year predicted greater use of emotional coping responses later in the school year. When examining coping differences among highly victimized youth, however, children who experience high levels of victimization throughout the school year report more externalized and avoidant coping responses than children whose high levels of victimization decrease over the course of the school year. Thus, although coping does not predict future victimization in most children, some coping responses may exacerbate victimization in youth who are already experiencing high levels of victimization.

## Introduction

Bullying is often defined as repeated aggressive acts directed towards an individual who is at a disadvantage in the interaction due to an imbalance of power (Olweus, 1978).

Additionally, the targets of bullying usually do nothing to instigate the attacks (Olweus, 1990).

Based on this and similar definitions, bullying involves a substantial portion of youth, and bullying is associated with a host of adjustment difficulties both in youth who enact bullying behaviors and in youth who are the targets of bullying (Espelage & Swearer, 2004; Juvonen & Graham, 2001; Olweus, 1978). Consequently, states are mandating the implementation of a wide variety of bullying interventions (Limber & Small, 2003).

Generally, coping responses includes effortful or purposeful thoughts and actions utilized to manage or overcome stressful situations and the resulting emotional distress (Lazarus & Folkman, 1984). How children respond to peer conflict is theorized by some to be an important determinant of future victimization rates (Perry, Perry, & Boldizar, 1990; Perry, Perry, & Kennedy, 1992; Perry, Willard, & Perry, 1990). Consequently, many bullying interventions include components designed to alter children's responses to peer conflict and victimization. Alternatively however, Limber (2004) suggests coping responses do not impact future victimization, especially when responding to attacks from bullies. Instead, because of the imbalance of power between bullies and their targets, there is little the targets can do, on their own, to deter future victimization.

Unfortunately, it is not clear which, or if, coping responses lead to or deter future victimization. Many of the theories regarding the associations between coping responses and victimization make longitudinal predictions, and very little longitudinal research has been conducted to test the hypotheses. In past studies, researchers also have failed to examine



potentially important child characteristics and social factors that may influence the relations between coping responses and victimization rates.

No matter what theory is supported, a better understanding of how coping responses relate to victimization will have important implications on intervention efforts. If, as Limber (2004) suggests, coping responses are not related to future victimization, then interventions could focus on other factors. In contrast, if coping responses are related to future victimization, teaching how to effectively respond to victimization will empower children to resolve their own problems. Additionally, teaching potential victims how to effectively respond to bullies' attacks makes it more difficult for bullies to obtain the goals of their aggressive behaviors, removing the reinforcement for such behaviors. Making it more difficult for bullies to successfully enact bullying behaviors also will likely support efforts to alter the cognitive biases, which lead to aggressive behaviors and bullying (Camodeca, Goossens, Schuengel, & Meerum, 2003; Crick & Dodge, 1994; 1996; Huesmann, 1998).

In order to address some of the limitations to past research on coping responses and peer victimization, the current project examines the longitudinal relations between coping responses and victimization rates. The current project also examines the influence that children's sex and peer support have on the associations between coping responses and victimization rates. The following literature review will first provide a brief discussion of research on bullying. Then, the following two sections will discuss theory and research regarding the relations between specific coping responses and peer victimization.

### *Bullying and Victimization: Background and Descriptive Findings*

Rates of bullying and victimization have been shown to vary widely based on the developmental level of the sample, the geographical location of the studies, and the methodology

utilized. Often, when examining the prevalence of bullying and victimization, researchers classify participants into one of four roles: bullies, bully-victims, victims and controls. Bullies are children who frequently bully peers, but they are not frequently the targets of others aggression. Bully-victims enact high frequencies of bullying behaviors, and they also are frequently the targets of bullies. Victims are children who are frequently the targets of bullies, but these children do not enact high rates of bullying behaviors.

Controls, or noninvolved children, are youth who do not experience high rates of victimization, nor do they enact high rates of bullying behaviors. Often noninvolved children are referred to as bystanders or witnesses. Conceptually, however, this can be misleading as bullies, victims, bully-victims, and noninvolved children can all be bystanders or witnesses during incidents of bullying among other peers. Consequently, children not involved in bullying will be referred to as controls or noninvolved participants, and the term bystander will be used to describe children who observe instances of bullying, regardless of their status as a bully, victim, bully-victim, or control.

In the United States, approximately 30% of youth are involved in bullying at any point in time, with 10% being bullies, 15% being victims, and 5% being bully-victims (Haynie et al., 2001; Nansel et al., 2001). Bullying occurs most frequently during late elementary and early middle school (Hoover, Oliver, & Hazler, 1992; Olweus, 1990). Although boys are more likely to be classified as bullies and bully-victims than are girls, both boys and girls are equally likely to be classified as victims (Bijl et al., 1998; Pellegrini, Bartini, & Brooks, 1999; Rigby, 1994).

Bullies exhibit impulsivity, a wider pattern of conduct problems, angry reactivity, and little empathy for their victims (Olweus, 1978; Pellegrini et al., 1999; Sutton & Keogh, 2000;

Wolke, Woods, Bloomfield, & Karastadt, 2000). Bullies also do not experience high levels of anxiety (Olweus, 1978). Cognitively, they tend to possess attitudes, beliefs, and information processing styles that support the use of aggression to attain dominance and for instrumental gain (Dodge & Schwartz, 1997; Olweus, 1978; Price & Dodge, 1989; Schwartz et al., 1998; Sutton & Keogh, 2000). Though bullying may lead to a host of negative psychosocial consequences, bullying is also associated with influence and dominance in the peer group (Olweus, 1978; Pellegrini et al., 1999; Prinstein & Cillessen, 2003; Wilton, Craig, & Pepler, 2000). Taken together, these psychosocial correlates suggest that bullies are effective in their use of aggression. Even though bullies may experience psychosocial difficulties, bullies get what they value most: dominance. Though bullies are generally thought of as effective aggressors, the way their targets respond to attacks from bullies could make it easier or harder for the bullies to establish and maintain this dominance.

In contrast to bullies, bully-victims are less effective aggressors (see Schwartz, Proctor, & Chien, 2001 for review). Bully-victims experience difficulty regulating their emotions and behaviors (Schwartz, 2000; Schwartz et al., 2001). They exhibit externalizing problems and disruptive and socially unskilled behaviors (Schwartz, et al., 2001). Additionally, bully-victims possess cognitive biases and intellectual difficulties, which contribute to the perceptions that school and peer interactions are emotionally distressing contexts (Camodeca et al., 2003; Kaukiainen et al., 2002; O'Moore, & Kirkham, 2001; Sutton, Smith, & Swettenham, 1999). Bully-victims respond to peer conflict by fighting, yelling, and cursing more often than their peers (Andreou, 2001; Bijttebier & Vertommen, 1998; Olafsen & Viemero, 2000). This constellation of responses escalates peer conflict, making the conflict more emotionally arousing (Wilton et al., 2000). Youth who have difficulty regulating the rising emotional arousal, bully-

victims, lose the conflicts amid a series of dysregulated behaviors (Wilton et al., 2000). By losing these conflicts, bullies establish dominance over bully-victims.

Like bully-victims, victims also possess cognitive biases leading them to view ambiguous social situations as hostile, to lack confidence in successfully enacting assertive behaviors, and to have negative attitudes toward school (Callaghan & Joseph, 1995; Kochenderfer & Ladd, 1996; Schwartz et al., 1998). Victims' behavioral and affective characteristics, however, are consistent with a pattern of internalizing, rather than externalizing, difficulties (Fox & Boulton, 2003, 2005; Prinstein, Boergers, & Vernberg, 2001; Swearer, Grills, Haye, & Cary, 2004). Internalizing difficulties are a class of inner-directed, psychological problems related to subjective distress and over-controlled behaviors (Reynolds, 1992). The subjective distress experienced by victims includes low self-esteem, anxiety, loneliness, and depressive symptoms (Callaghan & Joseph, 1995; Crick & Bigbee, 1998; Olweus, 1978). For boys, smaller size also leads to victimization (Olweus, 1978). Victims tend to respond to peer conflict by crying, worrying, and submitting to aggressive peers' demands, making it easy for bullies to establish dominance over them (Olweus, 1978). Though victimization status is relatively unstable early in elementary school, children's victimization status stabilize between the ages of 9 and 13 (Bjorkqvist, Ekman, & Lagerspetz, 1982; Kochenderfer & Ladd, 1996; Monks, Smith, & Swettenham, 2003; Olweus, 1978; Perry, Kusel, & Perry, 1988).

#### *Peer Victimization and the Easy Targets*

One reason bullies are effective aggressors is because they choose easy targets (Olweus, 1978). By definition, the targets of bullies are at a disadvantage due to an imbalance of power (Olweus, 1978). This imbalance of power is one of the key factors distinguishing bullying from the broader concepts of peer conflict and aggression, which may involve youth of relatively

equal power or stature (Perry et al., 1992). Many factors associated with victims and bully-victims make them easy targets, such as small size, few or poor quality friendships, poor regulatory abilities, or low intellectual abilities (Olweus, 1978; Perry Hodges, & Egan, 2001; Schwartz et al., 2001). The way youth cope, or respond, to victimization is also theorized by some to be a factor marking some youth as easy targets (Perry et al., 1992).

Perry and colleagues argue that initially aggressive children attack a large group of peers (Perry, Perry et al., 1990; Perry et al., 1992; Perry, Willard et al., 1990). After interacting with their peers, however, aggressive children narrow their group of targets to include those children who respond to conflict and victimization in ways that are rewarding to the aggressor. Decreases in victimization are expected to be evidenced primarily by youth who respond effectively to victimization at the beginning of the school year. For those youth who respond to victimization emotionally, however, victimization is expected to remain stable or even increase.

Some research supports the importance of coping responses in the narrowing of the victim pool process. For example, bullies, bully-victims, victims, and noninvolved youth cope differently with peer conflict (Andreou, 2001; Olafsen & Viemero, 2000; Olweus, 1978). Additionally, some forms of coping are associated with future victimization, particularly in newly forming peer groups or when the peer group is in periods of transition, suggesting these ways of coping lead to future victimization experiences (Kochenderfer & Ladd, 1997; Pellegrini & Long, 2003; Schwartz, Dodge, & Coie, 1993; Smith, Talamelli, Cowie, Naylor, & Chauhan, 2004).

Alternatively, Limber (2004) argues that the way youth respond when attacked by bullies does not impact future victimization. Though the way youth respond to peer conflict, may be an important factor in determining future victimization, Limber (2004) asserts that being bullied is

different than peer conflict. Peer conflict can involve youth of relatively equal power (Limber 2004; Perry et al., 1992). Thus, participants in a peer conflict have the ability to effectively respond. Due to the inherent imbalance of power between bullies and their targets, however, there is little the targets of bullies can do on their own to deter bullies.

If Limber's assertions are accurate, then one might expect the targets of bullies to begin experiencing more emotional distress, as they learn there is little they can do to end their victimization. Thus, victimization would be expected to increase future use of emotional and avoidant coping responses to deal with the increased distress.

Longitudinal studies are needed to determine if the assertions of Perry and colleagues (1992) or Limber (2004) more accurately represent the relations between coping and victimization. Unfortunately, little longitudinal research has been conducted (Kochenderfer & Ladd, 1997; Smith et al., 2004). Additionally, much of the research on coping and victimization has failed to directly test considered how children's personal characteristics and social factors might impact the associations between specific types of coping and victimization.

#### *Coping Responses and Peer Victimization*

Typically, the associations between peer victimization and coping responses has focused on five broad types of coping: internalized, externalized, avoidant, problem solving, and support seeking coping responses (Andreou, 2001; Bijttebier & Vertommen, 1998; Kochenderfer & Ladd, 1997; Olafsen & Viemero, 2000; Roecker-Phelps, 2001; Salmivalli, Karhunen, & Lagerspetz, 1996). Internalized coping is an emotional form of coping characterized by directing coping efforts inward (Causey & Dubow, 1992). Internalized coping includes excessive worry, rumination, and submissiveness. The targets of bullies who use internalized coping responses

become too upset to talk to anyone. They worry about the reoccurrence of victimization, and they might even cry.

Internalized coping responses are consistently associated with higher rates of peer victimization, and victims enact more internalized coping responses than noninvolved youth (Andreou, 2001; Bijttebier & Vertommen, 1998; Kochenderfer & Ladd, 1997; Olweus, 1978; Roecker-Phelps, 2001; Salmivalli et al., 1996). Internalizing and submissive coping responses in preschoolers also lead to more victimization (Patterson, Littman, & Bricker, 1967). However, no study has examined the longitudinal association between internalized coping and victimization in older age groups.

Observational research indicates a process through which internalized coping responses to peer conflict can reinforce both the aggressor and the targeted child for their behaviors (Wilton et al., 2000). When a child copes with peer victimization through internalized and submissive behaviors, the aggressor is rewarded because the aggressor quickly and easily fulfills the goal of the aggressive behavior. By fulfilling the goal of the aggressive behavior, the likelihood that the aggressor will target the same child in the future increases (Patterson et al., 1967; Schwartz et al., 1993; Perry et al., 1992). The child utilizing internalized coping responses also is rewarded for giving into the demands of the aggressor. Contrary to the positive reinforcement experienced by the aggressor, the target is negatively reinforced through the immediate de-escalation of the conflict, increasing the likelihood the victimized child will respond in a similar manner in the future. (Wilton et al., 2000).

Externalized coping is a second type of emotional coping. In contrast to internalized coping, however, externalized coping efforts are directed outward, such as yelling, cursing, fighting back, and hitting things (Causey & Dubow, 1992). Externalized coping responses are

theorized to be related to higher rates of peer victimization, especially for children who experience emotional and behavioral dysregulation (Perry et al., 1992). Externalized coping responses to peer conflict escalate the conflict (Wilton et al. 2000). As the conflict escalates, children's emotional arousal increases, making it more challenging for children to regulate their emotions and behaviors. Consequently, children with lower regulatory abilities tend to lose these peer conflicts amid a series of emotional and dysregulated behaviors, reinforcing the aggressor and bullies for targeting poorly regulated peers (Perry et al., 1992; Wilton et al. 2000).

When examining group differences, both bullies and bully-victims enact more externalized coping responses during peer conflict than their peers, (Andreou, 2001; Bijttebier & Vertommen, 1998; Olafsen & Viemero, 2000). However, when examining the association between externalized coping and victimization rates, research is mixed. In kindergarten, fighting back during peer conflicts in the fall predicts stable victim status through the spring (Kochenderfer & Ladd, 1997). Similarly, one study reports that counter-aggression is associated with higher rates of peer victimization during middle childhood (Salmivalli et al., 1996). However, a series of other studies with samples of participants in middle childhood found that externalizing forms of coping are unrelated to peer victimization rates (Andreou, 2001; Bijttebier & Vertommen, 1998; Roecker-Phelps, 2001).

Several explanations for the inconsistent findings between externalizing coping responses and peer victimization rates deserve future examination. First, there are two groups exhibiting high rates of externalizing coping. One group experiences high rates of victimization (bully-victims) and another group does not experience high rates of victimization (bullies). The group of externalizing youth hypothesized to suffer from emotional and behavioral dysregulation, bully-victims, experience high rates of victimization, and the group of externalizing youth



hypothesized to be better regulated, bullies, do not experience high rates of victimization (Schwartz et al., 2001). Thus, emotion regulation may play a role in influencing the relationship between externalized coping responses and victimization rates.

Inconsistencies also could result from gender differences in the relationships between externalized coping and victimization. Externalizing behaviors (though not specifically externalizing coping responses) are more immediately associated with higher victimization rates for girls (Snyder et al., 2003; Terranova, 2003). For boys, however, externalizing behaviors briefly suppress victimization experiences, but predict higher levels of victimization in the longer term (Snyder et al., 2003). Perhaps it is because externalizing behaviors are less normative for girls (see Underwood, 2003 for review).

Avoidant coping responses, a third type of coping, involve cognitively, emotionally, and physically distancing oneself from stressful situations (Program for Prevention Research, 1999). Avoidant coping behaviors include hanging out in different areas, staying away from stressful situations, forgetting the whole thing, or doing something to take your mind off of it. In previous studies, researchers have focused exclusively on the cognitive distancing or distraction components of avoidant coping. Items commonly included in the cognitive distancing and distraction subscales include, forgetting the whole thing, doing something different, and making believe nothing happened. Cognitive distancing and distraction forms of avoidant coping are uncorrelated with peer victimization rates (Andreou, 2001; Bijttebier & Vertommen, 1998), and research is mixed when comparing victims', bullies', bully-victims' and controls' use of avoidant coping strategies. In one study victims employed more avoidant coping behaviors than bullies and controls (Andreou, 2001). In two other studies, however, no differences in the use of

avoidant coping behaviors between victims, bullies, bully-victims, and controls were reported (Bijttebier & Vertommen, 1998; Roecker-Phelps, 2001).

Unfortunately, extant research focused exclusively on the cognitive distancing or distraction components of avoidant coping, and excluded the more active, behavioral avoidance (Andreou, 2001; Bijttebier & Vertommen, 1998; Roecker-Phelps, 2001). Behaviorally avoidant coping may be an effective way of dealing with peer victimization. By avoiding situations in which bullying is likely to occur, children can avoid being bullied. Schools, however, are restrictive environments. Children share the same playgrounds, classrooms, lunchrooms, and bathrooms with potential bullies, making it difficult for children to successfully avoid bullies for extended periods of time. Additionally, social avoidance, which may include avoidant coping, predicts peer victimization because social avoidance isolates youth, reducing the likelihood bystanders or adults can come to the aid of the victim. Consequently, the availability of friends and peer support may influence the effectiveness of avoidant coping behaviors in reducing victimization experiences. For instance, if a potential victim copes with being bullied by playing with his or her friends in another area of the playground, the potential victim can avoid the bully without socially isolating him or herself.

Problem solving, a fourth type of coping response, involves actively trying to deal with stressful situations through thought or action (Causey & Dubow, 1992). Problem solving responses include thinking of different ways to solve the problem, determining the best response, utilizing the best response, and trying hard to keep the stressful situation from happening again. Based on past research, problem solving coping responses are uncorrelated with peer victimization (Andreou, 2001; Bijttebier & Vertommen, 1998). Noninvolved youth, however, report using more problem solving coping responses during peer conflict than victims, bullies,

and bully-victims (Andreou, 2001; Roecker-Phelps, 2001), and victims use more problem solving coping behaviors than do bullies or bully-victims (Andreou, 2001).

Since two very different groups of children (victims and noninvolved youth) report high levels of problem solving coping responses, two issues must be considered when further examining the relationship between problem solving coping responses and victimization rates. First, it may be that problem solving responses are unrelated to victimization rates. Alternatively, problem solving may be an effective way of dealing with victimization for some children, but not others.

Numerous personal characteristics and social factors, which have not been considered in previous research, may impact the effectiveness of problem solving coping responses in reducing victimization. Affective problems, such as difficulty regulating emotional arousal, could influence children's problem solving efforts. For instance, an overly anxious child may think about the situation and determine that telling the bully to stop would be the best response. The child's anxiety, however, could interfere with the response. The targeted child may fail to make eye contact with the aggressor, or the child's voice may crack, ruining the firm tone the child was trying to achieve. Victims suffer from numerous forms of emotional distress, including anxiety, depressive moods, and low self-esteem (Craig, 1998; Egan & Perry, 1998; Olweus, 1978), which could influence the effectiveness of problem solving responses.

The availability of peer support may also influence the associations between problem solving responses and future victimization rates. Peer support may increase the effectiveness of problem solving coping by providing more response options or by communicating to bullies that the target's response will be supported by peers. For example, if a smaller target threatens to report the bully to an adult, the bully can easily restrain the target, making it difficult to get to an

adult. However, if the target typically receives peer support, the bully may fear that someone else will report the incident even if the target is unable to get away.

Two indirect lines of research suggest peer support may play a role in the association between problem solving and peer victimization experiences. First, children who receive more support from the peer group utilize more problem solving strategies than their peers (Roecker-Phelps, 2001), and second, the receipt of prosocial behaviors from peers is associated with less peer victimization (Crick & Bigbee, 1998; Demaray & Malecki, 2003). None of the available studies, however, have examined the role peer support might play in the association between problem solving and victimization rates.

Support seeking, the final type of coping discussed here, involves calling on others to assist in dealing with the victimization experiences (Causey & Dubow, 1992). Support seeking includes seeking help and advice from peers, family, and adults. Bullies, victims, bully-victims, and controls do not differ in their use of support seeking responses to victimization (Bijttebier & Vertommen, 1998; Roecker-Phelps, 2001). Generally though, support seeking is the only form of coping found to be associated with lower levels of victimization both concurrently and prospectively (Andreou, 2001; Kochenderfer & Ladd, 1997; Smith et al., 2004). Unfortunately, the negative association between support seeking and victimization rates has not been found in all studies or for girls (Andreou, 2001; Bijttebier & Vertommen, 1998; Kochenderfer & Ladd, 1997; Roecker-Phelps, 2001). Additionally, in one of the studies finding the negative relationship between support seeking and victimization, the findings may have been influenced by the implementation of an intervention that specifically sought to increase the quality and availability of social support (Smith et al., 2004).

Based on the research discussed above, support seeking is the most promising coping response to peer victimization, but the effectiveness of support seeking in deterring victimization may be dependent on numerous factors not addressed in previous research. One such factor is gender. Support seeking tends to be negatively associated with victimization for boys, but not for girls (Bijttebier & Vertommen, 1998; Kochenderfer & Ladd, 1997). Because boys are more often the targets of physical victimization (Crick & Bigbee, 1998; Crick & Grotpeter, 1996), perhaps it is easier to get support from others such as teachers, parents, and peers, as physical victimization is more likely to leave a mark or evidence of the attack. Additionally, teachers tend to respond more often to physical forms of bullying and aggression among students (Craig, Henderson, & Murphy, 2000).

A second factor might be the availability of social support. Seeking support in response to victimization is unlikely to deter bullies if the social support is unavailable (Perry, Perry, et al., 1990; Perry, Willard, et al., 1990). Additionally, who provides the social support may be an important factor in the association between support seeking and victimization (Demaray & Malecki, 2003). When asked which type of social support is most important in decreasing peer victimization, victims and bully-victims report peer support is most important (Demaray & Malecki, 2003). Consistent with the opinions of victims and bully-victims, these same researchers found that support from classmates and close friends are significant predictors of victimization rates, with higher levels of support being associated with less victimization (Demara & Malecki, 2003). Interestingly, social support from teachers was not predictive of victimization rates (Demara & Malecki, 2003). Thus, it appears that peer support, whether from classmates or close friends, may be one of the most important factors moderating the effectiveness of support seeking in reducing victimization.

In summary, there are two competing lines of thought regarding the associations between coping responses and future victimization. One predicts that over time, aggressive youth narrow the group of peers they choose as the targets of their attacks based on the targets' responses. Responding emotionally to peer conflict (internalized and externalized coping) makes some youth easy targets, leading to future victimization (Perry et al., 1992). Additionally, personal characteristics and social factors may influence whether specific coping responses lead to or deter future victimization. Alternatively, Limber (2004) asserts that coping responses are not important determinants of future victimization and attacks from bullies. Due to the inherent imbalance of power between bullies and their targets, the targets of bullies can do little on their own to deter the bullies. Unfortunately, there is little longitudinal research testing the competing assertions, and even less research examining the personal characteristics and social factors that may impact the relations between coping and victimization.

#### *Aims and Hypotheses*

Broadly, the goal of the current study is to further clarify the longitudinal associations between coping responses and victimization rates during middle childhood. A middle childhood sample was chosen for the current project because victimization becomes a more stable experience during this developmental period (Bjorkvist et al., 1982; Kochenderfer & Ladd, 1996; Monks et al., 2003; Olweus, 1978; Perry et al., 1988). To meet this goal the current study addressed four aims: 1) to examine the direct associations between coping responses and victimization rates, 2) to determine if bullies, victims, bully-victims, and noninvolved youth differ in their use of specific coping responses, to 3) examine if children's sex and the availability of peer support serve as moderators in the associations between coping responses and

victimization rates, and 4) to examine the longitudinal associations between coping and victimization. The aims and specific hypotheses are summarized in Table I.

*Aim 1: Direct Associations between Coping and Victimization*

When examining the direct associations between coping responses and victimization rates, it was hypothesized that, consistent with past research, internalized and externalized coping responses would be associated with higher levels of victimization (Hypothesis 1). The associations between problem solving, support seeking, and avoidant coping with victimization were hypothesized to depend on children's individual characteristics and social factors. Thus, the direct associations between these coping responses and victimization were explored, but no specific hypotheses were presented.

*Aim 2: Group Differences in the Use of Coping Responses*

The second aim seeks to determine if groups of children differ in their use of specific coping responses. To address the second aim, two sets of hypotheses were tested. The first set of analyses broadly predicted that bullies, victims, bully-victims, and noninvolved youth would differ in their use of coping responses (see Hypotheses 2 through 4 in Table I). First, because they exhibit wider patterns of externalizing behavior problems, bullies and bully-victims were expected to report higher rates of externalized coping responses than victims and noninvolved peers. Second, because victims suffer from a wider pattern of internalized difficulties, victims were predicted to utilize higher rates of internalized coping responses than bullies and noninvolved peers. Given bully-victims pervasive emotional regulatory difficulties, however, victims were not expected to evidence more internalized coping than bully-victims. Third, as problem solving is theorized to be an effective response to victimization, noninvolved children were expected to utilize more problem solving responses than bullies, victims, and bully-victims.

Table I

*Aims and Hypotheses*

---

Aim 1: Examine the direct associations between coping responses and victimization rates.

- Hypothesis 1: Externalized and internalized coping responses are related to higher rates of victimization.
- Exploratory Analysis: Explore the associations between problem solving, support seeking, and avoidant coping responses with victimization rates.

Aim 2: Determine if youth, grouped based on their involvement in bullying and victimization, respond to victimization in different ways.

- Hypothesis 2: Bullies and bully-victims use more externalized coping than victims and noninvolved peers.
- Hypothesis 3: Victims utilize higher rates of internalized coping responses than bullies and noninvolved peers.
- Hypothesis 4: Noninvolved children utilize more problem solving responses than bullies, victims, and bully-victims.
- Exploratory Analyses: Examine group differences in the use of support seeking and avoidant coping responses to victimization.
- Hypothesis 5: Stable victims use more internalized and externalized coping responses at Time 1 than escaped victims.
- Hypothesis 6: Escaped victims use more problem solving and support seeking coping at Time 1 than stable victims.
- Exploratory Analysis: Determine if stable and escaped victims differ in their use of avoidant coping responses at Time 1.



(Table I continued)

Aim 3: Determine if children's sex or availability of peer support moderates the associations between coping responses and victimization rates.

- Hypothesis 7: Externalized coping responses are more strongly related to higher levels of victimization for girls, than boys.
- Hypothesis 8: Support seeking responses are more strongly related to lower levels of victimization for boys, than for girls.
- Hypothesis 9: When youth experience low levels of peer support, avoidant responses are associated with higher levels of victimization.
- Hypothesis 10: For youth with higher levels of peer support, problem solving is associated with less future victimization.
- Hypothesis 11: Support seeking responses are associated with less future victimization when youth experience higher levels of peer support.

Aim 4: Examine the longitudinal relations between coping responses and victimization rates

- Hypothesis 12: Emotional (internalizing and externalizing) coping responses lead to increases in future victimization.
- Hypothesis 13: Problem solving and support seeking lead to less future victimization.
- Exploratory Analysis: Examine the association between avoidant coping and future victimization rates will be examined.
- Exploratory Analysis: Determine if victimization predicts future coping responses.

---

No specific hypotheses were presented regarding the use of support seeking and avoidant coping responses by bullies, victims, bully-victims, and noninvolved youth, but group differences will be examined in exploratory analyses.

The second set of hypotheses involved only participants who experienced high levels of victimization at Time 1. Broadly, if coping responses influence future victimization rates, then youth who experience high levels of victimization throughout the school year (stable victims) should cope differently with victimization than youth whose high levels of victimization decrease during the school year (escaped victims). More specifically, it was hypothesized that stable victims utilize more internalized and externalized coping responses at the beginning of the school year than youth who escape high levels of victimization by the end of the school year (Hypothesis 5). Additionally, escaped victims were predicted to use more problem solving and support seeking responses at the beginning of the school year than stable victims (Hypothesis 6). An exploratory analysis was also conducted to determine if stable and escaped victims differed in their use of avoidant coping responses at the beginning of the school year.

*Aim 3: Factors that Impact the Associations between Coping and Victimization*

The third aim sought to determine if children's sex and the availability of peer support moderate the associations between specific coping responses and victimization rates (see Hypotheses 7 through 11 in Table I). Though externalized coping responses were expected to lead to higher rates of victimization, it was also hypothesized (Hypothesis 7) that children's sex would moderate the association between externalized coping and victimization rates. Because externalizing behaviors were thought to be less socially acceptable for girls, externalized coping responses were hypothesized to be more strongly related to higher victimization rates for girls than boys. Sex also was predicted to moderate the association between support seeking responses and future victimization rates (Hypothesis 8). Support seeking was expected to be associated with less victimization for boys, not girls.

In Hypothesis 9, peer support was predicted to moderate the association between avoidant coping and victimization. More specifically, when youth experience low levels of peer support, avoidant coping responses were hypothesized to lead to higher levels of victimization, as avoidant coping more likely isolates the potential target. Similarly, in Hypothesis 10, it was predicted that the availability of peer support will moderate the association between problem solving coping and victimization. For youth with higher levels of peer support, problem solving was expected to be a more effective response, reducing future victimization. The association between support seeking and future victimization was also hypothesized to depend on the availability of peer support (Hypothesis 11). For youth with more peer support, support seeking would result in less victimization in the future. Alternatively, for youth with little peer support, support seeking would predict higher levels of future victimization.

#### *Aim 4: Longitudinal Associations between Coping Responses and Victimization*

The final aim of the current project sought to determine if, as Perry and Colleagues (1992) proposed, certain coping responses are key determinants of future victimization rates. Consistent with the assertions of Perry and colleagues (1992), it was hypothesized that externalized and internalized coping responses would predict higher levels of future victimization, when controlling for past victimization (Hypothesis 12). Additionally, problem solving and support seeking responses were hypothesized to lead to decreases in future victimization, when controlling for previous victimization (Hypothesis 12). The role of avoidant coping in predicting future victimization also was examined in exploratory analyses, though no specific hypotheses were presented.

Alternatively, Limber (2004) argued that, because of the inherent imbalance of power between bullies and their targets, there is little the victims of bullies can do to deter future

victimization. Thus, coping responses would not be expected to predict future victimization rates. Instead, victimization experiences might lead to changes in the use of certain coping responses. As the targets of bullies become more distressed at the prospect of having little control over their victimization, increases in the use of emotional (externalized and internalized) and avoidant forms of coping may occur to deal with the increased distress. Meanwhile, decreases in problem solving and support seeking responses would be expected. Thus, a series of exploratory analyses were also conducted to determine if victimization predicts future coping responses when controlling for past use of coping responses.

In summary, the current study sought to further clarify the associations between coping and peer victimization. The current study adds to extant literature by examining the longitudinal relations between coping responses and victimization. It will also be the first study to include a measure of avoidant coping responses that focuses on behaviorally avoiding situations in which victimization is likely to occur. The findings of the current study will have important implications on interventions efforts that seek to change the way youth respond to peer victimization.

## Method

### *Participants*

Fourth grade students in regular education classes and the students' teachers were recruited as participants from four Southeastern Louisiana schools. All schools providing participants were classified as Title I schools, meaning over 40% of the students qualify for free or reduced lunches due to low family incomes. Parental consent was obtained from 296 students, approximately 70% of the students eligible to participate, and from 42 of the students' teachers over the two school years. The sample is 49% male and 51% female. The sample is ethnically diverse, with 40% of participants being Caucasian, 27% African American, 22% as multiple ethnicities, and 11% other ethnicities. At the start of the study, participants ranged in age from 8 to 12 years old, with a mean age of nine-years, six-months old.

### *Procedures*

Data for the current study were part of a larger project examining the effectiveness of the BullySafe USA, school-based, bullying intervention. The intervention primarily consisted of class-based discussions. The content of the discussions included components that defined bullying, intended to increase empathy, and sought to improve students' and teachers' responses to bullying. The school system implemented the intervention in every school. Treatment schools for the current study were selected based on school system officials' recommendations, and the control group was selected from a school in a neighboring school system. The control school was selected to match the socioeconomic and ethnic characteristics of the treatment schools. The current study utilized student and teacher reported data collected from three data collection waves of the evaluation: a pretest during the fall of 2003 (Time 1), a 6-month posttest during the spring of 2004 (Time 2), and a 12-month posttest during the fall of 2004 (Time 3).

Approximately one week following Time 1 data collection, implementation of the intervention began. The intervention primarily consisted of class-based discussions involving students, their teachers, and trained intervention facilitators.

### *Student Procedures*

Approximately one month prior to the first wave of data collection, the principal investigator attended one of the monthly grade-level, teacher meetings at each participating school. The upcoming project was explained to the teachers, and teachers were provided with parental consent forms to distribute to their students. The students were instructed to have their parents sign the consent forms, granting or declining consent, and to return the signed forms to their teacher. The principal investigator then collected the consent forms from the teachers. Students received incentives for returning signed parental consents, regardless of whether the parent granted or declined consent. Incentives ranged from pizza parties for classes with 90% of the students returning signed consent forms, to free bowling coupons for each student, depending on the preference of the school and donations provided by local businesses. The parental consent collected prior to the first wave of data collection (Time 1) provided consent for children to complete questionnaires at both Times 1 and 2.

At Time 1, the principal investigator read student questionnaires aloud to groups of participants. The first page of the questionnaire was an assent form, allowing participants to grant or decline assent. As part of the instructions, the following definition of bullying was provided. “Bullying is when a student or many students are mean to another student over and over again. The student who is being bullied usually is at disadvantage, such as being smaller, outnumbered, or having fewer friends. Bullying may take many different forms, such as calling someone mean names, spreading rumors, excluding someone from activities or groups,

threatening, or punching and hitting.” Participants were encouraged to consider this definition when answering the victimization, bullying, and coping measures. Similar definitions of bullying that include examples of both relational and overt bullying are widely used in bullying research (Olweus, 2001a).

While completing the questionnaire, students reported on the frequency of their bullying behaviors, victimization experiences, coping responses to victimization, and their receipt of prosocial behaviors from peers (peer support) over the past three months. Student also reported on their age, sex, and race. The questionnaire took approximately 45 minutes to administer. A make-up administration day was also conducted for each school to collect data from students who were unable to attend the initial questionnaire administration. The same questionnaire and procedures were utilized during the second wave of data collection (Time 2). Because the third wave of data collection (Time 3) occurred during a different school year, parental consent was obtained again for participants. The same procedures and questionnaires were used to collect consent and administer surveys at Time 3.

#### *Teacher Procedures*

During the monthly grade-level teacher meeting, teachers also were informed what their involvement in the project would be, should they choose to participate. Teachers in all regular education, fourth grade classes were provided consent forms, indicating they would be completing surveys on participating students from their classes at both Times 1 and 2. Teachers were also informed that they would be awarded a small gift card (approximately \$25) to a local office supply store for completing the questionnaires on their students. Teachers were allowed to review the consent forms, ask questions, and return the forms during the meeting. Teachers were also able to review the forms and return them at a later date.

During the first data collection time point (Time 1), teachers were provided with a packet of questionnaires consisting of one questionnaire for every participating student in their class. Teachers were provided with the same definition of bullying that was included on the student questionnaire. Teachers were encouraged to consider this definition when answering the victimization and bullying scales, and the questionnaire instructions requested teachers to report on the frequency of bullying behaviors and victimization experiences of their students in the past three months. Teachers were also asked to report on the participants' average grades. Teachers were provided approximately three weeks to complete the questionnaire packet and return it in a sealed envelope. The packet of questionnaires took approximately 30 minutes to complete. The same questionnaires and procedures were followed at Time 2. Prior to Time 3, teacher consent was once again obtained, as a vast majority of the student participants advanced to the fifth grade and had new teachers. The same consent procedures, data collection procedures, and questionnaires utilized for Times 1 and 2 were also used for Time 3.

### *Measures*

#### *Peer Victimization*

Both students and teachers completed modified versions of the Social Experiences Questionnaire, a widely use measure of peer victimization in youth (SEQ-R: Crick & Bigbee, 1998; Crick & Grotpeter, 1996; Paquette & Underwood, 1999). In order to measure victimization at the hands of bullies, a definition of bullying was presented to students and teachers, and participants were instructed to consider this definition when completing the SEQ-R. Similar definitions of bullying that include examples of both relational and overt bullying are widely used in bullying research (Olweus, 2001a). Additionally, the stem to the SEQ items was altered from, "How often do peers..." to "How often do peers bully you (or the student) by..."



The modified student-report version of the SEQ-R consists of 12 items. The SEQ items are rated on a 5-point Likert response format, ranging from 0 = *Never* to 4 = *Always*. The SEQ-R is composed of a 7-item relational victimization subscale and a 5-item overt victimization subscale. The relational victimization subscale measures how often participants are the targets of acts designed to harm or manipulate social relationships. The relational victimization subscale includes items such as, “How often have other kids bullied you by leaving you out on purpose when it is time to play a game or do an activity,” or “How often have kids bullied you by telling lies about you, so that others will not like you?” The overt victimization subscale measures how often participants are the targets of physical and verbal attacks or threats of such damage. Items include, “How often have others bullied you by hitting you at school,” or “How often have other kids bullied you by kicking you or pulling your hair?”

The self-report version of the SEQ is a widely used measure with fourth through sixth grade students, and the reliability and validity of the SEQ have repeatedly been demonstrated in populations similar to the current study’s sample (Crick & Bigbee, 1998; Crick & Grotpeter, 1996; Roecker-Phelps, 2001). Internal reliabilities for the victimization subscales of the self-report SEQ have been reported between .73 and .80 (Crick & Bigbee, 1998; Crick & Grotpeter, 1996; Roecker-Phelps, 2001), and the correlations between peer nomination and self-report scales range from .31 to .39 (Crick & Bigbee, 1998).

The relational and overt victimization subscales are highly correlated, with correlation coefficients ranging from .57 to .69 (Crick & Bigbee, 1998; Crick & Grotpeter, 1996). In the current project, correlations between the relational and overt subscales range from .75 ( $p < .001$ ) to .79 ( $p < .001$ ). When controlling for the other type of victimization, relational and overt victimization also add to the prediction of psychosocial adjustment difficulties such as anxiety,

depression, and low self-esteem (Crick & Bigbee, 1998; Crick & Grotpeter, 1996). In the current project, the relational and overt victimization subscales were correlated with the same coping responses. For example, student reports of relational and overt victimization are positively correlated externalized coping at almost every time point. Whereas the correlations between relational victimization and externalized coping range from  $r = .18$  to  $r = .38$ , correlations between overt victimization and externalized coping range from  $r = .21$  to  $r = .44$ . Similarly, both relational and overt victimization tend to be uncorrelated with support seeking coping. Because the relational and overt subscales are highly correlated and related to similar psychosocial adjustment difficulties, the relational and overt victimization subscales were combined to create a general indicator of victimization. To create the general indicator of victimization, the means of the relational and overt subscales were combined, and divided by two, making the general victimization variable the mean of the subscales' means.

Similar to the self-report SEQ-R, all items in the teacher report version of the SEQ-R have a 5-point Likert style response format ranging from 0 = *Never* to 4 = *Always*. The teacher report SEQ-R is composed of a 3-item relational and a 3-item overt victimization subscale. The relational victimization subscale includes items measuring how often the teacher's student is ignored or the target of rumors. The overt subscale includes items measuring how often the teacher's student is physically threatened or hit by bullies.

The teacher report version of the SEQ-R is less commonly used, but a previous investigation reveals internal reliability estimates similar to the self-report version, with Cronbach's alphas above .80 (Terranova, 2003). The teacher report relational and overt victimization subscales are related to theoretically related variables, such as loneliness and submissiveness (Terranova, 2003). Similar to student reports, teacher reports of relational

victimization and overt victimization are highly correlated ( $r = .74, p < .001$  to  $r = .77, p < .001$ ), and the teacher reported relational and overt subscales tend to be correlated with the same coping responses in the current study. Consequently, the relational and overt victimization subscales in the teacher report SEQ-R also were combined to create a general indicator of victimization. To create the general indicator of victimization, the means of the relational and overt subscales were combined, and divided by two, making the general victimization variable the mean of the subscales' means.

#### *Receipt of Prosocial Behavior (Peer Support)*

Student participants also completed the receipt of prosocial behaviors subscale of the student report SEQ-R. The receipt of prosocial behaviors subscale was used as an indicator of the peer support students receive. The 4-item, peer support subscale measures how often participants are the recipients of support or kindness from peers. Items composing the peer support scale include, "How often do peers help you when you need it," and "How often do peers say nice things to you?" All items have a 5-point, Likert response format, ranging from 0 = *Never* to 4 = *Always*. When creating the peer support score, the mean of a participant's responses is calculated. The internal reliability estimates are adequate, with a Cronbach alpha of .77 (Crick & Grotpeter, 1996). As theorized, the peer support subscale is negatively related to both relational and overt victimization (Crick & Bigbee, 1998; Crick & Grotpeter, 1996; Terranova 2003). It is also related to the ways children respond to peer conflict (Roecker-Phelps, 2001).

#### *Bullying*

Both students and teachers completed modified versions of the Child Social Behavior Scale, a widely used measure of aggression in youth (CSBS: Crick, 1996). In order to measure bullying, as opposed to the broader concept of aggression, a definition of bullying was presented

to students and teachers, and the participants were instructed to consider this definition when completing the CSBS. Similar definitions of bullying that include examples of both relational and overt bullying are widely used in bullying research (Olweus, 2001a). Additionally, the stem to the CSBS items was altered from, “How often do you/how often does the student...” to “How often do you bully others by/How often does the student bully others by...”

The student report version of the CSBS utilized in the current project was composed of two bullying subscales, a 9-item relational bullying scale and a 4-item overt bullying scale. All items had a 5-item, Likert response format, ranging from 0 = *Never* to 4 = *Always*. The relational bullying subscale measured the frequency of students’ bullying behaviors that were intended to harm or manipulate social relationships. For example, “How often do you bully others by ignoring them?” The overt bullying scale measured how often students use physical or direct verbal bullying to harm peers. Items included, “How often do you bully others by hitting, shoving, or pushing peers,” and “How often do you bully others by threatening to beat them up?”

Though not as widely used as the peer nomination and teacher report versions of the CSBS, the self-report CSBS has demonstrated adequate internal reliability estimates for both the overt and relational subscales with Cronbach alphas above .75 (Terranova, 2003). The relational and overt subscales demonstrated adequate stability, with 2-month test-retest correlations of over .60, and the subscales were significantly correlated with theoretically related adjustment difficulties (higher levels of externalizing and oppositional behaviors), supporting the reliability and validity of the self-report version in elementary school children (Terranova, 2003). The correlations between self-reported relational and overt bullying subscales ranged between  $r = .66$  to  $r = .67$  at the three time points in the current project. Because the subscales were highly correlated and related to similar adjustment difficulties, a general indicator of bullying was

created. The general indicator of bullying was created by combining the means of the relational and overt bullying subscales, and dividing the combined means by two, making the general indicator of bullying the mean of the subscales' means.

The teacher report version of the CSBS is also composed of two subscales: a 4-item relational bullying and a 4-item overt bullying subscale. The reliability and validity of the measure have been demonstrated in previous studies. Cronbach alphas have been reported at .94 for the relational and overt subscales, and the subscales are highly correlated with peer nominations measures of relational and overt aggression, with correlations above .69 (Crick, 1996). Though there are some gender differences, the subscales are both associated with negative psychosocial adjustment, such as peer rejection (Crick, 1996). Teacher reports of overt and relational aggression are highly correlated,  $r = .77$  (Crick, 1996). Similarly, the bullying subscales are highly correlated in the current project, with correlations ranging from .74 to .88. Because they are highly correlated and tend to be related to similar adjustment difficulties, a general indicator of bullying was created. To create a general indicator of bullying, the means of the relational and overt bullying subscales were combined, and divided by two, making the general indicator of bullying the mean of the subscales' means.

### *Role in Bullying*

For some analyses, participants needed to be classified into one of the four roles involved in bullying: bully, victim, bully-victim, or noninvolved. This was done using the student and teacher reports of bullying and victimization. Participants who enacted bullying behaviors sometimes or more often (1.5 or above) on the teacher or self reports of bullying, and scored below 1.5 on both the student and teacher reports of victimization were classified as bullies. Participants who scored 1.5 or above on either the teacher or self-reports of victimization, and

scored below 1.5 on both teacher and self-reports of bullying, were classified as victims. Bully-victim status was assigned to participants who scored 1.5 or above on both the bullying (teacher or self-reported) and victimization (teacher or self-reported ) scales. All remaining participants should have scored below 1.5 on both teacher and self-reports of bullying and victimization. These participants were classified as noninvolved participants. This procedure was conducted at each time point, allowing the classification of participants into different roles at different time points. Similar procedures for classifying participants as bullies, victims, bully-victims, and noninvolved youth based on self-reports are widely used (Olweus, 2001b)

### *Coping Responses*

Students completed four subscales of the Self-Report Coping Scale (SRCS: Causey & Dubow, 1992): the support seeking, problem solving, internalized, and externalized coping subscales. The SRCS is a measure of situational coping designed to measure how youth respond to peer arguments and poor grades. In the current investigation, however, the stem for each item was changed to inquire how often participants coped in specific manners when picked on by bullies. For example, the stem, “When I have an argument with a friend, I usually ...,” was changed to, “When bullied...” Responses were coded on a 5-item, Likert response format, ranging from 0 = *Never* to 4 = *Always*. The mean of each subscale is calculated and used as participants’ scores on the subscales.

The 8-item, support seeking subscale measures how frequently participants seek help or advice from teachers, parents, or peers. Items include, “When bullied, how often do you tell a friend or family member what happened,” and “When bullied, how often do you get help from a friend?” The 8-item, problem solving subscale measures the frequency with which participants actively try to solve their bullying problem either through thoughts or actions. Examples of items

include, “When bullied, how often do you try to think of different ways to solve the problem,” and “When bullied, how often do you try extra hard to keep this from happening again?” The 7-item, internalized coping subscale measures the frequency participants respond to being bullied by focusing on their own emotional experience and directing coping efforts inward. Items include, “When bullied, how often do you feel sorry for yourself,” and “When bullied, how often do you become so upset that you can’t talk to any one?” The 4-item, externalized coping subscale measures emotional coping responses that are directed outward. Items include, “When bullied, how often do you get mad and throw or hit things,” or, “When bullied, how often do you yell to let off steam?”

Numerous studies have used the SRCS with elementary school children (Andreou, 2001; Bijttebier & Vertommen, 1998; Causey & Dubow, 1992; Roecker-Phelps, 2001). Internal reliabilities of the SRCS scales range from .69 to .84 when coping with peer conflict or poor grades, and there is moderate cross-situational stability in the coping styles (Causey & Dubow, 1992). Two week test-retest correlations ranged from .59 to .72 for the four scales used in the proposed investigation (Causey & Dubow, 1992). Additionally, the coping subscales have been demonstrated to be correlated with theoretically related constructs (Causey & Dubow, 1992). For example, anxiety was associated with internalizing coping (Causey & Dubow, 1992). Children using problem solving and support seeking coping behaviors evidence higher self-esteem, and externalizing coping behaviors are associated with poorer ratings of behavioral conduct (Causey & Dubow, 1992).

In addition to the four SRCS subscales, students completed a 6-item, behavioral avoidance subscale from the How I Coped Under Pressure Scale (HICUPS: Program for Prevention Research, 1999). The HICUPS also is a measure of situational coping designed to

assess responses to specific stressors. Similar to the SRCS, in the HICUPS, children are presented with a brief description of a stressful situation and asked to report how often they cope with the described situation in specific ways. The stem used for the current study asked students how often they coped in certain ways when bullied. For example, participants were asked, “When bullied, how often do you avoid the people who made you feel bad?” One item from this scale was modified. Instead of asking students how often they avoided being bullied by hanging out in their rooms, the item was worded, “How often do you avoid being bullied by hanging out in another area?” Additionally, items were added to sample how often children avoided certain people, such as the bully.

The internal reliability of the avoidant scale has been reported at .64, and the 1-week test-retest reliability was reported at  $r = .49$  (Program for Prevention Research, 1999). Similar to other measures of avoidant coping, the avoidant coping subscale is related to negative psychosocial adjustment, such as depression, anxiety, and conduct problems (Sandler, Tein, & West, 1994).



## Results

### *Descriptive Statistics*

Table II lists the means, standard deviations, and internal reliability estimates for the study variables. The means and standard deviations indicate sufficient variability in most variables to detect the hypothesized associations. Low means for teacher reports of victimization and student reports of bullying may produce a floor effect, but teacher reported victimization levels and student reported bullying levels are consistent with past studies (Andreou, 2001; Schafer, Werner, & Crick, 2002; Terranova 2003). Most scales possess adequate internal reliability, with Coefficient Alphas above .70. The externalized coping scale is the only scale with low internal reliability estimates (.59 at Time 1, .63 at Time 2, and .69 at Time 3). Even though the internal reliability estimates are low, the externalized coping scale was included in all analyses because it is a widely used measure of coping, and it is related to theoretically relevant variables (Andreou, 2001; Bijttebier & Vertommen, 1998; Causey & Dubow, 1992; Roecker-Phelps, 2001). Additionally, the externalized coping scale is correlated in expected directions with variables in the current study. It also demonstrated good test-retest reliability, with 6-month test-retest reliability estimates of  $r = .39$  and  $r = .44$ , and a 12-month test-retest reliability estimate of  $r = .49$ .

### *Attrition*

A substantial portion of participants failed to provide data at Time 3, with the number of participants dropping from approximately 275 at Times 1 and 2 to 180 at Time 3. To determine if this attrition is random or selective, participants were grouped into one of two groups: participants at Time 3 and nonparticipants at Time 3. Then, mean level group differences on the study variables at Times 1 and 2 were explored through the use of

Table II

*Descriptive Statistics*

Variables	Mean	(SD)	Min	Max	$\alpha$	N
Time 1						
Self Report Victimization	1.28	(.89)	0.00	4.00	.90	272
Teacher Report Victimization	.69	(.74)	0.00	3.67	.94	276
Self Report Bullying	.66	(.66)	0.00	3.49	.88	265
Teacher Report Bullying	.90	(.88)	0.00	3.38	.93	276
Peer Support	2.59	(.92)	0.00	4.00	.80	272
Support Seeking Coping	2.12	(.97)	0.00	4.00	.83	267
Problem Solving Coping	2.22	(.88)	0.00	4.00	.79	266
Externalizing Coping	1.25	(.92)	0.00	3.75	.59	267
Internalizing Coping	1.53	(.86)	0.00	3.71	.74	266
Avoidant Coping	2.12	(.96)	0.00	4.00	.71	266
Time 2						
Self Report Victimization	1.07	(.87)	0.00	4.00	.91	272
Teacher Report Victimization	.74	(.78)	0.00	3.50	.94	281
Self Report Bullying	.64	(.68)	0.00	3.33	.88	270
Teacher Report Bullying	1.01	(.89)	0.00	3.63	.93	281
Peer Support	2.43	(.98)	0.00	4.00	.84	274
Support Seeking Coping	1.96	(1.07)	0.00	4.00	.85	272
Problem Solving Coping	2.13	(.95)	0.00	4.00	.82	272
Externalizing Coping	1.38	(.97)	0.00	4.00	.63	269

(Table II continued)

Internalizing Coping	1.63	(.98)	0.00	4.00	.79	272
Avoidant Coping	2.07	(1.03)	0.00	4.00	.75	271
Time 3						
Student Report Victimization	.91	(.80)	0.00	3.86	.92	189
Teacher Report Victimization	.45	(.61)	0.00	2.50	.92	186
Student Report Bullying	.67	(.71)	0.00	4.00	.92	189
Teacher Report Bullying	.67	(.76)	0.00	3.63	.94	186
Peer Support	2.57	(.87)	0.20	4.00	.79	189
Support Seeking Coping	1.98	(1.04)	0.00	4.00	.88	188
Problem Solving Coping	2.01	(.98)	0.00	4.00	.85	188
Externalizing Coping	1.25	(.95)	0.00	4.00	.69	188
Internalizing Coping	1.38	(.93)	0.00	3.86	.81	188
Avoidant Coping	1.95	(1.03)	0.00	4.00	.79	189

---

Note: \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Analyses of Variance (ANOVA's). The ANOVA's reveal that the groups do not significantly differ on any of the self reported variables at Times 1 and 2. Groups, however, do significantly differ on teacher reports of bullying and victimization. More specifically, Teachers report less bullying,  $F(1, 276) = 4.601$ ,  $p < .05$ , and victimization,  $F(1, 276) = 6.749$ ,  $p < .01$ , at Time 1 among students who provided data at Time 3 in comparison to participants who failed to provide data at Time 3. Similarly, teachers report less victimization,  $F(1, 281) = 8.757$ ,  $p < .01$ , at Time 2 among participants who provided data at Time 3 than for participants who failed to provide data at Time 3. When combining student and teacher reports of victimization or bullying, as was

done for some analyses in the current project, the groups do not differ at Times 1 and 2 on the study variables.

### *Treatment Effects*

Data used in the current study are part of a larger project evaluating the effectiveness of a bullying intervention. Thus, any potential treatment effects must be examined and controlled. Analyses reveal few significant mean level differences between the treatment and control groups. At Time 1 (pretest), teachers in the treatment group report significantly higher levels of bullying,  $F(1, 275) = 7.348, p < .01$  and victimization,  $F(1, 275) = 20.049, p < .001$ , among their students, but this was not found for student reports of bullying and victimization.

Repeated measure analyses were then conducted to determine if, when compared to the control group, the treatment group evidenced significant changes in peer support, use of specific coping responses, bullying behaviors, and victimization experiences. Only two significant treatment status by time interactions reached statistical significance. When compared to the control group, teachers in the treatment group reported significant decreases in bullying,  $F(1, 165) = 12.876, p < .001$ , and victimization,  $F(1, 164) = 9.264, p < .01$ , among their students.

Attributing the significant decreases in bullying and victimization to the intervention, however, is problematic for four primary reasons. First, teachers in the treatment group reported significantly higher levels of bullying and victimization among their students prior to the intervention. Thus, regression to the mean is a plausible, alternative explanation for the decreases. Second, the decreases in teacher reports occurred when the student participants transitioned to a new grade, and different teachers were reporting on bullying and victimization. Consequently, the decreases may be a result of changes in the informants. Third, changes in self-reports of bullying and victimization do not differ between the treatment and control groups,

failing to support the decreases found in teacher reports. Fourth, when compared to the control group, the intervention failed to result in significant changes in variables theorized to lead to reductions in bullying, such as attitudes toward bullying, peer support, perceived friendships, and coping responses. Thus, if the intervention did decrease bullying and victimization, it is not clear how the intervention lead to these reductions.

More directly related to the current project, however, is whether the intervention changed the associations between variables. To determine if the intervention impacted the associations relevant to the hypotheses of the current study, treatment status was included (as a moderator) in a series of multiple regressions. The procedures recommended by Aiken and West (1991), Baron and Kenney (1986), and Holmbeck (2002) were followed to test treatment status moderation. Based on the results of the regressions, the associations between variables do not differ based on treatment status at Times 1, 2, or 3. Similarly, treatment status does not impact the longitudinal associations between variables from Times 1 to 2 and Times 1 to 3.

When examining the impact of the intervention from Times 2 to 3, however, one treatment status interaction reached statistical significance. While controlling for internalized coping (Time 2) and treatment status, the Time 2 internalized coping by treatment status interaction was a significant predictor of student,  $\beta = -.587, p < .05$ , and teacher reports,  $\beta = -.528, p = .05$ , of victimization at Time 3, indicating the intervention may have impacted the association between these variables. Post hoc probing of the significant interaction reveals that internalized coping at Time 2 predicts higher levels of victimization at Time 3 for the treatment group ( $\beta = .162, p = .05$ ), but not for the control group ( $\beta = -.175, p > .10$ ). Thus, when examining the relations between Time 2 internalized coping and Time 3 victimization, treatment effects were controlled for in analyses.

### *Sex Differences*

Past research indicates that boys and girls differ in their use of bullying behaviors and coping responses (Bijttebier & Vertommen, 1998; Kochenderfer & Ladd, 1997; Pelligrini et al., 1999; Rigby, 1994). Mean level sex differences in the current study are presented in Table III. Findings indicate that girls report significantly more support seeking, problem solving, internalized, and avoidant coping responses at every data collection point. Teachers report that boys enact more bullying behaviors and experience more peer victimization at Times 1 and 2. Boys and girls, however, do not self-report significant differences in bullying and victimization.

Beyond mean level sex differences, the associations between coping responses and victimization rates also have been shown to differ among boys and girls in past studies (Andreou, 2001; Bijttebier & Vertommen, 1998; Kochenderfer & Ladd, 1997; Olafsen & Viemero, 2000). Thus, partial correlations, controlling for the impact of sex, were calculated. Generally, there are few large differences between the partial correlations and bivariate correlations. However, when controlling for sex, the partial correlations tended to be slightly larger in magnitude than the bivariate correlations. So, partial correlations, controlling for participants' sex, were examined. Tables IV and V summarize the partial correlations that examine the concurrent associations between variables. Tables VI through VIII summarize the partial correlations (controlling for sex) that examine the longitudinal associations between variables.

Based on the partial correlations presented in Tables VI through VIII, test-retest correlations for self-reports of victimization range from  $r = .65$  to  $r = .69$  at 6-month follow-ups and  $r = .61$  at a 12-month follow-up. Test-retest correlations for teacher reports of victimization are  $r = .70$  between Times 1 and 2 (6-month retest). The test-retest correlation drops to  $r = .31$ , between Times 2 and 3 (6-month retest using different teachers), and to  $r = .25$  from Time 1 to 3

Table III

*Descriptive Statistics Separately by Sex*

Variables	Boys			Girls			F
	Mean	(SD)	N	Mean	(SD)	N	
Time 1							
Self Report Victimization	1.23	(.83)	133	1.32	(.95)	139	.790
Teacher Report Victimization	.83	(.79)	132	.56	(.66)	144	9.344**
Self Report Bullying	.67	(.61)	127	.66	(.66)	139	.008
Teacher Report Bullying	1.05	(.91)	132	.76	(.82)	144	7.242**
Peer Support	2.42	(.93)	133	2.76	(.88)	139	9.847**
Support Seeking Coping	1.82	(.93)	128	2.39	(.94)	139	25.587***
Problem Solving Coping	2.04	(.90)	127	2.39	(.83)	139	11.422***
Externalizing Coping	1.30	(.89)	128	1.20	(.96)	139	.839
Internalizing Coping	1.35	(.82)	128	1.70	(.87)	139	11.021***
Avoidant Coping	1.92	(.95)	128	2.37	(.92)	139	16.011***
Time 2							
Self Report Victimization	1.05	(.89)	128	1.08	(.86)	144	.096
Teacher Report Victimization	.84	(.80)	136	.65	(.74)	145	4.094*
Self Report Bullying	.63	(.69)	127	.65	(.67)	143	.039
Teacher Report Bullying	1.12	(.93)	136	.90	(.83)	145	4.309*
Peer Support	2.16	(.99)	130	2.66	(.92)	144	18.789***
Support Seeking Coping	1.75	(1.07)	130	2.16	(.99)	142	10.555***
Problem Solving Coping	2.02	(.97)	130	2.24	(.91)	142	3.828*

(Table III continued)

Externalizing Coping	1.41	(1.04)	130	1.35	(.90)	142	.311
Internalizing Coping	1.38	(.94)	130	1.85	(.97)	142	16.202***
Avoidant Coping	1.85	(1.11)	130	2.26	(.91)	142	11.473***
Time 3							
Self Report Victimization	.82	(.75)	89	.98	(.84)	100	2.001
Teacher Report Victimization	.52	(.65)	86	.39	(.56)	100	2.229
Self Report Bullying	.66	(.66)	89	.65	(.76)	100	.007
Teacher Report Bullying	.72	(.72)	87	.63	(.79)	100	.703
Peer Support	2.36	(.83)	89	2.76	(.87)	100	10.842***
Support Seeking Coping	1.71	(1.00)	88	2.21	(1.02)	100	11.361***
Problem Solving Coping	1.83	(.98)	88	2.17	(.96)	100	5.721*
Externalizing Coping	1.21	(.89)	88	1.28	(1.00)	100	.269
Internalizing Coping	1.09	(.77)	88	1.64	(.99)	100	18.197***
Avoidant Coping	1.58	(1.03)	89	2.29	(.91)	100	25.596***

---

Note: \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

(12-month follow-up). Similarly, the test-retest correlations for coping responses indicate moderate stability, ranging from  $r = .34$  to  $r = .53$ .

#### *Associations between Coping Responses and Victimization*

To determine if emotional forms of coping are associated with higher levels of victimization (Hypothesis 1), the partial correlations (controlling for sex) between externalized and internalized coping with teacher and student reports of victimization were examined (see Tables IV – VIII). As hypothesized, externalized coping responses are significantly correlated with higher levels of both teacher and self-reports of victimization concurrently and



longitudinally. Consistent with predictions, internalized coping responses are also significantly, positively correlated with self-reports of victimization both concurrently and longitudinally. In contrast, however, internalized coping responses are generally not related to teacher reports of victimization, except at Time 3. At Time 3, internalized coping is related to higher levels of teacher reported victimization.

Exploratory analyses reveal that avoidant coping responses are significantly associated with higher levels of self-reported victimization at Times 2 and 3. Support seeking (Time 1) is related to lower levels of teacher reported victimization at Time 1. Support seeking (Time 2) is also negatively correlated with self-reported victimization at Time 2. Similarly, higher rates of problem solving (Time 1) are related to lower levels of both teacher and self-reports of victimization at Time 1, and problem solving (Time 2) is negatively correlated with teacher reports of victimization at Time 2.

Teacher and self-reports of victimization are significantly correlated at every time point, with correlations ranging from .26 to .32, and both teacher and student reports of victimization tend to be correlated in similar directions and magnitude with most study variables. Thus, to reduce the number of analyses, teacher and self-reports of victimization were combined into a composite indicator of victimization for the following analyses. When combining the teacher and self-reports of victimization, the mean of scales were added together and divided by two, creating a combined informant victimization variable at each time point.

Table IV

*Concurrent Partial Correlations for Times 1 and 2*

			Support	Problem		Peer	Self-Report	Teacher-Report
	Externalized	Internalized	Seeking	Solving	Avoidant	Support	Victimization	Victimization
Externalized	--	.34***	-.04	-.06	.01	-.19**	.27***	.19**
Internalized	.32***	--	.28***	.33***	.52***	-.10	.37***	.08
Support Seeking	.01	.31***	--	.73***	.59***	.35***	-.09	-.16**
Problem Solving	-.02	.33***	.67***	--	.61***	.29***	-.12*	-.12*
Avoidant	.07	.56***	.53***	.58***	--	.15*	.10	-.03
Peer Support	-.16**	-.15**	.40***	.29***	.06	--	-.43***	-.20***
SR Victimization	.45***	.49***	-.02	.02	.17**	-.36***	--	.30***
TR Victimization	.16**	.13*	-.02	-.13*	-.01	-.09	.32***	--

*Note:* Table presents partial correlations controlling for participants' sex.

Time 1 correlations are above the split. Time 2 correlations are below the split. SR = self-report; TR = teacher-report.

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

Table V

*Time 3 Partial Correlations*

			Support	Problem		Peer	Self-Report	Teacher-Report
	Externalized	Internalized	Seeking	Solving	Avoidant	Support	Victimization	Victimization
Externalized	--	.22**	-.15*	-.16*	-.07	-.01	.24***	.15*
Internalized		--	.20**	.34***	.54***	-.09	.41***	.03
Support Seeking			--	.71***	.43***	.45***	-.15*	.03
Problem Solving				--	.61***	.33***	-.09	-.02
Avoidant					--	.05	.13	-.01
Peer Support						--	-.38***	-.02
SR Victimization							--	.26***
TR Victimization								--

*Note:* Table presents partial correlations controlling for participants' sex.

SR = self-report; TR = teacher-report.

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

Table VI

*Longitudinal Partial Correlations for Times 1 and 2*

Time 2	Time 1							
	Externalized	Internalized	Support Seeking	Problem Solving	Avoidant	Peer Support	Self-Report Victimization	Teacher-Report Victimization
Externalized	.44***	.27*	-.09	-.04	.01	-.21***	.36***	.14*
Internalized	.15*	.47***	.04	.08	.23***	-.19**	.37***	.09
Support Seeking	-.06	.06	.37***	.34***	.29***	.21***	-.44***	-.08
Problem Solving	-.12	.12*	.37***	.39***	.39***	.17**	-.17**	-.13*
Avoidant	-.02	.22***	.13*	.20**	.35***	-.03	-.03	-.05
Peer Support	-.12	-.20***	.24***	.21***	.13*	.53***	-.44***	-.06
SR Victimization	.28***	.32***	-.12	-.11	.04	-.35***	.69***	.31***
TR Victimization	.18**	.11	-.11	-.07	.02	-.10	.34***	.70***

*Note:* Table presents partial correlations controlling for participants' sex.

SR = self-report; TR = teacher-report.

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

Table VII

*Longitudinal Partial Correlations for Times 1 and 3*

Time 3	Time 1							
	Externalized	Internalized	Support Seeking	Problem Solving	Avoidant	Peer Support	Self-Report Victimization	Teacher-Report Victimization
Externalized	.39***	.17*	-.09	-.13	-.04	-.12	.26***	.22**
Internalized	.03	.34***	.07	.10	.20**	-.08	.25***	.06
Support Seeking	-.16*	.07	.41***	.31***	.29***	.15*	-.13	-.12
Problem Solving	-.25***	.05	.30***	.39***	.32***	.25***	-.15*	-.15*
Avoidant	-.12	.19*	.13*	.29***	.44***	.03	.00	-.03
Peer Support	.02	-.04	.31***	.21***	.08	.40***	-.29***	-.02
SR Victimization	.15*	.30***	-.09	-.05	.07	-.28***	.61***	.29***
TR Victimization	.23**	.10	-.03	.01	.04	-.13	.30***	.25***

*Note:* Table presents partial correlations controlling for participants' sex.

SR = self-report; TR = teacher-report.

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

Table VIII

*Longitudinal Partial Correlations for Times 2 and 3*

Time 3	Time 2							
	Externalized	Internalized	Support Seeking	Problem Solving	Avoidant	Peer Support	Self-Report Victimization	Teacher-Report Victimization
Externalized	.49***	.13	-.05	-.11	-.10	-.10	.27***	.19**
Internalized	.19**	.49***	.19**	.23***	.27***	-.21**	.25***	.11
Support Seeking	-.18*	.10	.48***	.36***	.21**	.13	-.10	-.06
Problem Solving	-.22**	.08	.43***	.51***	.25***	.16*	-.18*	-.08
Avoidant	-.06	.28***	.26***	.38***	.44***	-.06	.01	.03
Peer Support	-.16*	-.06	.28***	.20**	.03	.49***	-.19*	-.03
SR Victimization	.37***	.39***	.02	.10	.22**	-.31***	.65***	.36***
TR Victimization	.16*	.11	.10	.02	.09	-.03	.18**	.31***

*Note:* Table presents partial correlations controlling for participants' sex.

SR = self-report; TR = teacher-report.

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

### *Group Differences in the Use of Specific Coping Responses*

Table IX summarizes the number of participants classified as bullies, victims, bully-victims, and noninvolved youth at each time point, and Table X summarizes the means and standard deviations for each type of coping separately for bullies, victims, bully-victims, and noninvolved participants. In order to test hypothesized group differences in coping responses, planned comparisons t-tests were conducted over omnibus analyses of variance as recommended by Jaccard and Guilamo-Ramos (2002) and Tabachnick and Fidell (2001). As predicted in Hypothesis 2, planned comparisons reveal that bullies report greater use of externalized coping responses than noninvolved peers at every time point:  $t(1, 235) = 2.210, p < .05$  at Time 1;  $t(1, 258) = 3.659, p < .001$  at Time 2; and  $t(1, 165) = 4.375, p < .001$  at Time 3. Similarly, bully-victims report greater use of externalized coping behaviors than do noninvolved participants at Time 1,  $t(1, 235) = 4.486, p < .001$ , and at time 2,  $t(1, 258) = 6.384, p < .001$ . Bully-victims do not, however, report significantly greater use of externalized coping behaviors than do noninvolved youth at Time 3,  $t(1, 165) = 1.837, p = .07$ . Contrary to Hypothesis 2, bullies and bully-victims generally do not report greater use of externalized coping behaviors than do victims. The only exception is at Time 1; when bully-victims report significantly higher levels of externalized coping than do victims  $t(1, 235) = 1.951, p = .05$ .

Consistent with Hypothesis 3, victims report significantly higher levels of internalized coping responses than bullies, bully-victims, and noninvolved participants at every time point. Table XI provides the degrees of freedom, t values, and significance levels for each of the analyses. At Time 1, participants who are not involved in bullying report higher levels of problem solving coping than bullies,  $t(1, 234) = 2.206, p < .05$ ; victims,  $t(1, 234) = 2.782, p < .01$ ; and bully-victims,  $t(1, 234) = 3.322, p = .001$ . Noninvolved participants, however, do not

Table IX

*Number of Bullies, Victims, Bully-Victims, and Noninvolved Participants*

		Bully-		
	<u>Bullies</u>	<u>Victims</u>	<u>Victims</u>	<u>Noninvolved</u>
Time 1	18	59	53	109
Time 2	31	37	59	136
Time 3	27	27	17	98

differ from bullies, victims, or bully-victims in their use of problem solving responses to victimization at Time 2. At Time 3, noninvolved participants report significantly higher rates of problem solving in response to victimization than do bullies,  $t(1, 165) = 3.054, p < .01$ .

Two exploratory analyses were also planned to determine group differences in the use of support seeking and avoidant responses to victimization. Because no specific hypotheses were presented, Analyses of Variance (ANOVA's) were conducted. Results reveal that there is a significant difference among bullies', victims', bully-victims', or noninvolved participants' use of support seeking responses at Time 1,  $F(3, 235) = 4.541, p < .01$ . Post hoc analyses further reveal that noninvolved participants seek support in response to victimization more often than bully-victims,  $p < .01$ . Bullies, victims, bully-victims, and noninvolved participants do not differ in their use of support seeking at Times 2 and 3.

The different groups of participants do not differ in the use of avoidant coping responses at Times 1 and 2, but there are significant differences at Time 3,  $F(3, 165) = 9.267, p < .001$ . Post hoc analyses reveal that, at Time 3, victims ( $p < .001$ ) and noninvolved participants ( $p = .001$ ) report greater use of avoidant coping in response to victimization than do bullies.



Table X

*Mean Coping Scores for Bullies, Victims, Bully-Victims, and Noninvolved Participants*

Coping	Bullies		Victims		Bully-Victims		Noninvolved	
	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
Time 1								
Support Seeking	1.89	(1.09)	2.07	(.90)	1.77	(.97)	2.35	(.96)
Problem Solving	1.87	(1.09)	2.09	(.77)	1.99	(.83)	2.47	(.86)
Externalized	1.59	(1.01)	1.33	(.96)	1.66	(.92)	.99	(.81)
Internalized	1.47	(1.15)	1.88	(.85)	1.57	(.86)	1.35	(.75)
Avoidant	1.92	(1.08)	2.31	(.96)	2.00	(1.04)	2.23	(.94)
Time 2								
Support Seeking	1.77	(.98)	2.13	(1.07)	1.91	(1.02)	2.02	(1.06)
Problem Solving	2.07	(.90)	2.31	(.91)	2.00	(.82)	2.20	(1.00)
Externalized	1.63	(1.04)	1.64	(.88)	1.86	(1.02)	.99	(.77)
Internalized	1.31	(.97)	2.34	(.91)	1.90	(.94)	1.45	(.88)
Avoidant	1.77	(1.09)	2.42	(.89)	2.13	(1.08)	2.06	(.98)
Time 3								
Support Seeking	1.55	(.91)	2.06	(.87)	1.69	(1.13)	2.06	(1.06)
Problem Solving	1.50	(.84)	2.08	(.88)	1.72	(1.09)	2.14	(.99)
Externalized	1.85	(.97)	1.57	(.99)	1.42	(.99)	.98	(.85)
Internalized	1.06	(.78)	2.19	(.79)	1.07	(.93)	1.25	(.84)
Avoidant	1.24	(.94)	2.49	(.82)	1.48	(.87)	2.02	(1.01)

Table XI

*Planned Comparisons for Group Differences in Internalized Coping*

Contrast	<i>df</i>	<i>t</i>	<i>p</i>
Time 1			
Victims and Bullies	(1, 234)	2.001	.05
Victims and Bully-Victims	(1, 234)	1.949	.05
Victims and Noninvolved	(1, 234)	3.926	< .000
Time 2			
Victims and Bullies	(1, 258)	4.666	< .000
Victims and Bully-Victims	(1, 258)	2.285	.02
Victims and Noninvolved	(1, 258)	5.272	< .000
Time 3			
Victims and Bullies	(1, 165)	4.958	< .000
Victims and Bully-Victims	(1, 165)	4.334	< .000
Victims and Noninvolved	(1, 165)	5.182	< .000

Additionally, victims report greater use of avoidant coping than do bully-victims ( $p < .01$ ).

In order to determine if youth who experience high levels of victimization at Time 1 and Time 2 (stable victims) cope differently than youth who experience high levels of victimization only at Time 1 (escaped victims), two hypothesis were tested through the use of planned comparisons. To test the hypotheses, children identified as either victims or bully-victims at both Times 1 and 2 were classified as stable victims. Those youth who were classified as victims (or bully-victims) at Time 1, but not Time 2, were classified as escaped victims (Smith et al., 2004). Contrary to expectations, the two groups do not differ in their use of internalized coping

responses at Time 1,  $t(1, 212) = .581, p = .562$ ; support seeking responses,  $t(1, 212) = .331, p = .331$  and problem solving responses,  $t(1, 213) = 1.299, p = .195$ . As hypothesized however, stable victims utilized more externalized responses to victimization than escaped victims at Time 1,  $t(1, 213) = 2.321, p < .05$ . Exploratory analyses also reveal that stable victims utilized more avoidant coping responses than escaped victims at Time 1,  $t(1, 212) = 1.093, p = .05$ .

#### *Factors that Impact the Associations between Coping and Victimization*

To determine if sex and peer support impact the associations between coping responses and future victimization, a series of regressions were conducted. Procedures recommended by Aiken and West (1991), Baron and Kenney (1986), and Holmbeck (2002) for testing moderation were followed. In each of the regressions, the Time 2 combined informant victimization variable was the dependent variable. To control for previous levels of victimization, the Time 1 combined informant victimization variable was entered into the regressions as the first predictor. Then, a type of coping, sex or peer support (moderator) and the coping by moderator interaction term (Time 1) were entered into the regression as predictors. Moderation between Times 1 and 2 were tested because, based on the narrowing of the victim pool process, the association between coping and victimization is theorized to be strongest between these time points due to greater levels of peer group disruption (Perry et al., 1992; Pellegrini & Long 2003; Schwartz et al., 1993).

Contrary to expectations, sex does not impact the associations between externalized or support seeking coping responses with future victimization. Similarly, peer support failed to moderate the associations between avoidant, problem solving, or support seeking responses with future victimization.

## *Longitudinal Associations between Coping Responses and Victimization*

### *Coping Responses and Future Victimization*

Two series of multiple regressions were used to determine if coping responses predict future victimization. The first set of regressions examined if Time 1 coping responses added to the prediction of the Time 2 victimization, when controlling for Time 1 victimization. In the regressions, Time 2 combined informant victimization was used as the criterion variable. Time 1 combined informant victimization was entered into each regression as the first predictor. In the second step of each regression, a form of coping at Time 1 is entered to determine if the form of coping predicts future victimization over and above previous victimization rates. Tables XII through XVI summarize the results of the regressions.

Table XII

*Summary of Hierarchical Regression Analysis for Time 1 Externalized Coping Predicting Time 2 Victimization (N = 221)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Time 1 Victimization	.79	.04	.78***
Step 2			
Time 1 Victimization	.77	.04	.76***
Time 1 Externalized Coping	.05	.03	.08

*Note.*  $R^2 = .61$  for Step 1;  $\Delta R^2 = .03$  for Step 2 ( $p > .05$ ).

\*\*\* $p < .001$ .

Table XIII

*Summary of Hierarchical Regression Analysis for Time 1 Internalized Coping Predicting Time 2*

*Victimization (N = 220)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Time 1 Victimization	.79	.04	.78***
Step 2			
Time 1 Victimization	.78	.05	.77***
Time 1 Internalized Coping	.02	.03	.03

*Note.*  $R^2 = .61$  for Step 1;  $\Delta R^2 = .00$  for Step 2 ( $p > .05$ ).

\*\*\* $p < .001$ .

Table XIV

*Summary of Hierarchical Regression Analysis for Time 1 Problem Solving Coping Predicting*

*Time 2 Victimization (N = 218)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Time 1 Victimization	.79	.04	.78***
Step 2			
Time 1 Victimization	.78	.05	.77***
Time 1 Problem Solving Coping	-.01	.03	-.03

*Note.*  $R^2 = .61$  for Step 1;  $\Delta R^2 = .00$  for Step 2 ( $p > .05$ ).

\*\*\* $p < .001$ .

Table XV

*Summary of Hierarchical Regression Analysis for Time 1 Support Seeking Coping Predicting Time 2 Victimization (N = 218)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Time 1 Victimization	.79	.04	.78***
Step 2			
Time 1 Victimization	.78	.04	.78***
Time 1 Support Seeking Coping	-.02	.03	-.03

Note.  $R^2 = .61$  for Step 1;  $\Delta R^2 = .00$  for Step 2 ( $p > .05$ ).

\*\*\* $p < .001$ .

Table XVI

*Summary of Hierarchical Regression Analysis for Time 1 Avoidant Coping Predicting Time 2 Victimization (N = 218)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Time 1 Victimization	.79	.04	.78***
Step 2			
Time 1 Victimization	.78	.04	.78***
Time 1 Avoidant Coping	.00	.03	.00

Note.  $R^2 = .61$  for Step 1;  $\Delta R^2 = .00$  for Step 2 ( $p > .05$ ).

\*\*\* $p < .001$ .

Findings revealed that Time 1 victimization predicted higher levels of Time 2 victimization, accounting for 61% of the variance in the prediction of future victimization.

Contrary to predictions, however, neither externalizing nor internalizing coping responses at Time 1 predicted increases in victimization at Time 2, when controlling for previous victimization rates (Time 1). Also contrary to expectations, neither problem solving nor support seeking predicted decreases in future victimization. Additionally, avoidant coping at Time 1 did not predict future victimization, when controlling for previous victimization.

The second set of regressions examined if, when controlling for past victimization experiences, coping responses during the fourth grade predict victimization in the fall of the following school year. In all the regressions, the Time 3 combined informant victimization variable was the criterion variable. Times 1 and 2 combined informant victimization were entered into the regression as the first set of predictors, and one of the coping responses at Times 1 and 2 were entered into the regressions second. The results of the regressions are summarized in Tables XVII through XXI. In the regressions, victimization at Times 1 and 2 accounted for a 35% of the variance in the prediction of victimization at Time 3. When entered into the regression as the first set of predictors, both victimization at Time 1 and victimization at Time 2 significantly predicted victimization at Time 3. When controlling for Times 1 and 2 victimization, however, none of the coping responses added to the prediction of Time 3 victimization.

As discussed when examining potential treatment effects on the relations among variables, there was evidence that the intervention impacted the association between Time 2 internalized coping and Time 3 victimization. Thus, an additional regression was conducted to control for differences in the treatment and control groups when examining if internalized coping (Time 2) predicts Time 3 victimization. In the additional regression, Time 3 combined informant victimization was the criterion variable. Time 2 combined informant victimization and Time 2

internalized coping by treatment status interaction term were entered as predictors into the first step of the regression. Finally, Time 2 internalized coping was entered as a predictor. When controlling for Time 2 victimization, neither the interaction ( $\beta = -.161, p > .10$ ) nor Time 2 internalized coping ( $\beta = .198, p > .10$ ) added to the prediction of Time 3 victimization.

Table XVII

*Summary of Hierarchical Regression Analysis for Times 1 and 2 Externalized Coping Predicting Time 3 Victimization (N = 126)*

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Victimization Time 1	.24	.09	.27**
Victimization Time 2	.34	.09	.37***
Step 2			
Victimization Time 1	.22	.09	.25*
Victimization Time 2	.31	.10	.35**
Externalized Coping Time 1	.06	.05	.11
Externalized Coping Time 2	.01	.05	.02

*Note.*  $R^2 = .35$  for Step 1;  $\Delta R^2 = .01$  for Step 2 ( $p > .05$ ).

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



Table XVIII

*Summary of Hierarchical Regression Analysis for Times 1 and 2 Internalized Coping Predicting Time 3 Victimization (N = 128)*

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Victimization Time 1	.24	.09	.28**
Victimization Time 2	.32	.09	.37***
Step 2			
Victimization Time 1	.27	.09	.31**
Victimization Time 2	.28	.09	.33**
Internalized Coping Time 1	-.05	.05	-.08
Internalized Coping Time 3	.08	.05	.14

Note.  $R^2 = .37$  for Step 1;  $\Delta R^2 = .01$  for Step 2 ( $p > .05$ ).

\*\* $p < .01$ ; \*\*\* $p < .001$ .

Table XIX

*Summary of Hierarchical Regression Analysis Times 1 and 2 Problem Solving Coping Predicting Time 3 Victimization (N = 125)*

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Victimization Time 1	.24	.09	.28**
Victimization Time 2	.32	.09	.37***
Step 2			
Victimization Time 1	.25	.09	.29**

(Table XIX continued)

Victimization Time 2	.30	.09	.35***
Problem Solving Coping Time 1	.07	.05	.12
Problem Solving Coping Time 3	.06	.04	.11

---

*Note.*  $R^2 = .37$  for Step 1;  $\Delta R^2 = .02$  for Step 2 ( $p > .05$ ).  
 \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table XX

*Summary of Hierarchical Regression Analysis Times 1 and 2 Support Seeking Coping Predicting Time 3 Victimization (N = 127)*

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Victimization Time 1	.24	.09	.28**
Victimization Time 2	.32	.09	.37***
Step 2			
Victimization Time 1	.25	.09	.29**
Victimization Time 2	.29	.09	.34**
Support Seeking Coping Time 1	.07	.05	.11
Support Seeking Coping Time 3	.04	.04	.07

---

*Note.*  $R^2 = .37$  for Step 1;  $\Delta R^2 = .02$  for Step 2 ( $p > .05$ ).  
 \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table XXI

*Summary of Hierarchical Regression Analysis Times 1 and 2 Avoidant Coping Predicting Time 3**Victimization (N = 127)*

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Victimization Time 1	.24	.09	.28**
Victimization Time 2	.32	.09	.37***
Step 2			
Victimization Time 1	.27	.09	.31**
Victimization Time 2	.29	.09	.34**
Problem Solving Coping Time 1	-.01	.05	-.02
Problem Solving Coping Time 3	.05	.04	.10

Note.  $R^2 = .37$  for Step 1;  $\Delta R^2 = .01$  for Step 2 ( $p > .05$ ).

\*\* $p < .01$ ; \*\*\* $p < .001$ .

*Victimization and Future Coping Responses*

To determine if victimization predicts future use of coping behaviors, two series of multiple regressions were conducted. The first series of regressions sought to determine if Time 1 victimization predicts coping behaviors at Time 2. In each of the regressions, one form of coping at Time 2 was used as the criterion variable. The form of coping at Time 1 was entered into the regression as the first predictor. Then, in the second step of the regression, Time 1 combined informant victimization was entered to determine if it predicts use of the coping response (at Time 2) over and above previous use of the coping response. The results of the regressions are summarized in Tables XXII – XXVI.

Table XXII

*Summary of Hierarchical Regression Analysis Time 1 Victimization Predicting Time 2**Externalized Coping (N = 223)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Externalized Coping Time 1	.42	.06	.41***
Step 2			
Externalized Coping Time 1	.37	.07	.35***
Victimization Time 1	.27	.10	.18**

Note.  $R^2 = .17$  for Step 1;  $\Delta R^2 = .03$  for Step 2 ( $p < .01$ ).

\*\* $p < .01$ . \*\*\* $p < .001$ .

Table XXIII

*Summary of Hierarchical Regression Analysis Time 1 Victimization Predicting Time 2**Internalized Coping (N = 225)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Internalized Coping Time 1	.53	.07	.47***
Step 2			
Internalized Coping Time 1	.49	.07	.43***
Victimization Time 1	.22	.09	.15*

Note.  $R^2 = .22$  for Step 1;  $\Delta R^2 = .02$  for Step 2 ( $p < .05$ ).

\* $p < .05$ . \*\*\* $p < .001$ .

Table XXIV

*Summary of Hierarchical Regression Analysis Time 1 Victimization Predicting Time 2 Problem*

*Solving Coping (N = 225)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Problem Solving Coping Time 1	.44	.07	.41***
Step 2			
Problem Solving Coping Time 1	.42	.07	.39***
Victimization Time 1	-.14	.09	-.10

Note.  $R^2 = .17$  for Step 1;  $\Delta R^2 = .01$  for Step 2 ( $p > .05$ ).

\*\*\* $p < .001$ .

Table XXV

*Summary of Hierarchical Regression Analysis Time 1 Victimization Predicting Time 2 Support*

*Seeking Coping (N = 226)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Support Seeking Coping Time 1	.40	.06	.37***
Step 2			
Support Seeking Coping Time 1	.39	.07	.38***
Victimization Time 1	-.08	.10	-.05

Note.  $R^2 = .15$  for Step 1;  $\Delta R^2 = .00$  for Step 2 ( $p > .05$ ).

\*\*\* $p < .001$ .

Table XXVI

*Summary of Hierarchical Regression Analysis Time 1 Victimization Predicting Time 2 Avoidant Coping (N = 224)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Avoidant Coping Time 1	.43	.07	.40***
Step 2			
Avoidant Coping Time 1	.43	.07	.40***
Victimization Time 1	-.05	.10	-.03

*Note.*  $R^2 = .16$  for Step 1;  $\Delta R^2 = .00$  for Step 2 ( $p > .05$ ).

\*\*\* $p < .001$ .

Broadly, the results reveal that the use of a type of coping at Time 1 predicts future use of that type of coping at Time 2. Additionally, victimization at Time 1, adds to the prediction of externalized and internalized coping responses at Time 2, even when controlling for Time 1 use of the respective coping responses. When controlling for participants' use of support seeking at Time 1, victimization at Time 1 does not add to the prediction of support seeking at Time 2. Similarly, Time 1 victimization does not predict avoidant or support seeking coping responses at Time 2.

The second series of regressions were conducted to determine if victimization during the fourth grade predicts the use of specific coping behaviors at the following school year. In each of the regressions, one form of coping at Time 3 was used as the criterion variable. The use of the same form of coping at Times 1 and 2 were entered into the regression as the first set of predictors. Then, in the second step of the regression, Times 1 and 2 victimization were entered to determine if victimization predicts participants' use of the coping response (at Time 3) over

and above previous use of the coping response. Tables XXVII through XXXI summarize the results of the regressions.

Previous use of externalized coping at both Times 1 and 2 add in the prediction of externalized coping at Time 3, accounting for 33% of variance in predicting Time 3 coping. Victimization at Times 1 and 2, however, fail to significantly add to the prediction of externalized coping at Time 3 (see Table XXVII).

Table XXVII

*Summary of Hierarchical Regression Analysis Victimization at Times 1 and 2 Predicting Externalized Coping at Time 3 (N = 141)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Externalized Coping Time 1	.23	.08	.21**
Externalized Coping Time 2	.49	.08	.46***
Step 2			
Externalized Coping Time 1	.21	.08	.19**
Externalized Coping Time 2	.44	.09	.42***
Victimization Time 1	.12	.17	.07
Victimization Time 2	.08	.17	.05

Note.  $R^2 = .33$  for Step 1;  $\Delta R^2 = .01$  for Step 2 ( $p > .05$ ).

\*\* $p < .01$ . \*\*\* $p < .001$ .

The previous use of internalized coping behaviors significantly predicts the use of internalized coping responses Time 3, accounting for 30% of the variance (see Table XXVIII). More specifically, the use of internalized coping responses at Time 2 significantly predicts Time 3 internalized coping, but Time 1 internalized coping fails to account for a significant amount of

variance in the prediction of Time 3 internalized coping. Additionally, victimization at Times 1 and 2 fail to add to the prediction of internalized coping at Time 3.

Table XXVIII

*Summary of Hierarchical Regression Analysis Victimization at Times 1 and 2 Predicting Internalized Coping at Time 3 (N = 143)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Internalized Coping Time 1	.08	.09	.08
Internalized Coping Time 2	.50	.08	.52***
Step 2			
Internalized Coping Time 1	.08	.09	.08
Internalized Coping Time 2	.50	.08	.52***
Victimization Time 1	.07	.16	.05
Victimization Time 2	-.10	.16	-.07

Note.  $R^2 = .30$  for Step 1;  $\Delta R^2 = .00$  for Step 2 ( $p > .05$ ).

\*\* $p < .01$ . \*\*\* $p < .001$ .

The previous use of problem solving coping behaviors significantly predicts the use of problem solving coping responses Time 3, accounting for 33% of the variance (see Table XXIX). More specifically, the use of problem solving coping responses at Time 2 significantly predicts Time 3 problem solving coping, but Time 1 problem solving coping fails to account for a significant amount of variance in the prediction of Time 3 problem solving coping. Additionally, victimization at Times 1 and 2 fail to add to the prediction of problem solving coping at Time 3.



Table XXIX

*Summary of Hierarchical Regression Analysis Victimization at Times 1 and 2 Predicting*

*Problem Solving Coping at Time 3 (N = 143)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Problem Solving Coping Time 1	.13	.09	.12
Problem Solving Coping Time 2	.52	.08	.50***
Step 2			
Problem Solving Coping Time 1	.15	.09	.14
Problem Solving Coping Time 2	.50	.08	.49***
Victimization Time 1	.05	.16	.03
Victimization Time 2	-.28	.15	-.19

Note.  $R^2 = .33$  for Step 1;  $\Delta R^2 = .03$  for Step 2 ( $p = .05$ ).

\*\*\* $p < .001$ .

Previous use of support seeking coping responses significantly predict the use of support seeking coping responses at Time 3, accounting for 28% of variance in predicting Time 3 support seeking coping. More specifically, both support seeking at Times 1 and 2 add to the prediction of support seeking at Time 3. Victimization at Times 1 and 2, however, fail to significantly add to the prediction of support seeking coping responses at Time 3 (see Table XXX).

Table XXX

*Summary of Hierarchical Regression Analysis Victimization at Times 1 and 2 Predicting Support**Seeking Coping at Time 3 (N = 143)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Support Seeking Coping Time 1	.20	.08	.18*
Support Seeking Coping Time 2	.47	.09	.43***
Step 2			
Support Seeking Coping Time 1	.19	.08	.18*
Support Seeking Coping Time 2	.48	.09	.44***
Victimization Time 1	.07	.18	.04
Victimization Time 2	-.22	.17	-.14

Note.  $R^2 = .28$  for Step 1;  $\Delta R^2 = .01$  for Step 2 ( $p > .05$ ).

\* $p < .05$ ; \*\*\* $p < .001$ .

Previous use of avoidant coping responses significantly predict the use of support seeking coping responses at Time 3, accounting for 37% of variance in predicting Time 3 support seeking coping. More specifically, avoidant coping responses at both Times 1 and 2 add to the prediction of avoidant coping at Time 3. Victimization at Times 1 and 2, however, fail to significantly add to the prediction of avoidant coping responses at Time 3 (see Table XXXI).

Table XXXI

*Summary of Hierarchical Regression Analysis Victimization at Times 1 and 2 Predicting*

*Avoidant Coping at Time 3 (N = 143)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Avoidant Coping Time 1	.29	.08	.26***
Avoidant Coping Time 2	.44	.07	.45***
Step 2			
Avoidant Coping Time 1	.30	.08	.27***
Avoidant Coping Time 2	.46	.07	.47***
Victimization Time 1	.01	.17	.01
Victimization Time 2	-.18	.16	-.11

*Note.*  $R^2 = .37$  for Step 1;  $\Delta R^2 = .01$  for Step 2 ( $p > .05$ ).

\*\*\* $p < .001$ .

## Discussion

Currently, there are competing theories on whether children's coping responses are important determinants of future victimization (Perry et al., 1992; Limber, 2004). Unfortunately, little longitudinal research has been conducted to test the competing theories. Thus, the current project examined the associations between children's responses to being bullied and victimization rates over a 12-month period during middle childhood. Three broad conclusions can be drawn from the current findings. First, though emotional coping responses are significantly correlated with victimization in the current project, coping responses do not appear to predict future victimization rates. Contrary to predictions, when controlling for past victimization rates, problem solving, support seeking, externalized, internalized, and avoidant coping response all failed to predict future victimization rates. Also contrary to predictions, sex and peer support did not moderate the associations between coping responses and future victimization rates. Taken together with the high test-retest correlations for victimization ( $r < .70$  in some instances), these results speak to the stability of victimization experiences in middle school. Previous victimization predicts future victimization, and coping responses, children's sex, and peer support all fail to add much to the prediction of future victimization over past victimization.

The second conclusion is that victimization influences future coping behaviors. Consistent with the prediction that high levels of victimization lead to increased emotional distress and increased coping effort to regulate that distress, victimization in the current study predicted future use of emotional coping responses. More specifically, the current findings reveal that higher levels of victimization at the beginning of the school year predicted increased future use of externalized and internalized coping responses at the end of the school year, even when

controlling for previous usage of externalized and internalized coping responses. Victimization, however, failed to predict coping responses the following school year, suggesting the negative influence of victimization on coping does not carry over from one school year to the next.

The first two conclusions suggest that victimization predicts future coping, but coping responses do not play a major role in the prediction of victimization rates. Further analysis, however, reveals that these first two conclusions may not be completely accurate for a subgroup of children. The third conclusion is that some coping responses may lead to continued victimization, but only in youth who already experience high levels of victimization. In the current study, youth who experienced high levels of victimization at Time 1 (victims and bully-victims) were classified as either stable or escaped victims. Whereas stable victims experienced high levels of victimization at both Times 1 and 2, escaped victims experienced high levels of victimization only at Time 1. Findings reveal that stable victims reported greater use of externalized and avoidant coping responses at Time 1 than escaped victims, indicating these coping responses may be factors that lead to stable victims' continued victimization.

Taken as a whole, the current findings suggest the relations between coping responses and victimization rates are more complicated than past researchers have hypothesized. Generally, how youth respond to peer conflict (which includes bullying and other arguments) is theorized to determine future victimization rates (Perry et al., 1992). More specifically, effective responses are expected to reduce future victimization, and ineffective responses are expected to increase future victimization. Alternatively however, Limber (2004) asserts that there is an important difference between peer conflict and victimization at the hands of bullies. Whereas peer conflict may involve two peers of equal power, there is always an inherent imbalance of power between bullies and their targets. Because of the imbalance of power between bullies and their targets,

there is little targets can do on their own to influence future victimization rates (Limber, 2004).

The current study is one of the only projects examining how children respond to being victimized specifically by bullies, allowing the current study to determine if Perry's and colleagues' or Limber's assertions better represent the role of coping responses in future victimization. Broadly, the findings of the current project suggest that neither of the competing theories is completely accurate, but more support is found for Limber's (2004) assertion that coping when bullied plays less of a role in victimization than coping with peer conflict.

Consistent with the assertions of Perry and colleagues, the current findings indicate that externalized coping responses may lead to high levels of victimization in the future, but only for youth who are already experiencing high levels of victimization. Similarly, Kochenderfer and Ladd (1997) found that fighting back when victimized at the beginning of the year predicted stable victim status across the school year in kindergarteners. The finding that externalized coping is associated with stable victim status in both kindergarteners and in middle childhood suggests continuity in the association between externalized coping and victimization across development and different types of conflict (bullying and aggression). Externalized coping responses lead to continued victimization, but not necessarily increases in victimization rates.

The current findings also extend previous research by including a measure of behaviorally avoidant coping responses. Similar to the finding with externalized coping, stable and escaped victims differed in their use of avoidant coping. More specifically, stable victims used more avoidant coping responses at Time 1 than escaped victims. This finding also is consistent with the assertion that coping responses may impact future victimization in youth who already experience high levels of victimization.

In contrast to the two findings supporting the assertions of Perry and colleagues (1992), the majority of findings from the current study support Limber's (2004) assertion that coping with being bullied is different from coping with peer conflict. Past studies have found that supporting seeking in response to peer conflict is associated with reductions in victimization (Kochenderfer & Ladd, 1997; Smith et al., 2004). In contrast to past research on coping with peer conflict, no form of coping, including support seeking, was consistently associated with less victimization. Coping responses failed to predict future victimization rates, when controlling for past victimization, and children's sex and peer support also fail to moderate the associations between coping responses and victimization rates. Additionally, escaped victims did not use any form of coping more frequently than stable victims. Although seeking support in response to peer conflict may lead to reductions in victimization (Kochenderfer & Ladd, 1997; Smith et al., 2004), the current pattern of findings indicates that support seeking when bullied does not lead to reductions in future victimization. Thus, it appears that there is little the targets of bullies can do on their own to reduce victimization.

Beyond these main findings, bullies, victims, bully-victims, and noninvolved participants were also found to cope with victimization differently. Of particular interest in the current study are differences involving victims and bully-victims, as these are the two groups of youth who experience high levels of victimization. Consistent with previous research, the current findings indicate bully-victims utilized more externalized coping responses than noninvolved peers (Andreou, 2001; Bijttebier & Vertommen, 1998; Olafsen & Vienero, 2000). Victims reported more internalized coping than bullies, bully-victims, and noninvolved participants at all time points (Andreou, 2001; Bijttebier & Vertommen, 1998; Kochenderfer & Ladd, 1997; Olafsen & Vienero, 2000; Olweus, 1978; Roecker-Phelps, 2001; Salmivalli, Karhunen, & Lagerspetz,

1996). Internalized coping responses, however, fail to predict future victimization, indicating that these coping responses are not a key determinant in victims' frequent victimization.

One of the main strengths of this study is the use of a longitudinal design. As previously discussed, the theories regarding the associations between coping and victimization make longitudinal predictions. Thus, the longitudinal design of the current study allows for the testing of Perry's and Limber's competing predictions. Perry and colleagues (1992) assert that children's responses to peer conflict will lead to increases or decreases in future victimization. Alternatively, Limber (2004) asserts that the ways youth respond to being bullied will not predict future victimization. Generally, the findings support Limber's assertion that the ways youth respond to being bullied fail to predict future victimization. However, there may be some things that highly victimized youth do that exacerbates or lengthens the duration of high levels of victimization, as stable victims utilize more externalized and avoidant coping responses than escaped victims.

The use of multiple informants, both students and teachers, is also a strength of the current study. Though there are advantages and disadvantages associated with the use of any single type of informant, it is generally accepted that the use of multiple informants is the optimal procedure for measuring psychosocial constructs (Campbell & Fiske, 1959).

Despite the strengths of the current study, there are also several weaknesses that must be considered when interpreting the findings. First, the project focused on the relationships between coping and victimization solely during middle childhood, limiting the generalizability of the findings to other developmental periods. Some of the strongest support for the hypothesis that coping influences future victimization rates comes from research with preschool and kindergarten students (Kochenderfer & Ladd, 1997; Patterson et al., 1967; Schwartz et al., 1993).



Consistent with the findings of Kochenderfer and Ladd (1997) in kindergarteners, the current study found that externalized coping responses also are associated with stable victimization in middle childhood. This suggests some developmental continuity in the role of externalized coping, at least among youth who experience high levels of victimization. Alternatively, Tapper and Boulton (2005) recently asserted that children's responses to peer conflict may influence future victimization early in childhood, but the responses of bystanders or other peers may become more important determinants of children's aggression and victimization as youth develop (Tapper & Boulton, 2005). Thus, future longitudinal research with school children should also include measures of how youth respond when other peers are involved in conflict.

Secondly, since coping responses are assumed to be more important determinants of future victimization rates during periods of peer group transition, it is not surprising that coping responses have been found to predict future victimization during preschool, kindergarten, or in laboratory created playgroups (Kochenderfer & Ladd, 1997; Patterson et al., 1967; Pellegrini & Long, 2003; Perry et al., 1992; Schwartz et al., 1993). When starting preschool, kindergarten, or new playgroups, children suddenly find themselves in an environment with a large number of new peers. In the current project, the start of new school year was assumed to be a period of peer group transition. During this time, new peers arrive, and old peers move or are assigned to different classes. Starting a new school year at the same school, however, may not produce enough of a disruption to the peer group for aggressive youth to once again need to narrow their pool of victims (Pellegrini & Long, 2003). Thus, it is possible that coping responses failed to predict victimization because there was not a large enough disruption in the peer group in the current study. Future studies should include a measurement of peer group disruption or focus on samples of participants transitioning from elementary to larger middle schools.

Third, the data used in the current project come from an intervention sample, leaving open the possibility that the intervention had some undetected impact on the finding. Numerous analyses were conducted, comparing the treatment and control groups, to determine if the intervention had an impact on the relationships among variables. Generally only one potential treatment effect was found. Basically, the associations between Time 2 internalized coping and Time 3 victimization differed for the treatment and control groups. This treatment effect was controlled for in analyses, and it was not found to significantly alter the findings. Thus, it is unlikely the intervention had any meaningful impact on the results, but the remote possibility of undetected effects still exists. A final weakness is that a large number of participants dropped out of the study between Times 2 and 3. The attrition, however, seems to be random rather than selective. Thus, the results that can be drawn from analyses using data from Time 3 are probably accurate, but should still be interpreted with caution.

In the current study, several hypotheses were not confirmed or only partially confirmed. First, internalized coping responses were hypothesized to be associated with higher rates of victimization, but internalized coping tended to more strongly correlated to student reports of victimization than teacher reports. This is not completely unexpected, as students also reported on internalized coping. Thus, shared method variance may inflate the correlations between internalized coping and student reports of victimization. An alternate explanation is that teachers may be less aware of the victimization that youth experience when these youth utilize internalized coping responses. It is estimated that teachers are only aware of approximately 25% of bullying incidents (Atlas & Pepler, 1998). Additionally, internalized responses (e.g. ruminating, getting too upset to talk with anyone, feeling sorry for oneself, etc.) are unlikely to draw the attention of a teacher supervising a playground or a classroom full of students. Thus, it

is not surprising that teachers might be less aware of the victimization experiences of youth who utilize internalized coping responses.

It was also hypothesized that noninvolved participants would use more problem solving coping responses than bullies, victims, and bully-victims. However, noninvolved participants did not consistently report more problem solving coping. The current study, however, is not the only study finding noninvolved participants did not differ from peers in their use of problem solving (Bijttebier & Vertommen, 1998). Thus, more research is needed to determine if inconsistencies in the use of problem solving are a result of normal population variations, or some other factor.

Finally, it was predicted that certain coping responses would predict future victimization rates when controlling for past victimization. Yet, internalized, externalized, problem solving, and support seeking coping responses all failed to predict victimization rates. Similarly, children's sex and peer support failed to moderate the associations between coping responses and future victimization rates. Though this lack of findings fails to support the author's predictions, these findings are not completely unexpected. As previously stated, Limber (2004) has asserted that coping responses to being bullied would not predict future victimization. Additionally, Tapper and Boulton (2005) have suggested that coping responses would be even less important in determining future victimization in children at the developmental level of the current study's sample.

Alternatively however, the lack of findings could have resulted from the timing of the data collection points in the current study. The narrowing of the victim pool process does not specify exactly how quickly it takes aggressive children to narrow down their pool of targets. Though some research suggest chronic victimization begins to occur within the first few days of laboratory playgroups (Schwartz et al., 1993), there is reason to believe the process may take

longer in the school setting. The laboratory playgroups of past research included approximately six children per group. In the school setting, children find themselves in classes of 20 or more peers, and they often share playground space with multiple classes of peers. With more peers, it is assumed that the narrowing of the victim pool would take much longer. Additionally, Kochenderfer and Ladd (1997) found evidence that aggressive youth continued shopping for new targets throughout the school year. Thus, narrowing the victim pool was thought by the current researcher to take longer than a few meetings at the beginning of the school year, and the first wave of data (Time 1) was conducted approximately three months into the school year. The timing of data collection was selected because it was thought to give youth some, but not too much, time to interact. It was also thought to give teachers time to get to know their students, improving the reliability and validity of their reports. It is possible, however, that the narrowing of the victim pool had largely occurred before Time 1. Theoretically, this could attenuate the influence coping responses had on future victimization rates. Future studies should consider including data collection earlier in the school year, measuring coping responses to both peer conflict and bullying, and measuring the responses of peers to tease apart the predictions of Perry et al., (1992), Limber (2004), and Tapper and Boulton (2005).

An unexpected pattern of findings involving avoidant coping responses also emerged. Avoidant coping responses were included in the current study because it was thought avoidant coping responses would either lead to social isolation and higher levels of victimization or the avoidance of bullying situations and decreases in victimization. No specific hypotheses regarding the direct associations between avoidant coping responses were presented for two reasons. There is little theoretical work regarding the role of avoidant coping and victimization, and the relationship between coping and victimization was hypothesized to depend on the availability of

peer support. Unexpectedly, even when considering the availability of peer support, the current analyses revealed that avoidant coping responses were generally unrelated to victimization rates, suggesting avoidant coping does not appear to play a significant role in victimization. The one exception is that stable victims tend to use more avoidant coping at a beginning of the school year than escaped victims, suggesting avoidant coping may be a factor leading to continued victimization in youth who already experience high levels of victimization.

In conclusion, currently there are competing theories regarding the importance of coping responses in predicting future victimization, and little research has tested the longitudinal predictions of the competing theories. Generally, the present project supports the assertion that coping responses do not predict future victimization rates. Determining whether this is because there is little the targets of bullies can do to deter future victimization (Limber 2004), or because peer responses become more important factors predicting victimization during middle childhood (Tapper & Boulton, 2005) requires further study. The current study, however, does suggest that there are coping responses that may lead to continued, rather than decreased victimization in some youth. In youth who experienced high levels of victimization at the beginning of the school year, greater use of externalized and avoidant coping was associated with stable victimization, as opposed to youth who escaped higher levels of victimization later in the school year.

The findings from the current study also speak to the importance of reducing peer victimization, especially at the beginning of the school year, as it leads to increased risk of emotional coping responses (e.g. yelling, cursing, hitting things, crying, and worrying). Additionally, however, the current findings do not support the use of class-based lessons that try to teach all youth how to respond to bullies in order to deter future victimization. Coping responses did not predict victimization in the whole sample. Alternatively, seeking to reduce the

use of externalized and avoidant coping responses by meeting individually with youth who experience high levels of victimization at the beginning of the school year might be most beneficial in helping these youth escape stable victimization over the course of the school year. Since there appears to be little that the victims of bullies can do on their own to reduce future victimization, more research is needed to determine what more peers and teachers can do to reduce bullying and victimization.

## References

- Andreou, E. (2001). Bully/victim problems and their association with coping behaviour in conflictual peer interactions among school age children. *Educational Psychology, 21*, 59-66.
- Aiken, L. S., & West S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.
- Atlas, R. S., & Pepler, D. J. (1998). Observations of bullying in the classroom. *Journal of Educational Research, 92*, 86-99.
- 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*, 1173-1182.
- Bierman, K. L. (2004). *Peer Rejection*. New York: Guilford.
- Bijttebier, P. & Vertommen, H. (1998). Coping with peer arguments in school-agechildren with bully/victim problems. *British Journal of Educational Psychology, 68*, 387-394.
- Bjorkqvist, K., Ekman, K., & Lagerspetz, K. M. J. (1982). Bullies and victims : The ego picture, ideal ego picture, and normative ego picture. *Scandinavian Journal of Psychiatry, 33*, 307-313.
- Callaghan, S. & Joseph, S. (1995). Self-concept and peer victimization among school children. *Personality and Individual Differences, 18*, 161-163.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin, 56*, 81-105.

- Camodeca, M., Goossens, F. A., Schengel, C., & Terwogt, M. M. (2003). Links between social information processing in middle childhood and involvement in bullying. *Aggressive Behavior, 29*, 116-127.
- Causey, D. L., & Dubow, E. F. (1992). Development of a Self-Report Coping Measure for elementary school children. *Journal of Clinical Child Psychology, 21*, 47-59.
- Craig, W. M. (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences, 24*, 123-130.
- Craig, W. M., Henderson, K., & Murphy, J. G. (2000). Prospective teachers' attitudes toward bullying and victimization. *School Psychology International, 21*, 5-21.
- Crick, N. R. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. *Child Development, 67*, 2317-2327.
- Crick, N. R. & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: A multi informant approach. *Journal of Consulting and Clinical Psychology, 66*, 337-347.
- Crick, N. R. & Grotpeter, J. K. (1996). Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology, 8*, 367-380.
- Demaray, M. K., & Malecki, C. K. (2003). Perceptions of the frequency and importance of social support by students classified as victims, bullies, and bully-victims in an urban middle school. *School Psychology Review, 32*, 471-489.
- Dodge, K. A., & Schwartz, D. (1997). Social information processing mechanisms in aggressive behavior. In D. M. Stoff, J. Breiling, & J. D. Maser (Eds.), *Handbook of antisocial behavior* (pp. 171-180). United States: John Wiley & Sons.



- Egan, S. K., & Perry, D. G. (1998). Does low self-regard invite victimization? *Developmental Psychology*, 34, 299-309.
- Espelage & Swearer (2004). *Bullying in American schools: A social-ecological perspective on prevention and intervention*. Mahwah, NJ: Earlbaum.
- Fox, C. L., & Boulton, M. J. (2003). Evaluating the effectiveness of social skills training (SST) programme for victims of bullying. *Educational Research*, 45, 231-247.
- Fox, C. L., & Boulton, M. J. (2005). The social skills problems of victims of bullies. *British Journal of Educational Psychology*, 75, 313-328.
- Haynie, D. L., Nansel, T., Eitel, P., Crump, A. D., Saylor, K., Yu, K., & Simons-Morton, B. (2001). Bullies, victims, and bully/victims: Distinct groups of at-risk youth. *Journal of Early Adolescence*, 21, 29-49.
- Holmbeck, G. N. (2002). Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *Journal of Pediatric Psychology*, 27, 87-96.
- Hoover, J. H., Oliver, R. L., & Hazler, R. J. (1992). Bullying: Perceptions of adolescent victims in the Midwestern USA. *School Psychology International*, 13, 5-16.
- Huesmann, L. R. (1998). The role of social information processing and cognitive schema in the acquisition and maintenance of habitual aggressive behavior. In R. G. Green & E. Donnerstein (Eds.), *Human aggression: Theories, research, and implications for social policy* (pp. 73-109). San Diego, CA: Academic Press.
- Jaccard, J., & Guilamo-Ramos, V. (2002). Analysis of variance frameworks in clinical child and adolescent psychology: Issues and recommendations. *Journal of Clinical Child and Adolescent Psychology*, 31, 130-146.

- Juvonen, J., & Graham, S. (2001). *Peer harassment in school: The plight of the vulnerable and victimized*. New York, NY: Guilford.
- Kaukianen, A., Bjorkqvist, K., Lagerspetz, K., Osterman, K., Salmivalli, C., Rothberg, S., & Ahlbom, A. (1999). The relationships between social intelligence, empathy, and three types of aggression. *Aggressive Behavior*, 25, 81-89.
- Kochenderfer, B. J., & Ladd, G. W. (1996). Peer victimization: Cause or consequence of school maladjustment. *Child Development*, 67, 1293-1305.
- Kochenderfer, B. J. & Ladd, G. W. (1997). Victimized children's responses to peers' aggression: Behaviors associated with reduced versus continued victimization. *Development and Psychopathology*, 9, 59-73.
- Limber, S. P. (2004). Implementation of the Olweus Bullying Prevention Program in American schools: Lessons learned from the field. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 351-364). New York, NY: Earlbaum.
- Limber, S. P., & Small, M. A. (2003). State laws and policies to address bullying in schools. *School Psychology Review*, 32, 445-455.
- Monks, C. P., Smith, P. K., & Swettenham, J. (2003). Bullying in infant classes: Roles taken, stability, and relationship to sociometric status. *Merrill-Palmer Quarterly*, 49, 453-469.
- Nansel, 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.
- Olafsen & Viemero (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*. New York: Wiley.
- Olweus, D. (1979). Stability of aggressive reaction patterns in males: A review. *Psychological Bulletin*, 86, 852-875.
- Olweus, D. (1990). Bullying among school children. In K. Hurrelmann & F. Loesel (Eds.), *Health hazards in adolescence: Prevention and intervention in childhood and adolescence*, (Vol. 8 pp. 259-297). Berlin, Walter De Gruyter.
- Olweus, D. (2001a). Instructions for administering the revised Olweus Bully/Victim Questionnaire for students. Unpublished Manuscript.
- Olweus, D. (2001b). Information on registering and coding of the students' answers (The Revised Olweus Bully/Victim Questionnaire). Unpublished Manuscript.
- O'Moore, M., & Kirkham, C. (2001). Self-esteem and its relationship to bullying behavior. *Aggressive Behavior*, 27, 269-283.
- Paquette, J. A. & Underwood, M. K. (1999). Gender differences in young adolescents' experiences if peer victimization: Social and physical aggression. *Merrill-Palmer Quarterly*, 45, 242-266.
- Patterson, G. R., Littman, R. A., & Bricker, W. (1967). Assertive behavior in children: A step toward a theory of aggression. *Monographs for the Society of Research on Child Development*, 32, 1-36.
- Pellegrini, A. D., Bartini, M., & Brooks, F. (1999). School bullies, victims, and aggressive victims: Factors related to group affiliation & victimization in early adolescents. *Journal of Educational Psychology*, 91, 216-224.

- Perry, D. G., Hodges, E. V. E., & Egan, S. K. (2001). Determinants of chronic victimization by peers: A review and a new model of family influence. In J. Juvonen & S. Graham, *Peer harassment in school* (pp. 73-104). New York: Guilford.
- Perry, D. G., Kusel, S. J., & Perry, L. C. (1988). Victims of peer aggression. *Developmental Psychology*, 34, 807-814.
- Perry, D. G., Perry, L. C., & Boldizar, J. P. (1990). Learning of aggression. In M. Lewis & S. Miller (Eds.), *Handbook of developmental psychopathology* (pp. 135-146). New York: Plenum.
- Perry, D. G., Perry, L. C., & Kennedy, E. (1992). Conflict and the development of antisocial behavior. In C. U. Shantz & W. W. Hartup (Eds.), *Conflict in child and adolescent development* (pp. 301-329). New York: Cambridge University Press.
- Perry, D. G., Willard, J. C., & Perry, L. C. (1990). Peers' perceptions of the consequences that victimized children provide aggressors. *Child Development*, 61, 1310-1325.
- Price, J. M., & Dodge, K. A. (1989). Reactive and proactive aggression in childhood: Relations to peer status and social contexts dimensions. *Journal of Abnormal Child Psychology*, 17, 455-471.
- Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Child Clinical Psychology*, 30, 479-491.
- Prinstein, M. J., & Cillessen, A. H. (2003). Forms and functions of adolescent peer aggression associated with high levels of peer status. *Merrill Palmer Quarterly*, 49, 310-342.

- Program for the Prevention Research (1999). *Manual for the Children's Coping Strategies Checklist and the How I Coped Under Pressure Scale*. (Available from Arizona State University, P.O. Box 876005, Tempe, AZ 85287-6005).
- Rigby, K., (1994). Psychosocial functioning in families of Australian adolescent school children involved in bully/victim problems. *Journal of Family Therapy*, 16, 173-187.
- Rigby, K. (1998). The relationship between reported health and involvement in bully/victim problems among male and female secondary school students. *Journal of Health Psychology*, 3, 465-476.
- Rigby, K., & Slee, P. T. (1991). Bullying among Australian school children: Reported behavior and attitudes toward victims. *Journal of Social Psychology*, 131, 615-627.
- Roecker-Phelps, C. E., (2001). Children's responses to overt and relational aggression. *Journal of Clinical Child Psychology*, 30, 240-252.
- Salmivalli, C., Karhunen, J., & Lagerspetz, K. M. J. (1996). How do the victims respond to bullying? *Aggressive Behavior*, 22, 99-109.
- Schafer, M., Werner, N. E., & Crick, N. R. (2002). A comparison of two approaches to the study of negative peer treatment: General victimization and bully/victim problems among German schoolchildren. *British Journal of Developmental Psychology*, 20, 281-306.
- Schwartz, D. (2000). Subtypes of aggressors and victims in children's peer group. *Journal of Abnormal Child Psychology*, 28, 181-192.
- Schwartz, D., Dodge, K. A., Coie, J. D. (1993). The emergence of chronic peer victimization in boys' play groups. *Child Development*, 64, 1755-1772.

- Schwartz, D., Dodge, K. A., Coie, J. D., Hubbard, J. A., Cillessen, A. H. N., Lemeris, E. A., & Bateman, H. (1998). Social-cognitive and behavioral correlates of aggression and victimization in boys' play groups. *Journal of Abnormal Child Psychology*, 26, 431-440.
- Schwartz, D., Dodge, K. A., Pettit, G. S., & Bates, J. E. (1997). The early socialization of aggressive victims of bullying. *Child Development*, 68, 665-675.
- Schwartz, D., Mcfadyen-Ketchum, S., Dodge, K. A., Pettit, G. S., & Bates, J. E. (1999). Early behavior problems as a predictor of later peer group victimization: Moderators and Mediators in the pathways of social risk. *Journal of Abnormal Child Psychology*, 27, 191-201.
- Schwartz, D., Proctor, L. J., & Chien, D. H. (2001). The aggressive victim of bullying: Emotional and behavioral dysregulation as a pathway to victimization by peers. In J. Juvonen & S. Graham (Eds.) *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 147-174). New York: Guilford.
- Smith, P. K., Talamelli, L., Cowie, H., Naylor, P., & Chauhan, P. (2004). Profiles of non victims, escaped victims, continuing victims, and new victims of school bullying. *British Journal of Educational Psychology*, 74, 565-581.
- Snyder, J., Brooker, M., Patrick, M. R., Snyder, A., Schrepferman, L., & Stoolmiller, M. (2003). Observed peer victimization during early elementary school: Continuity, growth, and relation to risk for child antisocial and depressive behavior. *Child Development*, 74, 1881-1898.
- Sutton, J., & Keogh, E. (2000). Social competition in school: Relationships with bullying, Machiavellianism, and personality. *British Journal of Educational Psychology*, 70, 443-456.

- Sutton, J., Smith, P. K., & Swettenham, J. (1999). Bullying and 'Theory of Mind': A critique of the social skills deficit view of anti-social behaviour. *Social Development*, 8, 117-127.
- Swearer, S. M., Grills, A. E., Haye, K. M., Cary, & P. T. (2004). Internalized problems in students involved in bullying and victimization: Implications for intervention. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 63-84). New York, NY: Earlbaum.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Computer-assisted research design and analysis*. Boston, MA: Allyn & Bacon.
- Terranova, A. M. (2003). *Peer victimization in adolescence: Utility of the relational victimization, overt victimization, and teacher informants*. Unpublished master's thesis, University of New Orleans, New Orleans, LA.
- Underwood, M. K. (2003). *Social aggression among girls*. New York: Guilford.
- Wilton, M. M. M., Craig, W. M., & Pelter, D. J. (2000). Emotional regulation and display in classroom victims of bullying: Characteristic expressions of affect, coping styles and relevant contextual factors. *Social Development*, 9, 226-245.
- Wolke, D., Woods, S., Bloomfield, L., & Karastadt, L. (2000). The association between direct and relational bullying and behaviour problems among primary school children. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, , 989-1002.

## Appendix A: Measures



*Victimization: Student Report Social Experiences Questionnaire (SEQ)*

*How often have other kids bullied you by...*

- hitting you at school?
- leaving you out on purpose when it's time to play or do an activity?
- yelling at you or calling you mean names?
- not letting you in their group anymore?
- pushing or shoving you at school?
- telling lies about you so others will not like you?
- kicking you or pulling your hair at school?
- saying they wouldn't like you unless you did what they wanted you to do?
- saying mean things about you to keep others from liking you?
- saying they would beat you up if you didn't do what they wanted you to do?
- making mean faces at you?
- rolling their eyes at you?

*Victimization: Teacher Report Social Experiences Questionnaire (SEQ)*

*How often do bullies...*

- hit or kick the student?
- ignore the student?
- push or shove the student?
- leave the student out the group when someone is mad at the student or when the bully wants to get back at the student?
- physically threaten the student?
- spread rumors or gossip about the student in the playgroup?

*Receipt of Prosocial Behavior (Peer Support): SEQ*

- How often does another student give you help when you need it?
- How often do other students try to cheer you up when you feel sad?
- How often do other students do things that make you feel happy?
- How often do other students say nice things to you?
- How often do other students let you know that they care about you?

*Bullying Behaviors: Student Report Child Social Behavior Scale*

*How often do you bully others by...*

- excluding classmates from your group of friends because you are mad at them?
- hitting, shoving or pushing classmates?
- spreading rumors or gossip about classmates?
- getting into fights with classmates?
- trying to get other classmates to stop liking someone because you are mad at them?
- threatening to beat up classmates?
- telling lies about classmates so others won't like them?
- ignoring or stop talking to classmates because you are mad at them?
- bullying other classmates?
- threatening to stop being someone's friend unless they do what you want?

- excluding classmates from group activities?
- making mean faces at classmates?
- rolling your eyes at classmates to be mean to them?

*Bullying Behaviors: Teacher Report Child Social Behavior Scale*

*How often does the student bully others by...*

- hitting or kicking peers?
- ignoring others when a he or she is mad at them?
- pushing or shoving peers?
- leaving others out of the group when he/she is mad or wants to get back at them?
- physically threatening peers?
- spreading rumors or gossip about other students?
- calling peers names?
- making mean faces at peers?

*Support Seeking Coping*

- When bullied, how often do you tell a friend or family member what happened?
- When bullied, how often do you talk to someone about how it made you feel?
- When bullied, how often do you get help from a friend?
- When bullied, how often do you ask a friend for advice?
- When bullied, how often do you ask a family member for advice?
- When bullied, how often do you ask someone else who has had this problem what he or she did?
- When bullied, how often do you get help from a family member?
- When bullied, how often do you talk with the teacher about it?

*Problem Solving Coping*

- When bullied, how often do you try to think of different ways to solve the problem?
- When bullied, how often do you change something so things will work out better the next time?
- When bullied, how often do you decide on one way to deal with the problem and then do it?
- When bullied, how often do you do something to make up for it?
- When bullied, do you think there are things you can do to make it better?
- When bullied, how often do you go over in your mind what to do or say?
- When bullied, how often do you try to understand why this has happened to you?
- When bullied, how often do you try extra hard to keep this from happening again?

*Avoidant Coping*

- When bullied, how often do you try and stay away from the problem?
- How often do you avoid being bullied by hanging out in another area of the school?
- When bullied, how often do you avoid the people who made you feel bad?
- When bullied, how often do you stay away from the things that made you feel bad, such as the things you were picked on about (clothes, playing a sport, etc.)?

- When bullied, how often do you try to stay away from the bullies?
- When bullied, how often do you try to stay away from the people who watched but didn't help?

#### *Externalized Coping*

- When bullied, how often do you take it out on others because you feel sad or angry?
- When bullied, how often do you yell to let off steam?
- When bullied, how often do you curse out loud?
- When bullied, how often do you get mad and throw or hit something?

#### *Internalized Coping*

- When bullied, how often do you go off by yourself?
- When bullied, how often do you become so upset that you can't talk to anyone?
- When bullied, how often do you worry too much about it?
- When bullied, how often do you cry about it?
- When bullied, how often do you feel sorry for yourself?
- When bullied, how often do you worry that others will think badly of you?
- When bullied, how often do you get mad at yourself for doing something you shouldn't have done?

## Appendix B: Institutional Review Board Approval

UNIVERSITY OF NEW ORLEANS  
COMMITTEE ON THE USE OF HUMAN SUBJECTS

**Form Number:** 9FEB03 (please refer to this number in all future correspondence concerning this protocol)

**Principal Investigator:** Andrew Terranova **Title:** Graduate Student

**Department:** Psychology **College:** Sciences

**Name of Faculty Supervisor:** Amanda Morris, Ph.D. (if PI is a student)

**Project Title:** Coping with peer victimization: Strategies associated with decreases in future peer victimization rates

**Date Reviewed:** October 27, 2003

**Dates of Proposed Project Period:** From 10/03 to 10/04\*

\*approval is for one year from approval date only and may be renewed yearly.

**Note:** Consent forms and related materials are to be kept by the PI for a period of three years following the completion of the study.

☐ Full Committee Approval

☐ Expedited Approval

☒ Continuation

☐ Rejected

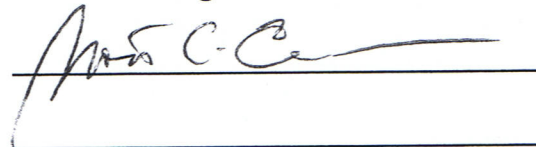
☐ The protocol will be approved following receipt of satisfactory response(s) to the following question(s) within 15 days:

---

---

---

**Committee Signatures:**



\_\_\_\_\_  
Scott C. Bauer, Ph.D. (Chair)

\_\_\_\_\_  
Gary Granata, Ph.D.

\_\_\_\_\_  
Betty Lo, M.D.

\_\_\_\_\_  
Hae-Seong Park, Ph.D.

\_\_\_\_\_  
Jane Prudhomme

\_\_\_\_\_  
Jayaraman Rao, M.D. (NBDL protocols only)

\_\_\_\_\_  
Richard B. Speaker, Ph.D.

\_\_\_\_\_  
Gary Talarchek, Ph.D.

---

*University Committee for the Protection  
of Human Subjects in Research  
University of New Orleans*

Form Number: 9FEB03

*(please refer to this number in all future correspondence concerning this protocol)*

Principal Investigator Andrew Terranova Title: Graduate Student

Faculty Supervisor: Dr. Amanda Morris *(if PI is a student)*

Department: Psychology College: Science

Project Title: Coping with peer victimization: Strategies associated with decreases in f<sub>1</sub>

Date Reviewed: 08/25/2004

Dates of Proposed Project Period From 08/25/2004 to 08/24/2005

*\*approval is for one year from approval date only and may be renewed yearly.*

Note: Consent forms and related materials are to be kept by the PI for a period of three years following the completion of the study.

Approval Status

Date

☐ Full Committee Approval

☐ Expedited Approval

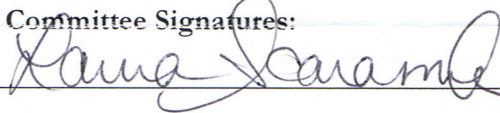
☒ Continuation

08/25/2004

☐ Rejected

☐ The protocol will be approved following receipt of satisfactory response(s) to the following question(s) within 15 days:

Committee Signatures:



Laura Scaramella, Ph.D. (Chair)

Pamela Jenkins, Ph.D.

Anthony Kontos, Ph.D.

Betty Lo, M.D.

Richard B. Speaker, Ph.D.

Gary Talarchek, Ph.D.

L. Allen Witt, Ph.D.



## Vita

Andrew Terranova, Jr. was born in Kenner, Louisiana. He earned a Bachelor's of Art, Summa Cum Laude, at Southeastern Louisiana University in December of 2000. He earned a Master of Science in Applied Developmental Psychology from the University of New Orleans, in August of 2003. In September 2006, he will begin a postdoctoral research position at Rutgers University's Newark, New Jersey campus. Andrew's interests focus on the social and cognitive factors that lead to aggression and peer victimization during middle childhood.