

THE IMPACT OF INTERPERSONAL BULLYING AND CYBERBULLYING ON  
SCHOOL AVOIDANCE

by

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The Impact of Interpersonal Bullying and Cyberbullying on School Avoidance

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## **DEDICATION**

To my family and friends for their unwavering love, encouragement, and support over the years. There are truly no words to thank you enough.

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## **ABSTRACT**

### **THE IMPACT OF INTERPERSONAL BULLYING AND CYBERBULLYING ON SCHOOL AVOIDANCE**

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George Mason University, 2014

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This dissertation examines the impact of bullying victimization on school avoidance. Using victim-centered adaptations of general strain theory and routine activity theory, this research proposes the following general hypotheses: (1) Net of other factors, students who have experienced bullying victimization are more likely to avoid places in school; (2) There are protective factors that will decrease the relationship between bullying victimization and avoidance behaviors, such as participation in school activities; and (3) There are aggravating factors that will increase the relationship between bullying victimization and avoidance behaviors, such as fighting. Data for these analyses are derived from the 2011 School Crime Supplement to the National Crime Victimization Survey. The findings of this dissertation provide support for the overall effect of bullying victimization on school avoidance, such that students who have experienced overall bullying are more likely to avoid places in school. Additionally, results suggest that participation in school activities can decrease the relationship between bullying

victimization and school avoidance and that fear can increase this relationship. These results seek to highlight the pervasiveness of bullying victimization in schools, as well as the protective and aggravating factors that impact upon the relationship between bullying victimization and avoidance behaviors, in order to provide further support for the development of prevention and intervention programs to mediate bully/victim issues.

## CHAPTER ONE

Bullying victimization has been a longstanding problem among adolescents in elementary, middle, and high school. Olweus (1991a) has provided a widely cited definition of bullying: “A person is bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons, and he or she has difficulty defending himself or herself” (p. 47). There are students who are bullied by their peers at school or on the way to and from school (Farrington & Ttofi, 2009). This type of harassment is often referred to as interpersonal bullying and can be characterized by direct or indirect bullying behaviors that occur in person, such as hitting or spreading rumors about someone (Greeff & Grobler, 2008). In recent years, however, rapidly developing technologies have allowed for the expansion of interpersonal bullying into the complex realm of cyberspace. Cyberbullying, also referred to as electronic bullying, has been defined as “willful and repeated harm inflicted through the medium of electronic text” (Patchin & Hinduja, 2006, p. 152). More specifically, this type of bullying primarily occurs through the use of cellular phones and Internet-enabled computers, as these devices present an opportunity for a victim to receive hurtful messages or inappropriate content by way of electronic mail (email), text messaging (“texting”), website postings, and so on (Ahlfors, 2010; Hinduja & Patchin, 2008).

Cyberbullying, like interpersonal bullying, can involve direct or indirect bullying behaviors, such as hurtful messages that are transmitted directly from the bully to the victim or spreading rumors about someone through an online forum (Snakenborg, Van Acker, & Gable, 2011). However, the characteristics that make cyberbullying unique and distinguish it from interpersonal bullying include (a) the potential for an infinite audience; (b) an altered balance of power; (c) an inability for the bully to observe the immediate reaction of the victim; (d) the absence of space and time constraints on bullying; and (e) the perception of anonymity on the part of the bully (Bauman, 2010; Slonje & Smith, 2008).

Despite evidence over the past several decades suggesting that schools are generally safe places for students (Calhoun & Daniels, 2008; Morrison, 2003), this environment provides a physical and social setting that is conducive to victimization through bullying. In 2009, evidence from the School Crime Supplement to the National Crime Victimization Survey demonstrated that approximately 28 percent of students 12-18 years of age reported having experienced interpersonal bullying at school during the school year and 6 percent reported being cyber-bullied inside or outside of school during the school year (DeVoe & Bauer, 2011). Additionally, the phenomena of interpersonal bullying and cyberbullying has drawn growing concern from parents, the school community, and legislators, following a series teen suicides and other incidents related to bullying that have been highly publicized in the news media. For example, the bullying-related suicide of 14-year-old Angel Green from Indiana led to anti-bullying legislation at the state's capital, requiring bully prevention training for all school staff (Goldstein,

2013). Although there is no definitive evidence that bullying victimization makes youth more likely to commit suicide, research finds an association between being bullied and suicidal ideations and behaviors (Bauman, Toomey, & Walker, 2013; Hinduja & Patchin, 2010; Kim & Leventhal, 2008). According to one systematic review, victims of bullying are two to nine times more likely than non-victims to report suicidal thoughts (Kim & Leventhal, 2008).

Beyond high profile cases in the media, interpersonal bullying victimization as well as cyberbullying victimization leads to a host of other unfavorable consequences for targeted youth. These consequences can include academic, behavioral, and psychological problems (Attwood & Croll, 2006; Bauman, 2010; Bauman et al., 2013; Glew et al., 2005; Hinduja & Patchin, 2010; Kochenderfer & Ladd, 1996a; Kochenderfer & Ladd, 1996b; Nansel et al., 2001; Patchin & Hinduja, 2010; Townsend et al., 2008). Victims of bullying oftentimes adopt negative coping strategies to deal with the effects of bullying, such as carrying weapons to school, depression, fear of school, loneliness, fighting, low self-esteem, school avoidance, substance use, and suicidal ideations and behaviors (Ahlfors, 2010; Attwood & Croll, 2006; Bauman, 2010; Bauman et al., 2013; Glew et al., 2005; Harper et al., 2012; Hinduja & Patchin, 2010; Kim & Leventhal, 2008; Kochenderfer & Ladd, 1996a; Kochenderfer & Ladd, 1996b; Meyer-Adams & Conner, 2008; Nansel et al. 2001; Slee, 1994; Storch, Brassard, & Masia-Warner, 2003; Patchin & Hinduja, 2010; Townsend et al., 2008; Völlink, Bolman, Dehue, & Jacobs, 2013; Ybarra and Mitchell, 2004a; Ybarra, Diener-West, & Leaf, 2007; Ybarra, Mitchell, & Espelage, 2009).

This study focuses on one of these negative coping strategies: school avoidance. More specifically, the current study examines whether both interpersonal bullying and cyberbullying victimization lead to school avoidance. This is an understudied area that requires further exploration, as school avoidance has been associated with a number of negative outcomes that can have a considerable impact on victimized youth in both the short- and long-term. Although bully victims who avoid places in school or school altogether may temporarily circumvent bullying incidents, avoidance behaviors can result in a student missing important learning and social opportunities that are essential to his or her development. Research findings suggest that school avoidance can significantly hinder academic success (Nansel et al., 2001; Townsend et al., 2008), and that students who frequently avoid school due to bullying are at a greater risk for dropping out of school altogether (DeVoe, Kaffenberger, & Chandler, 2005; Townsend et al., 2008). Moreover, dropping out of school has been shown to dramatically increase the probability of having economic, emotional, and physical problems later in life (Townsend et al., 2008).

Notably, there is no single theory that adequately provides a falsifiable set of propositions about which victims respond in what ways to the effects of bullies and bullying behaviors. Nor is there a single framework that provides predictions about what factors can protect against or aggravate deleterious effects. However, it stands to reason that when bullying reaches a certain level of intolerability, victims will engage in both normative and antinormative behaviors to cope with the problem. This study draws upon (a) extensions of Robert Merton's (1938) macro-strain theory into Agnew's (1992)

general strain theory and (b) routine activity theory (Cohen & Felson, 1979) to examine the associations between bullying victimization and school avoidance. Though originally developed to explain why individuals and classes of individuals commit crime, these theories have been extended to explain victimization and its consequences. Both of these theoretical frameworks are discussed in depth in Chapter Two and are introduced briefly here.

Agnew's (1992) individual-level articulation of a general strain theory posits, like that of the more macro-based theory developed by Merton (1938), that there are a range of predictable responses to negative stimuli, particularly when the individual (or group, in the case of Merton), faces greater obstacles with fewer resources for positive assimilation. For instance, Agnew (1992) argues that negative relationships can generate negative emotions in an individual, such as anger, depression, disappointment, and fear, and that these negative emotions then lead to crime. But, he also very clearly acknowledges that there are other expected adaptations or coping mechanisms that an individual may use. Included among these is a victimization-oriented framework that will be discussed in the following chapter. This victimization framework places interpersonal bullying and cyberbullying as the negative stimulus and school avoidance, fighting back, and other responses as expected and normal reactions to these negative and predicted stimuli, particularly for youth who lack social supports, are more vulnerable, and in general, are less equipped to overcome bullying victimization.

Routine activity theory can also be applied to this exploration of bullying victimization and school avoidance. Cohen and Felson (1979) looked at the convergence



in space and time of three necessary elements for a crime to occur, including a motivated offender, a suitable target, and the lack of a capable guardian. This framework has become one of the dominant theoretical models used to explain patterns in victimization (Popp & Peguero, 2011). According to Astor et al. (1999), patterns surrounding school victimization appear to be intrinsically linked to specific places and times inside or outside of school. These places and times, such as school playgrounds during recess or the school cafeteria during lunch, can facilitate the convergence of motivated offenders (i.e., youth who bully) as well as suitable targets (i.e., youth who are bully victims) in spaces where there is an absence or lack of capable guardians. It is anticipated that avoiding such places is an expected response. What is not understood is whether victims of interpersonal bullying and cyberbullying are more likely to avoid these places as a means of disrupting the elements necessary for experiencing or exacerbating victimization.

Taken together, at the individual-level, these two theories are consistent with research finding that youth who experience bullying report feeling emotionally distraught and are more likely to carry weapons to school, use alcohol and other substances, as well as skip school or be suspended from school (Ahlfors, 2010; Ybarra et al., 2007). It is important to note that not all youth respond in the same way to bullying victimization—some youth display resilience against bullying, functioning over the long run as well as those who have not experienced victimization (Ttofi, Bowes, Farrington, & Lösel, 2014). On the whole, however, research finds that bullying victimization can result in a variety of psychosocial outcomes that include negative adaptations or coping mechanisms

(Ahlfors, 2010; Ybarra et al., 2007) as well as avoidance behaviors (Astor et al., 1999; Greeff & Grobler, 2008; Rapp-Paglicci et al., 2004; Sapouna, 2008; Whitney & Smith, 1993). Research suggests that interpersonal bullying and cyberbullying often target the same victims (Twyman, Saylor, Taylor, & Comeaux, 2010). As such, using a victim oriented framework, both general strain theory and routine activity theory will be employed in the exploration of bullying victimization and school avoidance.

This dissertation examines the impact of bullying victimization on school avoidance. Using victim-centered adaptations of general strain theory and routine activity theory, this research proposes the following general hypotheses: (1) Net of other factors, students who have experienced interpersonal and cyberbullying are more likely to avoid places in school; (2) There are protective factors that will decrease the relationship between bullying victimization and avoidance behaviors, such as participation in school activities; and (3) There are aggravating factors that will increase the relationship between bullying victimization and avoidance behaviors, such as fighting. These hypotheses are further developed in the following chapters, with specific protective and aggravating factors identified and discussed.

The data for these analyses are derived from the 2011 School Crime Supplement to the National Crime Victimization Survey. The School Crime Supplement (SCS) is an occasional addition to the annual National Crime Victimization Survey, and gathers nationally representative data associated with school disorder and victimization (U.S. Dept. of Justice, 2013). Variables for this study were selected based on direct and indirect forms of interpersonal bullying and cyberbullying as well as school avoidance (e.g.,

avoidance of the school cafeteria, hallways or stairs, and the school restrooms). These data allow a rare opportunity to examine self-reported bullying victimization and the coping strategies or tactics that youth employ to combat bullying behaviors. It is not perfect in that the data collection is cross-sectional and retrospective in nature; however, it a) captures well-measured known correlates of bullying and victimization, b) is nationally representative, and c) allows bullying events to be placed within the context of other behaviors. Unlike the National Crime Victimization Survey, the School Crime Supplement captures some self-reported negative behaviors, such as taking actions against bullying (e.g., bringing weapons to school).

In all, this dissertation contributes to an area of study that has received little empirical attention—the impact of bullying victimization on school avoidance behaviors. It also reflects that for most youth, “cyber places” are as important as real physical places, and the avoidance of either may be equally important to their psychosocial development. Indeed, the realm of cyberspace is a vast playground where the evidence of bullying may be spread and shared well beyond more direct social interactions. As such, the current research begins to shape the practical and theoretical understanding of the impact of bullying victimization on the avoidance of “cyber places” and places in school that are important to youth.

## CHAPTER TWO

This chapter begins with a summary of background research on the types, characteristics, and outcomes of bullying. The purpose of this section is to provide a working definition of bullying victimization and the factors known to be both causes and effects of bullying victimization. The overall picture is one in which adolescent bullying victimization is predictably related to places and times where victims and bullies converge, usually with a suitable audience to observe the bullying and its effects, and a lack of intervention by appropriate guardians. This review of the literature provides a foundation for an examination of the techniques that victimized adolescents may employ to reduce the risks of bullying and ameliorate the effects of these behaviors.

As the literature review provided in this chapter reveals, there are a diverse set of behaviors that can be defined as bullying—from interpersonal bullying with audiences, to private communications using electronic, cyberspace platforms. The literature also reveals that victims of bullying respond in a number of ways to their victimization, depending on their psychosocial makeup, their returned investment in other prosocial activities (for example, friends who care about them or teachers who support them), and the extent to which bullying does or does not interfere with other goals (such as their investment in their future academic success).

While there is a wealth of descriptive information, as will be evident in the review of literature below, there is no single theory that adequately provides a falsifiable set of propositions about which victims respond in what ways to the effects of bullies and bullying behaviors. Nor is there a single framework that provides predictions about what factors can protect against or aggravate deleterious effects. However, it stands to reason that when bullying reaches a certain level of intolerability, victims will engage in behaviors to cope with the problem.

The primary coping response to bullying explored here is avoidance behaviors; that is, behaviors that are either deliberate or unconscious, but nonetheless result in the limitation of exposure to bullies and the effects of bullying. Because schools represent one of the most important places in adolescents' lives, in terms of both time and social environments, avoidance of school is arguably one of the most expected, though detrimental, coping behaviors a victim can employ.

The remainder of this chapter explores theories that may provide predictive frameworks and hypotheses regarding school avoidance as a potential coping mechanism. As noted, schools represent places where bullies and bully victims share spaces for prolonged and predictable periods of time, and thus, the focus of the theoretical discussion places special emphasis on school avoidance as a predictable though ultimately negative coping strategy used by bullied adolescents.

**Background: Definitions and Characteristics of Bully Victims, Risk Factors for Victimization, Demographic Factors for Bully Victims, Coping Mechanisms and Effects of Bullying Victimization**

*Definitions and Characteristics of Bully Victims: For interpersonal bullying victimization, research discusses direct and indirect victimization as well as passive*

*and proactive victims. For cyberbullying victimization, research explores the characteristics of cyber targets or cyber victims.*

### **Interpersonal bullying victimization**

According to Olweus (2012) the majority of students experience interpersonal bullying victimization. These negative actions occur at school or on the way to and from school (Farrington & Ttofi, 2009). Interpersonal bullying victimization can include direct forms of interpersonal bullying behaviors, such as hitting, kicking, or punching. It can also involve indirect forms of interpersonal bullying behaviors, such as malicious gossip or spreading rumors. Research finds that while boys who bully tend to use more direct forms of peer harassment (Baldry & Farrington, 2000; Greeff & Grobler, 2008; Nansel et al., 2001), girls who bully tend to use more indirect forms of peer harassment (Greeff & Grobler, 2008; Selekman & Vessey, 2004).

Targets of direct and indirect interpersonal bullying behaviors can include both passive victims and provocative victims (Batsche & Knoff, 1994; Olweus, 1973, 1978, 1984, 1991b; Parault, Davis, & Pellegrini, 2007; Pellegrini, 2002). Parault et al. (2007) provides a thorough discussion of these types of victims. They suggest that passive victims can be typified as individuals who: feel abandoned and lonely at school, ashamed, stupid, and unattractive; report few aggressive tendencies and think negatively about themselves; and view themselves as failures. These individuals tend to be anxious, insecure, and physically frail. Passive victims also report feeling that they have been victimized by bullies without provocation and often withdraw when attacked (Parault et al., 2007; Olweus, 1991b). According to Olweus (1984), passive victims represent the

majority of interpersonal bullying victimization targets, as more than 80% of individuals are associated with this characterization of bully victims.

Provocative victims, on the other hand, tend to display aggressive tendencies and are viewed in the research literature as both bullies and bully victims (Parault et al., 2007; Pellegrini, 2002). These individuals have been described as anxious, hot-tempered, and restless, and tend to be disliked by members of their peer group (Batsche & Knoff, 1994; Olweus, 1973, 1978). Unlike passive victims who tend to withdraw when bullied, provocative victims often choose to retaliate with violence that is typically reactive in nature and ineffective (Parault et al., 2007; Schwartz, Proctor, & Chien, 2001). According to Batsche and Knoff (1994), provocative victims are at risk for adjustment problems later in life.

### **Cyberbullying victimization**

As mentioned above, cyberbullying has been defined as “willful and repeated harm inflicted through the medium of electronic text” (Patchin & Hinduja, 2006, p. 152). This type of bullying is sometimes anonymous on part of the bully and primarily occurs through the use of cellular phones and Internet-enabled computers (Ahlfors, 2010; Bauman, 2010; Hinduja & Patchin, 2008; Slonje & Smith, 2008). These devices present an opportunity for a victim to receive hurtful messages or inappropriate content by way of electronic mail (email), text messaging (“texting”), website postings, and so on (Ahlfors, 2010; Hinduja & Patchin, 2008). Individuals who experience this type of bullying victimization are often referred to as “cyber targets” or “cyber victims” (Ahlfors, 2010).

Although limited research has addressed the frequency with which cyberbullying occurs (Pelfrey & Weber, 2013), existing estimates of cyberbullying victimization in the United States range from around 6% to more than 40% depending on how cyberbullying is formally defined and the age of the individuals studied (Bauman, 2010; Hinduja and Patchin, 2007; Kowalski & Limber, 2007; Kraft, 2006; Li, 2007a; Patchin & Hinduja, 2006; Patchin & Hinduja, 2010; Williams & Guerra, 2007; Ybarra & Mitchell, 2004b). For example, Kowalski and Limber (2007) report that 11.1% of middle school students had experienced cyberbullying victimization in the last 2 months. Moreover, using a sample of 14 worldwide studies, Kowalski, Limber, and Agatston (2008) report that rates of students experiencing cyberbullying victimization ranged from 4% to 53%.

Notably, research finds that “cyber targets” or “cyber victims” are the same individuals who are victims of interpersonal bullying, highlighting the association between these types of bullying victimization (Tokunaga, 2010; Ybarra et al., 2007). This relationship has been consistently documented in the literature (Didden et al., 2009; Juvonen & Gross, 2008; Katzer, Fetchenhauer, & Belschak, 2009; Kowalski and Limber, 2007; Slonje & Smith, 2008; Tokunaga, 2010; Twyman et al., 2010; Ybarra et al., 2007). For instance, Juvonen and Gross (2008) find that up to 85% of youth who are victims of cyberbullying are also victims of interpersonal bullying at school. In another study, Ybarra et al. (2007) report that 36% of youth concurrently experience interpersonal bullying and cyberbullying victimization.



***Risk Factors for Victimization: Those who experience social isolation, lack social support, and are in unfavorable or unsafe environments are more likely to be victimized; however, reducing risk for student victimization can involve developing and maintaining meaningful relationships between students and teachers or participating in school activities.***

### **Interpersonal bullying victimization**

Research highlights a number of risk factors that can increase the likelihood that an individual will experience interpersonal bullying victimization in school. Some of these risk factors include having fewer friends, lacking teacher support, class size and school size, attending schools with a negative school environment, and living in an unsafe neighborhood (Barboza et al., 2009; Espelage et al., 2000; Hellman & Beaton, 1986; Hodges & Perry, 1999; Hodges, Malone, & Perry, 1997; Hong & Espelage, 2012; Khoury-Kassabri et al., 2004; Nansel et al., 2003; Olweus, 1993a; Scholte et al., 2007; Swearer, Espelage, Vaillancourt, Hymel, 2010; Wang & Iannotti, 2012; Wang, Iannotti, & Nansel, 2009; Wienke Totura et al., 2008). For instance, peers can have a considerable influence on the likelihood that a student will be victimized (Hodges & Perry, 1999; Hodges, Malone, & Perry, 1997; Scholte et al., 2007; Wang et al., 2009). Students who experience interpersonal bullying victimization tend to be socially isolated and rejected by peers (Hodges & Perry, 1999; Hodges et al., 1997; Wang et al., 2009). Said differently, having fewer friends may be associated with an increase in interpersonal bullying victimization.

Research also finds that bullying increases among students who lack teacher support (Barboza et al., 2009). Barboza et al. (2009) suggest that the prevalence of interpersonal bullying victimization depends on several factors, such as the extent to

which teachers are interested in helping students in need and the extent to which teachers take an active role in promoting the welfare of students. Said differently, teachers who take an active interest in students and who are supportive of students create an environment that is more conducive to academic success and less conducive to bullying (Barboza et al., 2009). Teachers, for example, who treat students unfairly, can create a negative classroom environment that increases the opportunity for bullying victimization to occur (Barboza et al., 2009).

Another risk factor that can increase the likelihood that an individual will experience interpersonal bullying victimization at school includes class size and school size, as research suggests that bully victim problems can increase in proportion to both the size of the class and the size of the school (Khoury-Kassabri et al., 2004; Olweus, 1993a). Khoury-Kassabri et al. (2004) contend that teachers in large classrooms and large schools may have difficulty developing meaningful relationships with students. This is especially true for those students who display greater needs for attention and involvement in the classroom. Additionally, in large classes it may be increasingly difficult if not practically impossible for teachers to effectively monitor the behavior of all students, allowing for the possibility of discipline problems, crime, and victimization to take place (Hellman & Beaton, 1986; Khoury-Kassabri et al., 2004).

Overall school environment can also impact bullying victimization, as bullying increases among students who attend schools with unfavorable, unpleasant, and unwelcoming environments (Barboza et al., 2009; Swearer et al., 2010). Research has demonstrated the importance of school safety as an indicator of overall school

environment (Cornell & Mayer, 2010; Harper et al., 2012), and several studies have suggested that students who report lower perceptions of school safety also report higher levels of peer victimization (Nansel et al., 2001; Varjas et al., 2009).

According to Hong and Espelage (2012), “Because schools are embedded in neighborhoods, an unsafe neighborhood environment can influence bullying behavior due to inadequate adult supervision or negative peer influences” (p. 317). Although few researchers have investigated this relationship, existing studies have highlighted an association between bullying behaviors and neighborhood violence (Espelage, Bosworth, & Simon, 2000; Hong & Espelage, 2012; Nansel et al., 2003; Wienke Totura et al., 2008). Moreover, findings suggest that adolescents living in unsafe areas are more likely to experience bullying victimization than youth living in safer places, as these neighborhoods may reflect a larger environment that is conducive to bullying behaviors and violence (Espelage et al., 2000; Hong & Espelage, 2012; Khoury-Kassabri et al., 2004).

Notably, Khoury-Kassabri et al. (2004) contend that bullying victimization may be ameliorated by reducing risk factors for student victimization as well as focusing on school and larger social contexts that are likely to increase the prevalence of victimization. Such efforts can include developing and maintaining positive relationships between students and teachers, increasing teacher support of students, student participation in school activities, and improving school climate (Khoury-Kassabri et al., 2004). Each of these factors can increase students’ feelings of connectedness to school as

well as decrease feelings of alienation or isolation; thereby, reducing the likelihood of bullying victimization.

### **Cyberbullying victimization**

Research highlights several risk factors that can increase the likelihood that an individual will experience cyberbullying victimization. Unlike interpersonal bullying victimization, being a victim of cyberbullying is not associated with factors such as physical appearance (Wang, Iannotti, & Luk, 2010) or number of friends (Hodges & Perry, 1999; Hodges et al., 1997; Wang et al., 2009). This type of bullying is associated with the frequency with which youth use electronic devices. For instance, the more time an individual spends using electronic devices increases the chances that he or she will be a victim of cyberbullying (Ahlfors, 2010; Hinduja & Patchin, 2008; Li, 2007a; Juvonen & Gross, 2008; Wang, Iannotti, & Luk, 2009). In fact, Li (2007a) finds that the majority of individuals who are victimized (approximately 88%) used the computer at least one time per week. Juvonen and Gross (2008) also suggest that the use of Instant Messaging (IM) and web cameras can increase the likelihood of cyberbullying victimization.

*Demographic Factors for Bully Victims: For interpersonal bullying victimization, age is inversely related to victimization, males are more likely to be victims and victims of direct bullying, and the impact of race is unclear. For cyberbullying victimization, there is a negligible association between age and being a victim, males and females are likely to experience victimization at a similar rate, and the impact of race is unclear.*

### **Interpersonal bullying victimization**

Research on interpersonal bullying has considered the role of age, gender, and race in bullying victimization. For example, the majority of studies have substantiated the potential association between age and being a victim of interpersonal bullying

(DeVoe et al., 2005; Espelage & Horne, 2008; Hazler, Hoover, & Oliver, 1991; Nansel et al., 2001; Olweus, 1991c; Olweus, 1994; Pellegrini & Bartini, 2000; Rigby & Slee, 1991; Salmivalli, 2002; Seals & Young, 2003; Selekman & Vessey, 2004; Smith, Madsen, & Moody, 1999). This research is generally based on self-report data and shows a marked decline in interpersonal bullying victimization as students increase in age and advance to higher grades (Greeff & Grobler, 2008). For example, several studies report that the prevalence of interpersonal bullying victimization peaks during middle school years and decreases thereafter (Espelage & Horne, 2008; Nansel et al., 2001; Pellegrini & Bartini, 2000; Smith et al., 1999, as cited in Hong & Espelage, 2012). Other research, however, challenges these findings (Borg, 1998; O'Connell, Pepler, & Craig, 1999; Varjas, Henrich, & Meyers, 2009). Borg (1998) reports that the prevalence of interpersonal bullying victimization in schools only appears to decline as students grow older. Employing a sample of 6,282 students from six grades spanning both primary and secondary school settings, he finds that bullying behaviors change from direct, aggressive forms of peer victimization to more indirect or passive forms of peer victimization.

Research on the role of gender in interpersonal bullying victimization has received considerable empirical attention. The majority of studies report that males are more likely to be bully victims than females and are more likely to be the targets of same sex interpersonal bullying victimization (Craig & Pepler, 1998; Greeff & Grobler, 2008; Hazler et al., 1991; Juvonen et al., 2000; Olweus, 1994; Rigby, 1999; Rigby & Slee, 1991). Past findings also indicate that while male bully victims largely experience direct forms of peer harassment (e.g., hitting, kicking, or punching), female bully victims tend

to report more indirect victimization incidents (e.g., peer group exclusion or social isolation/rejection) (Kochenderfer & Ladd, 1997; Olweus, 1993b, 1994; Rigby, 1999; Van der Wal, De Wit, & Hirasing, 2003; Varjas et al., 2009; Wolke, Woods, Bloomfield, & Karstadt, 2001). It is important to note, however, that some researchers have reported that males and females experience interpersonal bullying victimization equally with regard to prevalence and severity (Greeff & Grobler, 2008; Lerner & Lerner, 2001).

The role of race in interpersonal bullying victimization has received little empirical attention, and the evidence that does exist provides mixed findings (Craig & Pepler, 1997; Dake, Price, & Telljohann, 2003; Graham & Juvonen, 2002; Greeff & Grobler, 2008; Hanish & Guerra, 2000; Mouttapa et al., 2004; Nansel et al., 2001; Qin, Way, & Rana, 2008; Seals & Young, 2003). For instance, Dake et al. (2003) found no significant differences when comparing the prevalence of interpersonal bullying victimization among different racial groups. These findings are supported by two of the largest national studies exploring the prevalence of bullying behaviors and victimization in the United States (Nansel et al., 2001) as well as research completed by Seals and Young (2003). Other studies, however, report significant differences in the frequency with which interpersonal bullying victimization occurs among different racial groups (Graham & Juvonen, 2002; Hanish & Guerra, 2000). Graham and Juvonen (2002), for example, find that White students are significantly more likely to be bully victims when compared with African American students. Interestingly, research literature suggests that the association between race and bullying among students may be influenced by the

racial composition of the community, school, or classroom (Hong & Espelage, 2012; Juvonen et al., 2001).

### **Cyberbullying victimization**

Research on cyberbullying has considered the role of age, gender, and race in cyberbullying victimization. For example, Tokunaga (2010) provides a thorough discussion on the role of age in cyberbullying victimization. He suggests that several studies have substantiated the potential association between age and being a victim of cyberbullying (DeHue, Bolman, & Völlink, 2008; Hinduja & Patchin, 2008; Kowalski & Limber, 2007; Slonje & Smith, 2007; Ybarra & Mitchell, 2008; Ybarra et al., 2007; Ybarra, Mitchell, Wolak, & Finkelhor, 2006; Williams & Guerra, 2007). Using a sample of students between 11 and 14 years of age, Kowalski and Limber (2007) find a positive association between age and the frequency with which students experience cyberbullying victimization. Ybarra et al. (2006) also demonstrate positive trends in their work that examines whether age significantly predicts cyberbullying victimization for students between 10 and 15 years of age. In contrast, several studies have uncovered an inverse relationship between age and cyberbullying victimization (DeHue et al., 2008; Slonje & Smith, 2007; Williams & Guerra, 2007). Slonje & Smith (2007), for example, report a negative association between age and victimization for students between 12 and 20 years of age. There is also evidence that cyberbullying peaks in middle school and declines thereafter (Williams & Guerra, 2007). More specifically, Williams and Guerra (2007) report that eighth grade students are more likely to experience cyberbullying victimization (12.9%) when compared with students in high school (9.9%). Despite such

findings, it is important to note that the majority of studies exploring this relationship find a negligible association between age and being a victim of cyberbullying (Beran & Li, 2007; Didden et al., 2009; Juvonen & Gross, 2008; Katzer et al., 2009; Patchin & Hinduja, 2006; Smith et al., 2008; Varjas et al., 2009; Wolak, Mitchell, & Finkelhor, 2007; Ybarra, 2004, as cited in Tokunaga, 2010). It is possible that the mixed findings can be attributed to the diversity among age groups included within study samples (Tokunaga, 2010).

Similar to the mixed findings on age differences in cyberbullying victimization, research on gender differences is also inconsistent. For example, a small number of studies suggest that gender significantly predicts cyberbullying victimization (DeHue et al., 2008; Kowalski & Limber, 2007; Ybarra & Mitchell, 2008; Ybarra et al., 2007, as cited in Tokunaga, 2010). More specifically, these studies report that females are more likely to experience cyberbullying victimization than males. These findings are in contrast to the majority of research on interpersonal bullying, which suggest that males are more likely than females to be victims (Boulton & Underwood, 1992; Olweus, 1987; Tokunaga, 2010). It is possible that because males who are bullied tend to be the target of direct forms of bullying, such as physical violence, females may be at an increased risk for cyberbullying victimization due to the more indirect forms of bullying that occur in the realm of cyberspace (Tokunaga, 2010). Despite such findings, the majority of research on gender differences in cyberbullying indicates that males and females experience victimization at a similar rate (Beran & Li, 2007; Didden et al., 2009; Hinduja & Patchin, 2008; Juvonen & Gross, 2008; Katzer et al., 2009; Li, 2006, 2007b; Patchin &



Hinduja, 2006; Slonje & Smith, 2008; Smith et al., 2008; Topçu, Erdur-Baker, & Capa-Aydin, 2008; Varjas et al., 2009; Williams & Guerra, 2007; Wolak et al., 2007; Ybarra, 2004; Ybarra et al., 2007).

The role of race in cyberbullying victimization has received little empirical attention. The evidence that does exist is conflicting, which is similar to research on interpersonal bullying victimization that provides mixed findings regarding the impact of race (DeVoe et al., 2002; Seals & Young, 2003). While some studies find that victims of cyberbullying victimization are more likely to be white (Li, 2007a; Ybarra et al., 2006), other studies report no statistically significant differences in cyberbullying victimization by race (Hinduja & Patchin, 2008). Hinduja and Patchin (2008) suggest that all races are vulnerable to cyberbullying. When looking at the previous 30 days, they find that middle school students in grades six through eight were equally as likely to experience cyberbullying victimization. However, Hinduja and Patchin (2008) note that when lifetime experiences with cyberbullying are explored, it appears that white youth are more likely to report victimization.

***Coping Mechanisms and Effects of Bullying Victimization: Coping mechanisms for bullied youth can include fear of school, fighting, lower school bonding or school disengagement, and bringing a weapon to school.***

### **Interpersonal bullying victimization**

Although interpersonal bullying victimization impacts adolescents differently, youth who are targeted by bullying behaviors may employ a number of negative coping mechanisms to deal with the situation. For instance, research has identified depression, fear of school, fighting, loneliness, lower school bonding or school disengagement,

stunted academic progress, as well as suicidal ideations and behaviors as a few factors that can adversely impact victims of interpersonal bullying (Attwood & Croll, 2006; Glew et al., 2005; Harper et al., 2012; Kim, Koh, & Leventhal, 2005; Kochenderfer & Ladd, 1996a; Kochenderfer & Ladd, 1996b; Meyer-Adams & Conner, 2008; Slee 1994; Townsend et al. 2008). In the context of the current research, Juvonen, Nishina, and Graham (2000) found that one of the immediate effects of interpersonal bullying victimization can be the avoidance of social situations that involve interactions with peers and the avoidance of school. It is possible that avoidance behaviors resulting from peer harassment can significantly hinder academic achievement and lead to engagement in delinquent behaviors (Gresham & Elliott, 1987; Nansel et al. 2001; Parault et al., 2007; Townsend et al. 2008).

Research has also noted that interpersonal bullying victimization can have lasting negative effects on victimized youth. For instance, frequent avoidance of places in school or absenteeism from school resulting from peer aggression may lead to dropping out of school altogether (DeVoe et al. 2005; Townsend et al. 2008). Long-term bullying victimization is also related to later social and psychological maladjustment (Cowen et al., 1973; Hawker & Boulton, 2000; Kumpulainen & Räsänen, 2000; Parault et al., 2007) as well as lower occupational stability and success (Ward, Parmenter, Riches, & Haurtiz, 1981; Parault et al., 2007).

### **Cyberbullying victimization**

Some studies suggest that the impact of cyberbullying appears to be negligible if a student is exposed to both interpersonal bullying and cyberbullying—that is, when a

student experiences interpersonal bullying “the addition of cyberbullying does not seem to markedly increase the distress or plight of the exposed student” (Olweus, 2012, p. 15). However, other research finds that cyberbullying can have a more detrimental impact on the bully victim than interpersonal bullying (Smith et al., 2008). Wolak, Mitchell, and Finkelhor (2006) report that youth rated 22% of victimization incidents as being extremely embarrassing, 24% as being very or extremely frightening, and 30% as being very or extremely upsetting. Cyberbullying victimization is associated with a number of negative adaptations or coping mechanisms. These coping mechanisms can include bringing a weapon to school and participating in other forms of school violence (Bailey, 2008; Mason, 2008; Pelfrey & Weber, 2013; Stover, 2006; Willard, 2006; Ybarra et al., 2007), depression (Bauman et al., 2013; Ybarra & Mitchell, 2004a; Ybarra et al., 2006), greater involvement in drinking and smoking (Ybarra & Mitchell, 2004a), low self-esteem (Kowalski & Limber, 2007; Ybarra et al., 2006), as well as suicidal ideations and behaviors (Bauman et al., 2013; Hinduja & Patchin, 2010; Patchin & Hinduja, 2006). Moreover, Strom and Strom (2005) find that individuals who experience cyberbullying victimization are more likely to become adults who are in need of mental health services and have unstable relationships. In the context of the current research, cyberbullying victimization can also lead to school avoidance as well as the avoidance of electronic devices (Pelfrey & Weber, 2013; Stover, 2006; Wolak et al., 2006).

These negative adaptations call attention to the serious short- and long-term impact(s) that cyberbullying can have on victimized youth. Juvonen and Gross (2008) report that 60% of surveyed youth who experienced cyberbullying victimization

retaliated on school grounds—the most likely site for retaliation. It is important to note that these data provide further support for the association between the online and school lives of students, rather than the assumption that victimized youth take advantage of the perception of anonymity that the realm of cyberspace offers (Juvonen & Gross, 2008). Such findings also warrant concern that behavior taking place away from schools may manifest itself in the academic setting (Pelfrey & Weber, 2013; Stover, 2006; Willard, 2006).

### **Bully-Prone Locations**

It is important to discuss the nature of bully-prone locations, as these are places where research finds that students are most likely to experience interpersonal bullying victimization and cyberbullying victimization. Although research on bully-prone locations has received little empirical attention, the existing findings provide a foundation for understanding avoidance behaviors among victimized youth (Hutzell & Payne, 2012). Research on school crime and disorder consistently highlights that interpersonal bullying victimization commonly occurs in less structured spaces where guardianship is not high, such as school playgrounds during recess (Craig & Pepler, 1998; Craig, Pepler, & Atlas, 2000; Greeff & Grobler, 2008; Rapp-Paglicci, Dulmus, Sowers, & Theriot, 2004; Sapouna, 2008; Seals & Young, 2003; Whitney & Smith, 1993), the school cafeteria (Astor, Meyer, & Behre, 1999; Rapp-Paglicci et al., 2004), corridors/hallways or stairwells (Astor et al., 1999; Greeff & Grobler, 2008; Rapp-Paglicci et al., 2004; Sapouna, 2008; Whitney & Smith, 1993), restrooms (Rapp-Paglicci et al., 2004; Sapouna, 2008), school parking lots (Astor et al., 1999), routes to and from school (Seals

& Young, 2003; Whitney & Smith, 1993), and the bus stop (Rapp-Paglicci et al., 2004). Moreover, a number of studies suggest that any area where a supervising authority figure is not present represents a potential space where bullying victimization can occur (Astor et al., 1999; Greeff & Grobler, 2008; Rapp-Paglicci et al., 2004; Sapouna, 2008).

For purposes of the current research, the realm of cyberspace and the social technologies that rely on this forum to operate may be included as bully-prone locations or “cyber places” where research finds that students are most likely to experience cyberbullying victimization. Although cyberbullying victimization is a relatively new area of study that has only recently begun to be explored (Hinduja & Patchin 2008; Patchin & Hinduja, 2006; Ybarra & Mitchell, 2004b), literature on cyberbullying suggests that the realm of cyberspace allows for students to experience victimization in a number of ways using several types of online social technologies (Hinduja & Patchin, 2008; Pelfrey & Weber, 2013). This type of bullying primarily occurs through the use of cellular phones and Internet-enabled computers, as these devices present an opportunity for a victim to receive hurtful messages or inappropriate content by way of chat rooms, electronic mail (email), instant messaging, online bulletin boards or web postings, online multiplayer video games (e.g., Halo 2 or Star Wars Galaxies) text messaging (“texting”), or websites (Ahlfors, 2010; Bauman, 2010; Chisholm, 2006; Hinduja & Patchin, 2008; Slonje & Smith, 2008). These “cyber places” create an environment with little guardianship from parents or the school community where cyberbullying victimization can generally be carried out with anonymity on part of the cyberbully (Kowalski & Limber, 2007; Patchin & Hinduja, 2006; Snakenborg et al., 2011).

## **Avoidance**

### ***Interpersonal Bullying Victimization***

The phenomena of interpersonal bullying in schools has drawn growing empirical attention, as research literature has highlighted various unfavorable consequences for victims who experience this type of peer harassment. Among these unfavorable consequences is school avoidance, which can include the avoidance of places in school due to fear of attack or harm (Astor et al., 1999; Greeff & Grobler, 2008; Hutzell & Payne, 2012; Juvonen et al., 2000; Mahady Wilton & Craig, 2000; Rapp-Paglicci et al., 2004; Sapouna, 2008; Slee, 1994; Storch et al., 2003; Whitney & Smith, 1993). Research finds that avoidance behaviors can adversely impact students in a number of ways, as these behaviors can significantly hinder academic success and increase the likelihood of school dropout (Nansel et al., 2001; Townsend et al., 2008). In order to avoid such outcomes, it is necessary to develop a better understanding of the association between interpersonal bullying victimization and school avoidance.

Although findings on the role of interpersonal bullying victimization in school avoidance are mixed, a large body of research has considered this relationship. Hutzell and Payne (2012) provide a thorough discussion of these findings. For example, they suggest that the majority of research demonstrates an association between interpersonal bullying victimization and avoidance behaviors (DeVoe et al., 2005; Juvonen et al., 2000; Kochenderfer & Ladd, 1996a, 1996b; Mahady Wilton & Craig, 2000; Meyer-Adams & Conner, 2008; Parault et al., 2007; Slee, 1994; Storch & Esposito, 2003; Storch et al., 2003; Townsend et al., 2008). These studies were separated by research that exclusively

examined the avoidance of social situations, research that examined the avoidance of specific places in school, and research that examined both the avoidance of social situations and specific places.

Both Mahady Wilton and Craig (2000) and Storch et al. (2003) have examined the avoidance of social situations due to interpersonal bullying victimization. Mahady Wilton and Craig (2000) examined several coping behaviors employed by victimized youth in two Canadian elementary schools. They found that students who experience peer harassment employ two disparate coping mechanisms: aggressive strategies and problem-solving strategies. While aggressive strategies (e.g., anger) tend to be used by high-conflict victims, problem-solving strategies (e.g., acquiescence and social withdrawal) are often adopted by more passive bully victims. Storch et al. (2003) also demonstrate an association between the avoidance of social situations and interpersonal bullying victimization, exploring data from 383 students in ninth and tenth grade from the Northeastern United States. The results of this research are supportive of previous research, suggesting that interpersonal bullying victimization is associated with considerable distress that includes social avoidance (Storch et al., 2003).

Several studies have focused exclusively on the avoidance of places in school as a result of interpersonal bullying victimization (Juvonen et al., 2000; Kochenderfer & Ladd 1996a, 1996b; Storch & Esposito, 2003; Townsend et al., 2008, as cited in Hutzell & Payne, 2012). Using a sample of 200 kindergarten students from three communities in the Midwestern United States, Kochenderfer & Ladd (1996a, 1996b) report that interpersonal bullying victimization was found to increase school avoidance. Avoidance

behaviors were more specifically associated with increased feelings of loneliness in the school environment among victimized youth. Juvonen et al. (2000) also demonstrate a relationship between interpersonal bullying victimization and school avoidance, using data that were obtained from 243 seventh and eighth grade middle school students in California. They found that students who experienced interpersonal bullying victimization often reported psychological difficulties that resulted in poor school functioning and absenteeism from school. In another example, Storch and Esposito (2003) explored the relationship between posttraumatic stress and interpersonal bullying victimization. Data for this study were obtained from 201 fifth and sixth grade students in the New York area. Findings indicate that avoidance behaviors can result from repeated adverse interactions with classmates (Storch & Esposito, 2003). Examining the relationship between interpersonal bullying victimization and dropping out of school, Townsend et al. (2008) conducted a longitudinal cohort study in Cape Town, South Africa that utilized a sample of 1,470 public high school students from 39 schools. Not only did results indicate that interpersonal bullying victimization is common among this group of students, they also found that “continued involvement in bullying behavior means continued exposure to the negative effects of bullying, such as absenteeism, poor academic performance, and psychological distress” (Townsend et al., 2008, p. 29).

Hutzell and Payne (2012) report that a final category of research that examines both the avoidance of social situations and specific locations in school (DeVoe et al., 2005; Meyer-Adams & Conner, 2008; Parault et al., 2007, Slee, 1994, as cited in Hutzell & Payne 2012). For example, DeVoe et al. (2005) demonstrated an association between



interpersonal bullying victimization and avoidance behaviors, using data from the 2001 School Crime Supplement (SCS). They found that bully victims who feared attack or harm were more likely to avoid both school-related activities and locations in school, such as the cafeteria, hallways or stairs, the school entrance, among other locations in school. Other studies have reported similar results, including research completed by Slee (1994) who utilized a sample of 114 students in Australia in grades 4 through 7, research completed by Parault et al. (2007) who obtained data from a sample of 136 sixth grade students in Georgia, and research completed by Meyer-Adams and Conner (2008) who included a sample of 5,153 middle school students from Philadelphia.

According to Hutzell and Payne (2012), other studies have reported mixed findings on the relationship between interpersonal bullying victimization and avoidance behaviors (Addington, Ruddy, Miller, & DeVoe, 1999; Attwood & Croll, 2006; Chandler, Nolin, & Davis, 1995). Using a sample of 6,504 elementary, middle, and high school students in grades six through twelve from the 1993 National Household Education Survey (NHES), Chandler et al. (1995) explored student responses involving avoidance behaviors due to interpersonal bullying victimization. They found that avoidance behaviors differed by grade level. Said differently, elementary and middle school students were more likely than high school students to avoid locations in school due to fear of attack or harm (Chandler et al., 1995). Similarly, Addington et al. (1999) used data from the 1999 School Crime Supplement (SCS) and found that youth who reported interpersonal bullying victimization experiences were more likely to report avoidance behaviors. However, they also report that the majority of students do not

avoid social situations or specific places (e.g., extracurricular activities, class, or school) due to fear of attack or harm in those locations. Finally, using data from the British Household Panel Survey (BHPS), Attwood and Croll (2006) employed a sample of 770 students between 11 and 15 years of age to explore the relationship between interpersonal bullying victimization and avoidance behaviors, such as absenteeism from school and dropout. Although this data revealed little evidence to support the link between being a bully victim and school avoidance, a smaller sample of 17 student interviews showed that interpersonal bullying victimization may precipitate absenteeism from school (Attwood & Croll, 2006).

Hutzell and Payne (2012) also find that are some studies that do not report any association between interpersonal bullying victimization and avoidance behaviors (Glew et al., 2005; Wolke et al., 2001). Using data from 1,639 elementary school students across 31 schools, Wolke et al. (2001) explored the link between being a bully victim and avoidance behaviors. This study found no association between interpersonal bullying victimization and absenteeism from school. Similar results were reported in a study completed by Glew et al. (2005). This research employed data from 3,530 elementary school students in grades three through five, and concluded that no significant relationship was revealed regarding interpersonal bullying victimization and avoidance behaviors (Glew et al., 2005). Notably, it is possible that younger students and students in lower grades are less likely to avoid school due to bullying victimization, because parents of these youth can more readily reduce the likelihood of absenteeism.

More recent research has also explored the relationship between interpersonal bullying victimization and school avoidance (DeVoe et al., 2011; Puhl & Luedicke, 2012; Skrzypiec, Slee, Murray-Harvey, & Pereira, 2011; Yen et al., 2013). For instance, DeVoe et al. (2011), Skrzypiec et al. (2011), as well as Puhl and Luedicke (2012) report an association between students who experience interpersonal bullying victimization and the avoidance of places in school. DeVoe et al. (2011) demonstrated an association between interpersonal bullying victimization and avoidance behaviors, using data from the 2009 School Crime Supplement (SCS). They found that students between 12 and 18 years of age who reported being a bully victim were more likely than students who were not bullied to avoid specific locations at school. Using a sample of 452 students between 12 and 14 years of age attending two South Australian high schools, Skrzypiec et al. (2011) suggest that bullied students were more likely to use avoidance strategies as a coping mechanism to mediate peer aggression. Similarly, Puhl and Luedicke (2012) found that victimized youth were more likely to use avoidance as a coping strategy, using a sample of 394 high school students from two locations in Connecticut. Yen et al. (2013), however, do not report any association between interpersonal bullying victimization and avoidance behaviors for 5,537 Taiwanese students between 11 and 18 years of age.

### ***Cyberbullying Victimization***

Although cyberbullying victimization is a relatively new area of study that has only recently begun to be explored (Hinduja & Patchin 2008; Patchin & Hinduja, 2006; Ybarra & Mitchell, 2004b), existing research findings demonstrate an association

between cyberbullying victimization and avoidance behaviors (Agatston, Kowalski, & Limber, 2007; Beran & Li, 2005; Dehue et al., 2008; DeVoe et al., 2011; Hinduja & Patchin, 2007; Kowalski et al., 2008; Li, 2010; Parris et al., 2011; Schenk & Fremouw, 2012; Smith et al., 2004; Smith et al., 2008). Similar to the research discussed above on interpersonal bullying victimization and avoidance, this research can be categorized by studies that exclusively examined the avoidance of cyberbully situations (e.g., deleting threatening messages), studies that examined the avoidance of specific “cyber places” or places in school, and studies that examined both the avoidance of cyberbully situations and specific “cyber places” or places in school.

The majority of research examined the avoidance of cyberbully situations due to cyberbullying victimization (Agatston et al., 2007; Dehue et al., 2008; Kowalski et al., 2008; Parris et al., 2011; Schenk & Fremouw, 2012; Smith et al., 2004; Smith et al., 2008). Smith et al. (2008) used a sample of 533 students from 5 schools in London and reported that the most popular avoidance strategies employed by students who experienced cyberbullying victimization included blocking messages or identities and changing one’s email address or phone number. Other studies have reported similar results, including research completed by Agatston et al. (2007) using a sample of 148 middle and high schools students from a public school district, research completed by Kowalski et al. (2008) using a sample of students from a focus group interview on cyberbullying victimization, and research completed by Schenk and Fremouw (2012) using a sample of 856 students. Agatston et al. (2007) also reported that victimized students chose to ignore the cyberbully situation as an avoidance strategy. These findings

are supported by Smith et al. (2004) who included a sample of 406 students between 13 and 16 years of age from the United Kingdom, Dehue et al. (2008) who included a sample of 1,211 students from 34 primary schools and seven secondary schools in the Netherlands, and Parris et al. (2011) who included a sample of 20 students from a public suburban high school located in a Southeastern school district. Notably, ethnographic work completed by Parris et al. (2011) revealed that some students believe that the avoidance of cyberbully situations is the only way to cope with cyberbullying victimization. For instance, a 17-year-old females explained that “the only thing is that you might delete the person...everybody will still know your business anyways and [cyberbullying] is just immature” (p. 293).

Other studies have discussed the avoidance of specific “cyber places” or places in school (Beran & Li, 2005; DeVoe et al., 2011; Li, 2010). Using a sample of Canadian students in grades 7 through 9, Beran and Li (2005) found that cyberbully victims consciously avoided the Internet. DeVoe et al. (2011) used a nationally representative sample from the 2009 School Crime Supplement (SCS) to explore this association. They found that students between 12 and 18 years of age who experienced cyberbullying victimization were more likely to skip school than students who were not a victim of cyberbullying behaviors. Similarly, Li (2010) suggested that the psychological harm inflicted by cyberbullying victimization is like that of interpersonal bullying victimization and is reflected in negative coping mechanisms which in include school avoidance.

One study reported exclusively on both the avoidance of cyberbully situations and the avoidance of specific “cyber places” or places in school (Hinduja & Patchin, 2007).

Hinduja and Patchin (2007) suggest that targets of cyberbullying may, at some point, become preoccupied with plotting ways to avoid certain peers due to fear for their safety. Indeed, victims of cyberbullying may attempt to avoid cyberbullies on the Internet in chat rooms, email interactions, and instant message conversations. Because these types of online bullying behaviors often manifest offline via actions or words, Hinduja and Patchin (2007) further state that cyberbullying victims may use avoidance strategies in the school setting as well in order to avoid cyberbullies in person (e.g., avoidance of the bus stop).

### **Theoretical Framework**

#### *Calculated Assessments of Approach or Avoidance as a Coping Mechanism*

Given the negative consequences associated with avoidance behaviors, it is important to examine potential associations between these behaviors and bullying victimization. Research finds that the approach-avoidance model (Roth & Cohen, 1986) is particularly relevant when discussing this topic (Parris, Varjas, Meyers, & Cutts, 2011; Sleglova & Cerna, 2011). Roth and Cohen (1986) suggest that coping strategies can be categorized as either approach or avoidance. In this model, the individual considers whether they have the necessary resources to cope with the situation and then chooses either the approach strategy (i.e., taking actions that address the situation directly) or the avoidance strategy (i.e., evading the stressor or traumatic situation). For example, with regard to interpersonal bullying victimization, students using the approach strategy may confront the bully face-to-face instead of ignoring the situation, whereas students using the avoidance strategy may ignore the bully by avoiding certain places and times where

an interaction may occur. Similarly, with regard to cyberbullying victimization, students using the approach strategy may confront the cyberbully face-to-face instead of ignoring the situation. Students using the avoidance strategy, on the other hand, may claim that cyberbullying does not bother them, delete threatening messages, or ignore the cyberbully (Parris et al., 2011; Sleglova & Cerna, 2011).

These ideas are similar to the theoretical frameworks of general strain theory (Agnew, 1992) and routine activity theory (Cohen & Felson, 1979) in that they highlight the potential for avoidance behaviors as a coping response to strain among victimized youth and draw attention to specific situations and places to avoid. The approach-avoidance model, with a specific focus on avoidance behaviors, provides a foundation for the discussion of general strain theory (Agnew, 1992) and routine activity theory (Cohen & Felson, 1979) in the following sections.

### ***General Strain Theory***

Strain theory was originally posited by Robert K. Merton (1938) to explain deviance by individuals who lacked legitimate means of achieving socially defined success. He described five ways that an individual can adapt to feelings of frustration or strain that result from lacking access to the legitimate means to achieve desired goals. These modes of adaptation include conformity, innovation, ritualism, retreatism, and rebellion. Conformity is the most common mode of adaptation. It occurs when an individual believes in culturally defined goals as well as the means of achieving them. The innovator wants the same goals as the conformist (e.g., power, success, and wealth), but lacks or rejects the socially approved means of achieving them. This is the mode of

adaptation that is most often associated with criminal behavior. Ritualism occurs when an individual accepts the socially approved means of achieving culturally defined goals, but rejects the goals. Retreatism involves rejecting culturally defined goals as well as the means of achieving them. Similar to the retreatist, rebels reject culturally defined goals as well as the means of achieving them, but these individuals substitute new goals and means. According to Merton (1938), any mode of adaptation that rejects conventional means can result in criminal behavior.

While this viewpoint has evolved over the past several decades, perhaps the most notable addition to strain theory came in 1992 by Robert Agnew. Agnew (1992) proposed general strain theory, which focuses on negative relationships with others. He argued that negative relationships can generate negative emotions in an individual, such as anger, depression, disappointment, and fear, and that these negative emotions then lead to crime. However, not all individuals who experience negative emotions commit crime. Crime is one adaptation or coping mechanism that a strained individual can use when presented with a “noxious” or unwanted situation and is unable to escape from that situation—that is, any relationship in which an individual experiences undesired outcomes or is not treated as he or she would like to be treated (Agnew, 1992; Bernard Snipes, & Gerould, 2010; Hay & Meldrum, 2010; Patchin & Hinduja, 2011). It is important to note that both Merton (1938) and Agnew (1992) provide theoretical explanations for crime as a normal response to strain. However, they also very clearly acknowledge that there are other expected adaptations or coping mechanisms that an individual may use. Included among these is a more victimization oriented framework.



This framework has been expanded upon and is discussed below, as it can be applied to responses to bullying victimization.

Although Agnew (1992) proposed a general theory of crime, it has been used to specifically explain why youth engage in delinquency and other harmful behaviors (Agnew, 1992; Bernard et al., 2010; Brezina, 1996; Hay & Meldrum, 2010; Hoffmann & Cerbone, 1999; Patchin & Hinduja, 2011; Wallace, Patchin, & May, 2005). Agnew (1992) explained that delinquency and other harmful behaviors can be used to cope with or manage negative emotions that are caused by strain. For instance, early research by Agnew (1985, 1989) suggested that aggressive behavior and anger were associated with negative experiences at home and at school. Notably, his later work found that negative school experiences, including peer abuse, are among the strains that are most likely to lead to delinquency and other harmful behaviors (Agnew, 2001).

Over the past several decades, strain as an explanation of crime and delinquency has been widely supported by research (Agnew, 2002; Agnew, Brezina, Wright, & Cullen, 2002; Agnew & White, 1992; Brezina, 1996, 1999; Hoffman & Cerbone, 1999; Hoffman & Miller, 1998; Mazerolle & Maahs, 2000; Paternoster & Mazerolle, 1994; Wallace et al., 2005). Although general strain theory was originally posited to explain these phenomena, scholars have recently used this theoretical perspective to explore the relationship between victimization and strain in schools given the prevalence of physical and verbal peer victimization that occurs in these locations (Agnew, 2002; Agnew et al., 2002; Wallace et al., 2005). For example, Agnew (2002) concluded that physical peer victimization is a source of strain for many youth that results in negative coping

mechanisms, such as delinquency. Through an elaboration of these findings, Wallace et al. (2005) found that both physical and verbal peer victimization are strongly associated with negative emotions, including anger and frustration, which are also independently linked to school delinquency.

Although very little empirical inquiry has been conducted in this area, it is important to note that perpetrators of school violence have identified repeated victimization by peers as a contributory factor (Ericson, 2001; Gang Intelligence Strategy Committee, 2000; Wallace et al., 2005). In the context of the current research, one common form of peer victimization is being bullied by fellow schoolmates. Studies examining bullying victimization as a potential source of strain consistently highlight negative adaptations or coping mechanisms employed by youth (Hay & Meldrum, 2010; Hinduja & Patchin, 2007; Patchin & Hinduja, 2011; Wallace, Patchin, & May, 2005). For instance, Hay and Meldrum (2010) find that both interpersonal bullying and cyberbullying victimization are positively related to self-harm as well as suicidal ideations. Research also highlights the potential for avoidance behaviors as a deviant coping response to strain among victimized youth. Hinduja and Patchin (2007) suggest that targets of cyberbullying may, at some point, become preoccupied with plotting ways to avoid certain peers due to fear for their safety. Indeed, victims of cyberbullying may attempt to avoid cyberbullies while instant messaging on the Internet or avoid these individuals in person (e.g., at the bus stop or at school).

### ***Routine Activity Theory***

The routine activities framework was initially developed by Lawrence Cohen and Marcus Felson (1979) as an approach for examining social change as well as aggregate official crime rate trends in the post-World War II United States. They hypothesized that “the dispersion of activities away from households and families increases the opportunity for crime and thus generates higher crime rates” (Cohen & Felson, 1979, p. 588). Said differently, Cohen and Felson (1979) suggested that structural changes in the routine activity patterns of individuals could explain trends in aggregate official crime rates. Routine activities can be defined as “recurrent and prevalent activities which provide for basic population and individual needs, whatever their biological or cultural origins” (Cohen & Felson, 1979, p. 593). Cohen and Felson (1979) believed that a routine activity approach would be more successful than other macro-ecological theories of crime at explaining the aggregate official crime rate trends during this time, because rather than employing traditional indicators of crime, such as age, education, or poverty, they looked at the convergence in space and time of three necessary elements for crime and victimization to occur, including a motivated offender, a suitable target, and the lack of a capable guardian. Routine activities, such as family interactions, formalized work, or leisure activities, were relevant to the routine activities framework, because these activities could affect the convergence of motivated offenders, suitable targets, and lack of capable guardianship if they are influenced. As such, crime rates could be affected if changes in the routine activity patterns of individuals prevented or transformed any of the three necessary elements for a crime to occur (Cohen & Felson, 1979; Lum, 2003).

The routine activities framework is one that has been used to explain the concentration of crime and victimization at specific places, as a number of research studies have suggested that the routine activity patterns of potential offenders and potential victims are associated with the location of crime events (e.g., Brantingham & Brantingham, 1975, 1981 [1991]; Groff, Weisburd, & Morris, 2009; Lum, 2003; Sherman, Gartin, & Buerger, 1989; Smith, Frazee, & Davison, 2000; Weisburd, Morris, & Groff, 2009). It is important to note that despite increasing evidence that supports crime concentrations at hot spots or “micro level units of geography,” scholars, until recently, have largely ignored the potential for juvenile crime concentrations at specific places (Weisburd et al., 2009; Weisburd, Groff, & Yang, 2012). Findings from recent work completed by Weisburd et al. (2009) reveal that juvenile crime in Seattle, Washington is strongly concentrated at hot spots and that, while variability in trajectories is found over time, stability over a 14 year period was observed for a high rate of street segments with juvenile crime. From this example, it is possible to consider that a routine activity framework would predict high concentrations of crime and victimization at particular places for juveniles, as the routine activities of juveniles are likely to be strongly concentrated at specific places and times (Weisburd et al., 2009). These limited “activity spaces” are places that are more well-known to juveniles and places that they visit routinely, such as schools and other familiar “hang outs” (e.g., malls and movie theaters) (Felson, 2006; Weisburd et al., 2009).

In the context of the current study, this research reaffirms the importance of routine activity theory in understanding the association between unsupervised juveniles

inside or outside of schools and the potential for victimization to occur. In fact, the routine activities framework has become one of the dominant theoretical models used to explain patterns in victimization (Popp & Peguero, 2011). Patterns surrounding school victimization appear to be intrinsically linked to specific places and times inside or outside of school (Astor et al., 1999). These places and times, such as school playgrounds during recess, can facilitate the convergence of motivated offenders (i.e., youth who bully) as well as suitable targets (i.e., youth who are bully victims) in spaces where there is an absence or lack of capable guardians.

### **Hypotheses**

Based on the above discussions, the hypotheses to be tested in this dissertation include the following primary propositions:

Hypothesis One: Net of other factors, students who have experienced bullying victimization are more likely to avoid places in school.

Merton (1938) and Agnew (1992) provide a more victimization oriented framework, acknowledging that there are a number of expected adaptations or coping mechanisms that a strained individual may use in addition to crime or delinquency. This idea can be applied to responses to bullying victimization, as victims of both interpersonal bullying and cyberbullying oftentimes adopt negative coping strategies to deal with the effects of such strain-inducing experiences. Among these unfavorable strategies are avoidance behaviors. Research finds that victims of interpersonal bullying can avoid places in school or school altogether due to fear of attack or harm (Astor et al., 1999; DeVoe et al., 2005; Greeff & Grobler, 2008; Hutzell & Payne, 2012; Juvonen et al., 2000; Mahady Wilton & Craig, 2000; Rapp-Paglicci et al., 2004; Sapouna, 2008;

Slee, 1994; Storch et al., 2003; Townsend et al., 2008; Whitney & Smith, 1993).

Similarly, existing research demonstrates an association between cyberbullying and the avoidance of cyber situations (e.g., deleting threatening messages), specific “cyber places” or places in school. As such, it is suggested that, net of other factors, students who have experienced bullying victimization are more likely to avoid places in school.

Hypothesis Two: There are protective factors that will decrease the relationship between bullying victimization and avoidance behaviors. For instance:

Sub Hypothesis A: Students who participate in school activities are less likely to avoid school due to bullying victimization.

It has been suggested that participation in school activities, such as academic clubs or performing arts, can increase students’ connection to school and reduce their feelings of alienation (Khoury-Kassabri et al., 2004). Researchers have posited that students who participate in school activities are afforded the opportunity to develop supportive networks of friends and adults through personal relationships with peers who have related interests, coaching or mentoring relationships, and interactions with other adults from the school or larger community who support the activity (Dworkin, Larson, & Hansen, 2003; Feldman & Matjasko, 2005; Smith, 2003). These relationships are hypothesized to promote both academic achievement and student engagement in school (Feldman & Matjasko, 2005; Lamborn, Brown, Mounts, & Steinberg, 1992). As such, it is suggested that participation in school activities is a protective factor that will decrease the relationship between bullying victimization and avoidance behaviors.

Sub Hypothesis B: Students who report that their school takes security measures to make sure students are safe are less likely to avoid school due to bullying victimization.

It has been suggested that school security measures, such as metal detectors and security guards, can decrease low-level violent behaviors (Blosnich & Bossarte, 2011). Blosnich and Bossarte (2011) found that having adults in hallways resulted in a significant reduction in both physical bullying and having rumors spread. While security measures in school are largely aimed at preventing high-level violence (e.g., bringing a weapon to school and gang activity), it is possible that the presence of these measures decreases perceptions of school disorder among students by creating an awareness of proactivity and surveillance on part of the school (Blosnich & Bossarte, 2011). As such, it is suggested that school security measures is a protective factor that will decrease the relationship between bullying victimization and avoidance behaviors.

Sub Hypothesis C: Students who report having an adult at school who has a positive influence on their lives are less likely to avoid school due to bullying victimization.

It has been suggested that having an adult at school who has a positive influence, such as a teacher or coach, can reduce students' feelings of alienation or isolation and increase their connection to school and engagement in school (Feldman & Matjasko, 2005; Khoury-Kassabri et al., 2004; Lamborn et al., 1992). For instance, the support provided by caring student-teacher relationships is of particular significance, as it is imperative for the emotional well-being of victimized youth (Mihalas, Witherspoon, Harper, & Sovran, 2012). Researchers have found that supportive student-teacher relationships serve as protective mechanisms for bully victims (e.g., by facilitating student disclosure of victimization experiences) and provide a buffer against the negative effects of victimization (Boulton et al., 2009; Espelage & Swearer, 2009; Mihalas et al.,

2012). As such, it is suggested that having a positive adult influence at school is a protective factor that will decrease the relationship between bullying victimization and avoidance behaviors.

Sub Hypothesis D: Students who report having a friend at school who has a positive influence on their lives are less likely to avoid school due to bullying victimization.

It has been suggested that having the support of a close friend can reduce the negative effects of peer victimization and prevent maladaptive outcomes (Bollmer, Milich, Harris, & Maras, 2005; Schmidt & Bagwell, 2007; Yeung Thompson & Leadbeater, 2012). For instance, research has demonstrated the importance of friend emotional support in reducing internalizing symptoms (e.g., anxiety and depression) for youth who are bullied. Emotionally supportive friendships generally involve the provision of empathy, respect from friends, and trust. They can also be characterized by intimate exchange and warmth, which may provide a context for youth who are bullied to problem-solve and share their experiences (Goldbaum, Craig, Pepler, & Connolly, 2003; Yeung Thompson & Leadbeater, 2012). As such, it is suggested that having a positive friend influence at school is a protective factor that will decrease the relationship between bullying victimization and avoidance behaviors.

Sub Hypothesis E: There are some individual factors that may incentivize youth to go to school, such as belief in future achievement.

It has been suggested that bullying victimization can significantly hinder academic achievement (Gresham & Elliott, 1987; Nansel et al. 2001; Parault et al., 2007; Townsend et al. 2008), which is a precursor to graduating from high school and later professional success (Finn, Gerber, & Boyd-Zaharias, 2005). However, achievement can



be increased when school culture is supportive of academically-engaged students who are invested in the process of learning, especially in contexts where education is viewed as a direct path to opportunity and success in life (Schwartz, Chang, & Farver, 2001; Schwartz, Kelly, & Duong, 2013; Walker & Lambert, 1995). This culture can be facilitated by teachers who play a considerable role in creating a positive school climate that encourages student engagement and inhibits bullying behaviors (Espelage, Hong, Rao, & Low, 2013; Yoneyama & Naito, 2003). As such, it is suggested that belief in future achievement is a protective factor that will decrease the relationship between bullying victimization and avoidance behaviors.

Hypothesis Three: There are aggravating factors that will increase the relationship between bullying victimization and avoidance behaviors. For instance:

Sub Hypothesis A: Students who report being distracted from doing their schoolwork because other students are misbehaving are more likely to avoid school due to bullying victimization.

Research identifies risk factors that can increase the likelihood that an individual will experience bullying victimization. For example, bullying victimization problems can increase in proportion to both the size of the class and the size of the school, as it may be increasingly difficult if not practically impossible for teachers or staff to effectively monitor the behavior of all students (Hellman & Beaton, 1986; Khoury-Kassabri et al., 2004; Olweus, 1993a). Lack of supervision allows for the possibility of discipline problems, crime, and victimization to take place. As such, it is suggested that distractions from school work is an aggravating factor that will increase the relationship between bullying victimization and avoidance behaviors.

Sub Hypothesis B: Students who report feeling unsafe in the neighborhood where they live are more likely to avoid school due to bullying victimization.

Research identifies risk factors that can increase the likelihood that an individual will experience bullying victimization. For example, bullying victimization problems can increase for youth who live in unsafe areas, as these neighborhoods may reflect a larger environment that is conducive to bullying behaviors and violence (Espelage et al., 2000; Hong & Espelage, 2012; Khoury-Kassabri et al., 2004; Nansel et al., 2003; Wienke Totura et al., 2008). As such, it is suggested that an unsafe neighborhood environment is an aggravating factor that will increase the relationship between bullying victimization and avoidance behaviors.

Sub Hypothesis C: Students who report feeling unsafe in the neighborhood where they go to school are more likely to avoid school due to bullying victimization.

Research identifies risk factors that can increase the likelihood that an individual will experience bullying victimization. For example, bullying victimization problems can increase for youth who go to school in unsafe areas (Hong & Espelage, 2012). Hong and Espelage (2012) contend that schools are reflective of the neighborhood environment in which they are embedded. Therefore, an unsafe neighborhood environment can influence bullying victimization, due to negative peer associations or inadequate adult supervision. As such, it is suggested that an unsafe school environment is an aggravating factor that will increase the relationship between bullying victimization and avoidance behaviors.

Sub Hypothesis D: Students who are fearful that someone will attack or harm them are more likely to avoid school due to bullying victimization.

Research finds that students who fear attack or harm are more likely to avoid places in school or school altogether (Astor et al., 1999; DeVoe et al., 2005; Greeff &

Grobler, 2008; Hutzell & Payne, 2012; Juvonen et al., 2000; Mahady Wilton & Craig, 2000; Parault et al., 2007; Rapp-Paglicci et al., 2004; Sapouna, 2008; Slee, 1994; Storch et al., 2003; Whitney & Smith, 1993). For example, several studies propose that students who fear attack or harm are more likely to avoid both school-related activities and locations in school, such as the cafeteria, hallways or stairs, and the school entrance (DeVoe et al., 2005; Parault et al., 2007; Slee, 1994). As such, it is suggested that fear of attack or harm is an aggravating factor that will increase the relationship between bullying victimization and avoidance behaviors.

Sub Hypothesis E: Students who have been in one or more physical fights at school are more likely to avoid school due to bullying victimization.

Research finds that violent victimization at school, including fights or physical attacks, can have a detrimental impact on the emotional and social development of targeted youth (Bastche & Knoff, 1994; Brockenbrough, Cornell, & Loper, 2002; Olweus, 1993b). Victims tend to have attendance problems, exhibit lower self-esteem than non-victims, and have higher levels of anxiety and depression (Brockenbrough et al., 2002; Harris, 1994; Olweus, 1993b). As such, it is suggested that being in one or more physical fights is an aggravating factor that will increase the relationship between bullying victimization and avoidance behaviors.

Sub Hypothesis F: Students who report bringing a weapon to school are more likely to avoid school due to bullying victimization.

Research finds that the likelihood of bringing a weapon to school is higher among bully victims than among adolescents who do not experience this type of victimization (DeVoe, 2007; Dukes, Stein, & Zane, 2010; Glew, Fan, Katon, & Rivara, 2008). Victims

tend to bring weapons to school for self-protection or intimidation, as they are fearful of past victimization, future violence, and generally do not feel safe at school (Ahlfors, 2010; Dukes et al., 2010; Ybarra et al., 2007). As such, it is suggested that bringing a weapon to school is an aggravating factor that will increase the relationship between bullying victimization and avoidance behaviors.

Overall, there appears to be theoretical and empirical support for examining these relationships. Hypotheses will be tested using data from the National Crime Victimization Survey, School Crime Supplement. These data and the analytical methods are described in the following chapter.

## CHAPTER THREE

### **Description of Data**

Data for these analyses are from the National Crime Victimization Survey (NCVS): School Crime Supplement (SCS). The NCVS is an ongoing collection of crime victimization in the United States, and has periodically included add-on surveys, of which the School Crime Supplement (SCS) is one. These data and how they are collected are described below.

#### *National Crime Victimization Survey*

The NCVS was instituted in 1972 and is an ongoing survey that is conducted by the United States Census Bureau for the Bureau of Justice Statistics. This survey provides estimates of the nature and extent of criminal victimization throughout the United States, including crime that is not reported to official sources (U.S. Dept. of Justice, 2013). The United States Census Bureau uses a “rotating panel” design to select respondents for the NCVS each month. Households are randomly selected and divided into groups or rotations. Each age-eligible household member (i.e., individuals who are 12 years old and older) becomes part of the panel. These individuals are identified by the household reference person. Each household must have a reference person who is the primary respondent that provides household-level information and information on persons in the household. The reference person must be a household member. Ideally,

this individual is an adult who owns or rents the home and is less likely to permanently leave the household. Once in the sample, respondents are interviewed every six months over a three-year period for a total of seven interviews. The first interview is face-to-face and is considered the incoming rotation. The following interviews are generally by telephone and are in the continuing rotations. The rotation scheme is used to reduce respondent burden that may occur if households were to remain in the sample indefinitely. This scheme requires that a household be removed from the panel after the seventh interview and a new household be rotated into the sample (U.S. Dept. of Justice, 2013).

It is important to note that household-level information is collected prior to screening for crime issues (e.g., data on reference persons, the composition of each NCVS household, or information on household income). There is also a person-level file created for each respondent in the household. This file includes background information, such as age, education, and employment, which is generally obtained from the reference person. Following this process, screening is conducted to establish whether a crime has been committed against any household member or their property. The general interview sequence for the NCVS includes the administration of the NCVS-1 and the NCVS-2 (U.S. Dept. of Justice, 2013). The NCVS-1, also referred to as the screen questionnaire, uses everyday language to describe behaviors and characteristics of a criminal event in order to gather information from the respondent about victimization. Positive responses indicating that the respondent has been victimized during the six months prior to the

interview are followed by the NCVS-2 (the incident report). The incident report collects specific details of each incident (U.S. Dept. of Justice, 2013).

### *School Crime Supplement*

In addition to regular NCVS information on the nature and extent of criminal victimization, additional information is periodically obtained about specific issues that relate to crime. Such information is collected using a supplemental survey instrument, such as the School Crime Supplement. The School Crime Supplement (SCS) was initially fielded at all NCVS households in 1989, and then again in 1995, 1999, 2001, 2003, 2005, 2007, 2009, and 2011 to produce a cross-section of national estimates of the levels of school-related disorder and victimization (U.S. Dept. of Justice, 2013). The general interview sequence for the SCS includes asking all appropriate NCVS questions to one member of each household and subsequently asking all appropriate SCS questions if that household member is eligible to participate in the supplement (eligibility is described below). These individuals are interviewed using both computer-assisted personal interviewing and computer-assisted telephone interviewing. This is done before proceeding on to the next household member to avoid any increase in NCVS nonresponse due to the SCS questions (U.S. Dept. of Justice, 2013). It is important to note that the household reference person can affect these interviews, as this individual is responsible for the identification and coordination of interviews with SCS respondents.

Respondents who were administered the 2011 SCS questionnaire were required to be between the ages of 12 and 18, were required to attend a primary or secondary education program, and were required to have been enrolled in school at any time during

the six months prior to the month of the interview (U.S. Dept. of Justice, 2013). For purposes of this survey, school was defined as any private or public institution leading to a high school diploma. This included “elementary schools, middle schools, high schools, home schools, Church schools, and vocational or trade schools” (U.S. Dept. of Justice, 2013, p. 5). Notably, students schooled at home were not included past screen questions, as many of the SCS sections were not relevant to these individuals and their situation. Individuals not eligible for inclusion were students seeking their general education development (GED) degree; student attending colleges or universities, except in situations where a student in high school who had not yet obtained their diploma was enrolled in an upper level curriculum course; students attending specialized schools that are not associated with academics, such as beauty schools or vocational trade schools; and students attending night school (U.S. Dept. of Justice, 2013).

The 2011 SCS consists of questions that relate to students’ experiences with and perceptions of school crime and safety. The final questionnaire includes eight sections: 1) screen questions that are asked to determine if the respondent is eligible for the SCS; 2) environmental questions (e.g., the type of school that the student attends or student involvement in extracurricular activities); 3) questions that are related to fighting, bullying, and hate behaviors; 4) avoidance questions that were designed to determine if students stayed away from places at school or from school; 5) questions pertaining to fear (i.e., how often a student feared being attacked or harmed at school); 6) questions that asked about bringing weapons to school for protection; 7) questions relating to the presence of gangs at school; and 8) questions on student characteristics (e.g., questions on



the respondent's grades or plans to attend college). The SCS questionnaire is linked to the NCVS survey instrument, as this provides a more complete understanding of the respondent's circumstances (U.S. Dept. of Justice, 2013).

***Creating National Estimates from the NCVS and SCS: Weighting and Sampling***

The NCVS provides three classes of weights, which include household weight, person weight, and incident weight. These weights are designed to produce national estimates of counts of households, people, and crime incidents from the NCVS and SCS sample cases (U.S. Dept. of Justice, 2013). If a study aims to describe current rates, incidents, or population characteristics that are nationally representative, weights are appropriate to use, and must be selected correctly from among the weight variables available in the public use file (U.S. Dept. of Justice, 2013). Because the current research is concerned primarily with the relationship between bullying victimization and avoidance behaviors, and not with the production of national counts or rates, the use of weights is not necessarily appropriate. For modeling purposes, sampling weights are used so that characteristics in the sample are more like characteristics in the population. This would have an impact if the sample data departed greatly from the national estimate representations of the relationships in question. In past analyses of NCVS data, researchers have conducted analyses primarily without sample weights. For instance, work appearing in distinguished academic journals has conducted analyses without weights, and noted that coefficients were unlikely to change when unit weights were turned on (for example, see Bachman, 1998; Lauritsen et al., 2012).

Sampling methods for the NCVS rely on a stratified, multi-stage cluster design, wherein the population is divided into naturally occurring clusters—some of these clusters are sampled and others are not. This type of sampling results in variances that are smaller than would be achieved if a random sample design were used (clusters create dependency and dependency reduces overall variability). As such, this sampling method has another potential implication for model estimation which involves artifacts created by the clustering of cases. This artifact, wherein cases are drawn in close geographic proximity to save interview resources, means that the sample might not capture the full range of perspectives or views of what is being measured, because individuals in places closer in proximity may not have the same perspectives or views as individuals who are further away from one another. The degree to which each cluster is representative of the larger population versus the degree to which each cluster is different from the larger population is an important distinction to note, as the degree to which each cluster is different means that it does not necessarily capture the perspectives or views of the larger population. This becomes a problem when the number of cases per cluster is high, thus decreasing the variation of the coefficient and creating correlations among error terms. Adjusting for such clustering involves an identifier of the sample unit at the appropriate level (i.e., the census tract and potentially the household). This identifier represents the sampling cluster within which someone belongs, which is reflected in the sampling frame. In practice, it is a unique identifier that identifies specific units—in this case census tracts. Should clustering appear to be a problem, these identifiers can be used in statistical software to account for correlations among error terms created by clustering.

In the context of the current research, sample unit identifiers could theoretically be used, but the likelihood of multiple cases arising from within the same census tract is limited by both the total sample size and method.

#### ***Data Availability and Format***

Data were obtained from the Interuniversity Consortium for Political and Social Research on March 7, 2013. These data are freely available and can be found at the following persistent URL: <http://dx.doi.org/10.3886/ICPSR33081.v1>. With regard to data processing, ICPSR data are altered when necessary, limiting the risk of disclosure. These data also undergo a confidentiality review. Ready-to-go files along with setups are routinely created for use with the major statistical software formats. For purposes of the current research, IBM SPSS Statistics software will be utilized when conducting analyses. Additionally, standard codebooks accompany each data set when available. In addition to the aforementioned procedures, ICPSR has performed the following processing steps for the 2011 SCS data collection: (1) checked for out-of-range or undocumented codes; (2) created variables and/or value labels; and (3) performed consistency checks. The resulting consolidated 2011 SCS file contains 956 variables and captures information at the school, household, and individual level in order obtain information “about school-related victimizations so that policymakers; academic researchers; practitioners at the federal, state, and local levels; and special interest groups who are concerned with crime in schools can make informed decisions concerning policies and programs” (U.S. Dept. of Justice, 2013, pp. 4-5).

## Sample Description

For purposes of the current study, these data allow a rare opportunity to examine self-reported bullying victimization and the coping strategies that youth employ to combat bullying behaviors. Of the 10,341 NCVS respondents that were eligible for inclusion in the SCS questionnaire, 6,547 (63.3%) completed the interview and 3,794 (36.7%) were noninterviews. *An individual was considered a noninterview if the individual was eligible for but did not participate in the NCVS interview, the individual was unavailable for or refused to participate in the SCS interview, a proxy was not available and the individual was mentally or physically unable to answer interview questions, or a proxy was available and the individual refused to participate in the interview (U.S. Dept. of Justice, 2013).* As suggested above, the household reference person can affect participation in the SCS questionnaire for those individuals that are eligible, due to the complexity that is involved in coordinating interviews with SCS respondents. Said differently, the low response rate (or high rate of noninterviews) may be explained by complications that result from having the reference person track down respondents and make them available for the SCS interview. It is possible to examine whether individuals participating in the SCS are significantly different from those who are not based on demographic and family factors, making it possible to understand whether there is great or little reason to expect bias.

In total, the 2011 SCS was administered to 5,268 males (50.9%) and 5,073 females (49.1%). All students who completed the SCS questionnaire were between 12 and 18 years of age. Students who were 12 years of age ( $N = 1457$ ) represented 14.1% of

the total sample. Students who were 13 years of age (N = 1478) represented 14.3% of the total sample. Students who were 14 years of age (N = 1413) represented 13.7% of the total sample, which is the smallest age group. Students who were 15 years of age (N = 1492) represented 14.4% of the total sample. Students who were 16 years of age (N = 1552) represented 15.0% of the total sample, which is the largest age group. Students who were 17 years of age (N = 1528) represented 14.8% of the total sample. And, students who were 18 years of age (N = 1421) represented 13.7% of the total sample. The 2011 SCS also collected data that measured the racial characteristics of respondents. This survey has been collapsed into two racial categories, which include 8,152 White (78.8%) and 2,189 Minority (21.1%).

Following an examination of the SCS data according to type of SCS interview, and excluding cases of noninterviews as well as missing data, 3,305 males (50.5%) and 3,242 females (49.5%) completed the interview using computer-assisted personal interviewing or computer-assisted telephone interviewing with or without a proxy (N = 6,547). All students who completed the SCS questionnaire were between 12 and 18 years of age. Students who were 12 years of age (N = 940) represented 14.4% of the total sample. Students who were 13 years of age (N = 992) represented 15.2% of the total sample, which is the largest age group. Students who were 14 years of age (N = 917) represented 14.0% of the total sample. Students who were 15 years of age (N = 963) represented 14.7% of the total sample. Students who were 16 years of age (N = 969) represented 14.8% of the total sample. Students who were 17 years of age (N = 962) represented 14.7% of the total sample. And, students who were 18 years of age (N =

804) represented 12.3% of the total sample, which is the smallest age group. The 2011 SCS also collected data that measured the racial characteristics of respondents. This survey has been collapsed into two racial categories, which include 5,229 White (79.9%) and 1,318 Minority (20.1%).

## **Measures**

Variables for the current research were selected from the 2011 SCS based on direct and indirect bullying behaviors (e.g., physical harm or gossip), empirically and theoretically derived protective and aggravating factors (e.g., participation in student activities or bringing a weapon to school), as well as avoidance behaviors (e.g., avoidance of the school cafeteria or avoidance of restrooms). In total, forty-three variables are used to examine the impact of bullying victimization on school avoidance. Fifteen independent measures (one scale and fourteen binary variables that construct the final scale) have been selected to assess bullying victimization. A scale has also been created as a dependent measure of student-reported avoidance behaviors from twelve binary variables. Eleven empirically and theoretically derived variables were selected as protective and aggravating factors. Additionally, four self-report measures were included as control variables.

### ***Primary Independent Variable Measurement: Bullying Victimization***

Bullying victimization is measured by a series of questions asking if another student has bullied the respondent during this school year. In total, fourteen binary variables measuring bullying victimization were included in the final scale: “Has another student: (1) made fun of you, called you names, or insulted you, in a hurtful way; (2)

spread rumors about you or tried to make others dislike you; (3) threatened you with harm; (4) pushed you, shoved you, tripped you, or spit on you; (5) tried to make you do things you did not want to do, for example, give them money or other things; (6) excluded you from activities on purpose; (7) destroyed your property on purpose; (8) posted hurtful information about you on the Internet, for example, on a social networking site like MySpace, Facebook, Formspring, or Twitter; (9) purposely shared your private information, photos, or videos on the Internet or mobile phones in a hurtful way; (10) threatened or insulted you through email; (11) threatened or insulted you through instant messaging or chat; (12) threatened or insulted you thorough text messaging; (13) threatened or insulted you through online gaming, for example, while playing XBOX, World of Warcraft, or similar activities; and (14) purposefully excluded you from online communications?”<sup>1</sup> Possible responses to each item were “yes” and “no” (yes = 1, no = 0). The descriptive statistics for each individual item as well as the total counts for interpersonal bullying victimization, cyberbullying victimization, and overall bullying victimization can be seen in Table 1.

There are many different ways to create a scale of these items. For instance, it is possible to collapse responses into one dichotomous variable that represents whether

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<sup>1</sup> Despite claims that cyberbullying is a very frequent phenomenon among youth and that the prevalence of this phenomenon has increased in recent years, some research suggests that this type of bullying is an overrated phenomenon—that is, cyberbullying is actually a low-prevalence phenomenon and the impact of cyberbullying appears to be negligible if a student is exposed to both interpersonal bullying and cyberbullying (Olweus, 2012). Olweus (2012) finds that when a student experiences interpersonal bullying “the addition of cyberbullying does not seem to markedly increase the distress or plight of the exposed student” (p. 15). For purposes of the current research, interpersonal bullying and cyberbullying will be combined to create one overall measure of bullying victimization, as data from the 2011 SCS support that cyberbullying is indeed quite a low-prevalence phenomenon (see Table 1).

**Table 1: Frequency Breakdown for Bullying Victimization**

Variable	Sample Size	Frequency (Percent)	
		Yes	No
<b>Interpersonal Bullying Victimization</b>			
Made fun of you, called you names, or insulted you, in a hurtful way	5793	1034 (17.8%)	4759 (82.2%)
Spread rumors about you or tried to make others dislike you	5784	1078 (18.6%)	4706 (81.4%)
Threatened you with harm	5792	300 (5.2%)	5492 (94.8%)
Pushed you, shoved you, tripped you, or spit on you	5790	462 (8.0%)	5328 (92.0%)
Tried to make you do things you did not want to do, for example, give them money or other things	5788	189 (3.3%)	5599 (96.7%)
Excluded you from activities on purpose	5786	317 (5.5%)	5469 (94.5%)
Destroyed your property on purpose	5785	161 (2.8%)	5624 (97.2%)
<b>Cyberbullying Victimization</b>			
Posted hurtful information about you on the Internet, for example, on a social networking site like MySpace, Facebook, Formspring, or Twitter	5766	214 (3.7%)	5552 (96.3%)
Purposely shared your private information, photos, or videos on the Internet or mobile phones in a hurtful way	5772	63 (1.1%)	5709 (98.9%)
Threatened or insulted you through email	5778	113 (2.0%)	5665 (98.0%)
Threatened or insulted you through instant messaging or chat	5779	160 (2.8%)	5619 (97.2%)
Threatened or insulted you thorough text messaging	5778	261 (4.5%)	5517 (95.5%)
Threatened or insulted you through online gaming, for example, while playing XBOX, World of Warcraft, or similar activities	5780	83 (1.4%)	5697 (98.6%)
Purposefully excluded you from online communications	5781	67 (1.2%)	5714 (98.8%)
<b>Total interpersonal bullying victimization</b>	5796	1634 (28.2%)	4162 (71.8%)
<b>Total cyberbullying victimization</b>	5786	525 (9.1%)	5261 (89.9%)
<b>Total overall bullying victimization</b>	5798	1735 (29.9%)	4063 (70.1%)



students were bullied or not bullied (“yes” or “no”) or to collapse responses into one variable that represents direct bullying victimization, indirect bullying victimization, and no bullying victimization (e.g., pushed you, shoved you, tripped you, or spit on you versus made fun of you, called you names, or insulted you, in a hurtful way versus did not experience bullying victimization).<sup>2</sup> Originally, it was proposed that a principal component analysis (PCA) would be used for creating the bullying victimization scale; however, after further investigation it appears that the current data does not lend itself to factor analysis even though this method has the ability to capture latent characteristics that are central to bullying victimization experiences. This is evident when examining the nature of the measures, as the bullying victimization items might not be highly correlated with one another even if an individual has experienced a high level of bullying. Factor analysis creates factors based on a high degree of correlation among items and assumes that when a correlation exists that there is a common underlying latent construct. The items on this scale are not necessarily mutually exclusive and responding “yes” to one does not necessarily increase the likelihood of responding “yes” to another. As such, one variable representing whether students were bullied or not bullied (“yes” or “no”) was created for the current research (Table 1). This scale is of interest as it is a straightforward measure, capturing whether students self-reported bullying victimization or not.

With regard to self-reported bullying victimization, it was of interest to examine patterns in response rates. Although no patterns were observed for cyberbullying

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<sup>2</sup> DeVoe (2007) reports that adoption of school avoidance behaviors did not differ by the type of bullying victimization (i.e., direct or indirect).

victimization, 2011 SCS data show that 4,147 students (71.8%) did not report any type of interpersonal bullying victimization; 242 students (4.2%) indicated that they were made fun of, called names, or insulted, in a hurtful way, but did not report any other type of interpersonal bullying victimization; 307 students (5.3%) indicated that someone spread rumors about them or tried to make others dislike them, but did not report any other type of interpersonal bullying victimization; and 207 students (3.6%) indicated that they were made fun of, called names, or insulted, in a hurtful way, and that someone spread rumors about them or tried to make others dislike them, but did not report any other type of interpersonal bullying victimization. These four patterns accounted for 84.9% of interpersonal bullying victimization cases, suggesting that these forms of bullying are the most common types of victimization experienced by bullied youth. Notably, 14 students (0.2%) reported that they experienced all seven types of interpersonal bullying victimization measured by the 2011 SCS.

As discussed above, Olweus (1991a) has provided a widely cited definition of bullying: “A person is bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons, and he or she has difficulty defending himself or herself” (p. 47). Although the data employed in this research capture some of the objective indicators that someone has been bullied, it is important to note the potential disconnect between the measured bullying victimization variables available through the SCS and this theoretical definition. The measures, while not perfect, adequately capture a degree of diversity of bullying victimization, but no indication of intensity of the events or the degree of repeated events. Moreover, the

current research is not is not directly measuring a student's ability to defend himself or herself, but simply whether or not the student perceives the event as bullying victimization.

It is also important to discuss the distinction between student aggression and bullying victimization. For example, it is possible that engaging in a fight is not bullying victimization, but instead a one-time act of student aggression. In some cases it may not be possible to differentiate between these types of incidents and bullying victimization. However, on the whole, such responses would be student error in responding to the SCS questionnaire, as the survey is divided into specific sections that include skip patterns. Said differently, the SCS questionnaire is divided into sections, and each SCS section is specifically related to fighting, or bullying, or hate behaviors, and so on. Questions specifically ask the student if the event in question was related to bullying, for example, so as to avoid possible confusion between acts of student aggression and bullying victimization incidents. For questions specifically related to bullying, the SCS includes a statement that reads: "Now I have some questions about what students do at school that make you feel bad or are hurtful to you. We often refer to this as being bullied. You may include events you told me about already. During this school year, has any student bullied you? This is, has another student..." (U.S. Dept. of Justice, 2013, p. 8). As such, the incidents that the students report, those that they believe represent bullying, or those that meet this description are a subset of incidents that students perceive as bullying independent of any formal or objective definition. Said differently, it appears that

students self-report bullying victimization based on the description provided by the SCS rather than self-defined perceptions of bullying victimization.

***Primary Dependent Variable Measurement: Avoidance***

Avoidance behaviors are measured by a series of questions asking if a student has avoided school because they were fearful of being attacked or harmed in that area. A scale has been created from twelve binary variables, which include the avoidance of: (1) the shortest route to school; (2) the entrance into the school; (3) hallways or stairs; (4) parts of the school cafeteria; (5) any school restrooms; (6) other places inside the school building; (7) the school parking lot; (8) other places on school grounds; (9) any online activities; (10) any activities at your school; (11) any classes; and (12) school. Possible responses for these items were “yes” and “no” (yes = 1, no = 0). The descriptive statistics for each individual item as well as the total for overall avoidance can be seen in Table 2.

Originally, it was proposed that a principal component analysis (PCA) would be used for creating the avoidance scale; however, after further investigation it appears that the current data does not lend itself to factor analysis even though this method has the ability to capture latent characteristics that are central to avoidance behaviors. This is evident when examining the nature of the measures, as the avoidance items might not be highly correlated with one another even if an individual has engaged in a high level of avoidance behaviors. Factor analysis creates factors based on a high degree of correlation among items and assumes that when a correlation exists that there is a common underlying latent construct. The items on this scale are not necessarily mutually

exclusive and responding “yes” to one does not necessarily increase the likelihood of responding “yes” to another. As such, these items are collapsed into one dichotomous variable that represents whether students did or did not avoid places in school or school altogether (“yes” or “no”, Table 2). This scale is of interest due to the lack of variation in the data and the dichotomous responses for each avoidance item.

**Table 2: Frequency Breakdown for Avoidance**

Variable	Sample Size	Frequency (Percent)	
		Yes	No
Avoidance of the shortest route to school	5786	115 (2.0%)	5671 (98.0%)
Avoidance of the entrance into the school	5787	51 (0.9%)	5736 (99.1%)
Avoidance of hallways or stairs	5787	143 (2.5%)	5644 (97.5%)
Avoidance of parts of the school cafeteria	5788	104 (1.8%)	5684 (98.2%)
Avoidance of any school restrooms	5788	102 (1.8%)	5686 (98.2%)
Avoidance of other places inside the school building	5785	66 (1.1%)	5719 (98.9%)
Avoidance of the school parking lot	5785	52 (0.9%)	5733 (99.1%)
Avoidance of other places on school grounds	5786	58 (1.0%)	5728 (99.0%)
Avoidance of any online activities	5785	108 (1.9%)	5677 (98.1%)
Avoidance of any activities at your school	5785	67 (1.2%)	5718 (98.8)
Avoidance of any classes	5787	43 (0.7%)	5744 (99.3%)
Avoidance of school	5787	50 (0.9%)	5737 (99.1%)
<b>Total overall avoidance</b>	<b>5789</b>	<b>447 (7.7%)</b>	<b>5342 (92.3%)</b>

***Control Variable Measurement: Protective Factors***

Protective factors included in this analysis consist of five variables that have been selected based on previous findings reporting an association between reduced bullying victimization and each of these individual items. These protective factors include: (1) participation in school activities; (2) school security measures; (3) positive adult

influence at school; (4) positive friend influence at school; and (5) belief in future achievement. The descriptive statistics for these individual items can be seen in Table 3.

**Table 3: Frequency Breakdown for Protective Factors**

Variable	Sample Size	Frequency (Percent)	
		Yes	No
Participation in School Activities	5827	3954 (67.9%)	1873 (32.1%)
School Security Measures	5826	5806 (99.7%)	20 (0.3%)
Positive Adult Influence	5803	5787 (99.7%)	16 (0.2%)
Positive Friend Influence	5790	5605 (96.8%)	185 (3.2%)
Belief in Future Achievement	5535	5211 (94.1%)	324 (5.9%)

Participation in school activities is measured by a series of questions which ask if a student has participated in any of the following activities sponsored by their school: (1) athletic teams at school; (2) spirit groups, for example cheerleading, dance team, or pep club; (3) performing arts, for example, band, choir, orchestra, or drama; (4) academic clubs, for example, debate team, honor society, Spanish club, or math club; (5) student government; (6) volunteer or community service clubs sponsored by your school, for example, peer mediators, ecology club, or recycling club (if grades 6, 7, or 8) or volunteer or community service clubs sponsored by your school, for example, peer mediator, ecology club, key club, or interact (if grades 9, 10, 11, or 12); and (7) other school clubs or activities. Possible responses to these items were “yes” and “no” (yes = 1, no = 0). These items were collapsed into one dichotomous variable that represents participation in school activities.

School security measures which can decrease perceptions of school disorder are measured by a series of questions which ask if a student's school takes any of the following security measures to make sure students are safe: (1) security guards or assigned police officers; (2) other school staff or other adults supervising the hallway; (3) metal detectors, including wands; (4) locked entrance or exit doors during the day; (5) a requirement that visitors sign in; (6) locker checks; (7) a requirement that students wear badges or picture identification; (8) one or more security cameras to monitor the school; and (9) a code of student conduct, that is, a set of written rules or guidelines that the school provides you. Possible responses to these items were "yes" and "no" (yes = 1, no = 0). These items were collapsed into one dichotomous variable that represents school security measures.

Other identified control variables that may protect against school avoidance include positive social connections. An adult at school who has a positive influence on your life (or positive adult influence at school) is measured by a series of questions which ask if a student believes that there is an adult at school who: (1) really cares about you; (2) notices when you are not there; (3) listens to you when you have something to say; (4) tells you when you do a good job; (5) always wants you to do your best; and (6) believes that you will be a success. Possible responses to these items were strongly agree, agree, disagree, or strongly disagree. These items were collapsed into dichotomous response categories (yes = strongly agree and agree, no = disagree and strongly disagree), and then collapsed again to create one variable that represents an adult at school who has a positive influence on your life (yes = 1, no = 0). Similarly, a friend at school who has a

positive influence (or positive friend influence at school) on your life is measured by a question which asks if a student believes that there is a friend at school who they can talk to, who cares about their feelings, and what happens to them. Possible responses to these items were strongly agree, agree, disagree, or strongly disagree. These items were collapsed into dichotomous response categories (yes = strongly agree and agree, no = disagree and strongly disagree), and then collapsed again to create one variable that represents a friend at school who has a positive influence on your life (yes = 1, no = 0).

A final factor that may protect against school avoidance is the investment that an individual has in their future. Belief in future achievement is measured by two questions which ask if a student believes that in the future they will: (1) attend school after high school, such as a college or technical school and (2) graduate from a 4-year college. Possible responses to these items were “yes” and “no” (yes = 1, no = 0). These items were collapsed into one dichotomous variable that represents belief in future achievement.

#### ***Control Variable Measurement: Aggravating Factors***

Aggravating factors included in this analysis consist of six variables that have been selected based on previous findings reporting an association between bullying victimization and each of these individual items. The description of each variable can be seen in Table 4. These aggravating factors include: (1) distraction from schoolwork; (2) unsafe home neighborhood; (3) unsafe school neighborhood; (4) fear; (5) fighting; and (6) bringing a weapon to school. Distraction from schoolwork is measured by a question which asks how often a student is distracted from doing their schoolwork because other



students are misbehaving, for example, talking or fighting. Possible responses to this question were never, almost never, sometimes, and most of the time. This item was collapsed into dichotomous response categories (yes = most of the time and sometimes, no = never and almost never), creating one variable that represents whether a student is distracted from doing their schoolwork because other students are misbehaving (yes = 1, no = 0).

**Table 4: Frequency Breakdown for Aggravating Factors**

Variable	Sample Size	Frequency (Percent)	
		Yes	No
Distraction from Schoolwork	5807	2924 (50.4%)	2883 (49.6%)
Unsafe Home Environment	5801	5611 (96.7%)	190 (3.3%)
Unsafe School Environment	5798	5613 (96.8%)	185 (3.2%)
Fear	5781	1138 (19.7%)	4643 (80.3%)
Fighting	5798	262 (4.5%)	5536 (95.5%)
Weapon	5769	146 (2.5%)	5623 (97.5%)

Variables Unsafe Home Environment and Unsafe School Environment are coded as “yes” (student feels safe) and “no” (student does not feel safe).

Feeling unsafe in the neighborhood where you live (or unsafe home neighborhood) is measured by two questions which ask a student if they would strongly agree, agree, disagree, or strongly disagree with the following: (1) there is not a lot of crime in the neighborhood where you live and (2) you feel safe in the neighborhood where you live. These items were collapsed into dichotomous responses (yes = strongly agree and agree, no = disagree and strongly disagree) and then collapsed again in order to create one dichotomous variable that represents feeling unsafe in the neighborhood where you live (yes = feels safe, no = does not feel safe). Similarly, feeling unsafe in the

neighborhood where you go to school (or unsafe school neighborhood) is measured by two questions which ask a student if they would strongly agree, agree, disagree, or strongly disagree with the following: (1) there is not a lot of crime in the neighborhood where you go to school and (2) you feel safe in the neighborhood where you go to school. These items were collapsed into dichotomous responses (yes = strongly agree and agree, no = disagree and strongly disagree) and then collapsed again in order to create one dichotomous variable that represents feeling unsafe in the neighborhood where you got to school (yes = feels safe, no = does not feel safe).

Fear that someone will attack or harm you (or fear) is measured by two questions which ask a student the following: (1) how often are you afraid that someone will attack or harm you in the school building or on school property and (2) how often are you afraid that someone will attack or harm you on a school bus or on the way to and from school. Possible responses to these questions were never, almost never, sometimes, and most of the time. These items were collapsed into dichotomous response categories (yes = most of the time and sometimes, no = never and almost never), and then collapsed again in order to create one variable that represents student fear (yes = 1, no = 0).

Fighting is another aggravating factor and is measured by a question that asks if a student has been in one or more physical fights at school during this school year. Possible responses to this item were “yes” and “no” (yes = 1, no = 0). Lastly, bringing a weapon to school is measured by a series of questions that ask if a student has ever brought the following to school or onto school grounds: (1) a gun; (2) a knife brought as a weapon; and (3) some other weapon. Possible responses to these items were “yes” and

“no” (yes = 1, no = 0). These items were collapsed into one dichotomous variable that represents bringing a weapon to school.

***Other Control Variables***

Four self-report measures will be included in this research as individual-level control variables. The frequency breakdown of each variable can be seen in Table 5.

**Table 5: Frequency Breakdown for Other Control Variables**

Variable	Frequency (Percent)
<b>Student Gender</b>	
Female	3242 (49.5%)
Male	3305 (50.5%)
Total	6547 (100%)
<b>Student Age</b>	
12	940 (14.4%)
13	992 (15.2%)
14	917 (14.0%)
15	963 (14.7%)
16	969 (14.8%)
17	962 (14.7%)
18	804 (12.3%)
Total	6547 (100%)
<b>Student Race</b>	
White Only	5229 (79.9%)
Minority	1318 (20.1%)
Total	6547 (100%)
<b>Academic Achievement</b>	
Mostly A's	2265 (39.7%)
Mostly B's	2455 (43.0%)
Mostly C's	853 (14.9%)
Mostly D's	104 (1.8%)
Mostly F's	31 (0.5%)
Total	5708 (100%)

Control variables were selected based on previous literature finding an association between bullying victimization, school avoidance, and one or more of these individual-level factors (for example, see Addington et al., 2002; Ahlfors, 2010; Chandler et al., 1995; DeHue et al., 2008; DeVoe et al., 2005; Greeff & Grobler, 2008; Hazler et al., 1991; Hinduja & Patchin, 2008; Juvonen & Gross, 2008; Juvonen et al., 2000; Townsend et al., 2008). These variables are included in the current study in order to guard against the possibility that the relationship between bullying victimization and school avoidance is spurious.

Previous research has found an association between bullying victimization and gender (Beran & Li, 2007; Craig & Pepler, 1998; Didden et al., 2009; Greeff & Grobler, 2008; Hazler et al., 1991; Hinduja & Patchin, 2008; Juvonen & Gross, 2008; Juvonen et al., 2000; Katzer et al., 2009; Li, 2006, 2007b; Olweus, 1994; Patchin & Hinduja, 2006; Rigby, 1999; Rigby & Slee, 1991; Slonje & Smith, 2008; Smith et al., 2008; Topçu, Erdur-Baker, & Capa-Aydin, 2008; Varjas et al., 2009; Williams & Guerra, 2007; Wolak et al., 2007; Ybarra, 2004; Ybarra et al., 2007) as well as avoidance behaviors and gender (Slee, 1994; Townsend et al., 2008). The majority of studies report that males are more likely to be bully victims than females and are more likely to be the targets of same sex interpersonal bullying victimization (Craig & Pepler, 1998; Greeff & Grobler, 2008; Hazler et al., 1991; Juvonen et al., 2000; Olweus, 1994; Rigby, 1999; Rigby & Slee, 1991). While male victims of interpersonal bullying often experience direct forms of peer harassment, such as hitting, punching, or kicking, female victims tend to report more indirect forms of peer harassment, such as intentional peer group exclusion or social

isolation (Kochenderfer & Ladd, 1997; Olweus, 1993b, 1994; Rigby, 1999; Van der Wal et al., 2003; Varjas et al., 2009; Wolke et al., 2001). Notably, the majority of research on gender differences in cyberbullying indicates that males and females experience victimization at a similar rate (Beran & Li, 2007; Didden et al., 2009; Hinduja & Patchin, 2008; Juvonen & Gross, 2008; Katzer et al., 2009; Li, 2006, 2007b; Patchin & Hinduja, 2006; Slonje & Smith, 2008; Smith et al., 2008; Topçu, Erdur-Baker, & Capa-Aydin, 2008; Varjas et al., 2009; Williams & Guerra, 2007; Wolak et al., 2007; Ybarra, 2004; Ybarra et al., 2007). However, a small number of studies suggest that females are more likely to experience cyberbullying victimization than males (DeHue et al., 2008; Kowalski & Limber, 2007; Ybarra & Mitchell, 2008; Ybarra et al., 2007, as cited in Tokunaga, 2010). It is possible that because males who are bullied tend to be the target of direct forms of bullying, such as physical violence, females may be at an increased risk for cyberbullying victimization due to the more indirect forms of bullying that occur in the realm of cyberspace (Tokunaga, 2010). Research also finds that bullying victimization, particularly for females, is associated with higher levels of school avoidance, placing students at a greater risk for dropping out of school altogether (Slee, 1994; Townsend et al., 2008). The 2011 SCS was completed by 3,305 males (50.5%) and 3,242 females (49.5%). For purposes of the current research, gender is coded according to male (0) and female (1).

Age has also been associated with bullying victimization (DeHue et al., 2008; DeVoe et al., 2005; Espelage & Horne, 2008; Hazler et al., 1991; Hinduja & Patchin, 2008; Kowalski & Limber, 2007; Nansel et al., 2001; Olweus, 1991c; Olweus, 1994;

Pellegrini & Bartini, 2000; Rigby & Slee, 1991; Salmivalli, 2002; Seals & Young, 2003; Selekman & Vessey, 2004; Slonje & Smith, 2007; Smith et al., 1999; Ybarra & Mitchell, 2008; Ybarra et al., 2007; Ybarra et al., 2006; Williams & Guerra, 2007) as well as with avoidance behaviors (Addington et al., 2002; Chandler et al., 1995). The majority of studies have suggested that being a victim of interpersonal bullying and cyberbullying (either indirectly or directly) decreases with age (DeHue et al., 2008; DeVoe et al., 2005; Espelage & Horne, 2008; Hazler et al., 1991; Hinduja & Patchin, 2008; Kowalski & Limber, 2007; Nansel et al., 2001; Olweus, 1991c; Olweus, 1994; Pellegrini & Bartini, 2000; Rigby & Slee, 1991; Salmivalli, 2002; Seals & Young, 2003; Selekman & Vessey, 2004; Slonje & Smith, 2007; Smith et al., 1999; Ybarra & Mitchell, 2008; Ybarra et al., 2007; Ybarra et al., 2006; Williams & Guerra, 2007). Said differently, research on both interpersonal bullying victimization and cyberbullying victimization generally shows a marked decline in victimization as students increase in age and advance to higher grades. Additionally, while some studies have concluded that avoidance behaviors also decrease with age (Chandler et al., 1995), others research has found that older students are more likely to avoid school (Addington et al., 2002). The 2011 SCS respondents who completed the survey were between the ages of 12 and 18. Sixteen years of age was the largest age group (N = 969) and 18 years of age was the smallest age group (N = 804).

Previous research has also discussed the relationship between bullying victimization and race (Craig & Pepler, 1997; Dake et al., 2003; DeVoe et al., 2002; Graham & Juvonen, 2002; Greeff & Grobler, 2008; Hanish & Guerra, 2000; Hinduja & Patchin, 2008; Li, 2007a; Mouttapa et al., 2004; Nansel et al., 2001; Qin et al., 2008;

Seals & Young, 2003; Ybarra et al., 2006) as well as avoidance behaviors and race (Addington et al., 2002; Chandler et al., 1995; Townsend et al., 2008). It is important to note that the role of race in interpersonal bullying victimization and cyberbullying victimization has received little empirical attention, and the evidence that does exist provides mixed findings (Craig & Pepler, 1997; Dake et al., 2003; DeVoe et al., 2002; Graham & Juvonen, 2002; Greeff & Grobler, 2008; Hanish & Guerra, 2000; Hinduja & Patchin, 2008; Li, 2007a; Moumtapa et al., 2004; Nansel et al., 2001; Qin et al., 2008; Seals & Young, 2003; Ybarra et al., 2006). Graham and Juvonen (2002), for example, find that White students are significantly more likely to be interpersonal bully victims when compared with African American students. However, other research reports no significant differences when comparing the prevalence of interpersonal bullying victimization among different racial groups (Dake et al., 2003; Nansel et al., 2001; Seal & Young, 2003). Similarly, while some studies find that victims of cyberbullying victimization are more likely to be white (Li, 2007a; Ybarra et al., 2006), other studies report no statistically significant differences in cyberbullying victimization by race (Hinduja & Patchin, 2008). These findings are of interest given that studies exploring avoidance behaviors suggest that racial minorities are more likely to engage in avoidance behaviors and drop out of school when compared to other racial groups (Addington et al., 2002; Chandler et al., 1995; Townsend et al., 2008). For purposes of the current study, student race was collapsed into a binary variable (White = 0, Minority = 1). Persons who indicated they were White comprised 79.9% of the total sample (N = 5229) and persons who self-reported Minority made up 20.1% of the total sample (N = 1318).

Lastly, academic achievement has been associated with bullying victimization and avoidance behaviors (Ahlfors, 2010; DeVoe et al., 2005; Juvonen et al., 2000; Nansel et al., 2001; Peguero, 2008; Townsend et al., 2008; Ybarra et al., 2007). Studies suggest that student achievement is negatively impacted by both interpersonal bullying and cyberbullying experiences (Ahlfors, 2010; DeVoe et al., 2005; Juvonen et al., 2000; Nansel et al., 2001; Peguero, 2008; Townsend et al., 2008; Ybarra et al., 2007). When compared with non-bullied peers, bully victims report being suspended from school (Ahlfors, 2010; Ybarra et al., 2007), exhibit stunted academic progress (Townsend et al., 2008), perform poorly on standardized tests (Peguero, 2008), and report lower grades (Townsend et al., 2008). Additionally, studies have reported that low grades or failing grades are related to higher levels of absenteeism from school and dropping out of school (Juvonen et al., 2000; Townsend et al., 2008). In this study, academic achievement was measured according to self-reported grades across all school subjects. In total, 5,708 students responded to this question. Students who received mostly A's (N = 2265) represented 39.7% of the total sample. Students who received mostly B's (N = 2455) represented 43.0% of the total sample, which was the largest group of respondents. Students who received mostly C's (N = 853) represented 14.9% of the total sample. Students who received mostly D's (N = 104) represented 1.8% of the total sample. And, students who received mostly F's (N = 31) represented 0.5% of the total sample, which was the smallest group of respondents.



## **Analytical Approach**

### *General Analysis Strategy*

A number of analytic techniques will be used to evaluate data from the 2011 SCS, beginning with a description of the distributions for individual key variables, and culminating in logistic regression models that consider the moderating effects of empirically and theoretically derived protective and aggravating factors in the relationship between bullying victimization and school avoidance. Model development is based upon examination of the individual and joint distributions among bullying victimization and school avoidance behaviors as well as among the key independent variables and dependent variable.<sup>3</sup>

Additionally, self-reported protective factors, aggravating factors, and other control variables will be moderating variables in the relationship between bullying victimization and avoidance behaviors, which can be handled through interaction terms (for example, see Baron & Kenny, 1986). A moderating variable is one that influences the direction or strength of the relationship between an independent variable and dependent variable, and specifies when certain effects will hold. A moderator, for

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<sup>3</sup> Logistic regression models are an attractive and appropriate analytic technique for the current research, because the dependent variable is dichotomous (avoid or did not avoid), logistic regression allows for description in odds and in probability, and logistic regression allows for interaction effects to explore the proposed hypotheses and sub hypotheses. Although multinomial logit models are an extension of this and are a potential method for testing the hypotheses for this research, such analyses would be more appropriate if the current study employed two dependent variables. Notably, Ordinary Least Squares (OLS) and Structural Equation Modeling (SEM) were also considered for the current analyses, but these are unlikely methods to be used considering the nature of the data collected (cross-sectional), the dichotomous outcome measure, and the ability of logit-based modeling with interaction effects to capture the same relationships.

example, may change the direction of a relationship, decrease the strength of a relationship, or increase the strength of a relationship (Baron & Kenny, 1986).

### *Specific Analysis Strategy*

In order to test Hypothesis One, a series of analyses will be performed where the avoidance scale will be regressed on the bullying victimization scale as well as each of the individual bullying victimization items. These individual bullying victimization items included: “Has another student: (1) made fun of you, called you names, or insulted you, in a hurtful way; (2) spread rumors about you or tried to make others dislike you; (3) threatened you with harm; (4) pushed you, shoved you, tripped you, or spit on you; (5) tried to make you do things you did not want to do, for example, give them money or other things; (6) excluded you from activities on purpose; (7) destroyed your property on purpose; (8) posted hurtful information about you on the Internet, for example, on a social networking site like MySpace, Facebook, Formspring, or Twitter; (9) purposely shared your private information, photos, or videos on the Internet or mobile phones in a hurtful way; (10) threatened or insulted you through email; (11) threatened or insulted you through instant messaging or chat; (12) threatened or insulted you thorough text messaging; (13) threatened or insulted you through online gaming, for example, while playing XBOX, World of Warcraft, or similar activities; and (14) purposefully excluded you from online communications?” Individual-level control factors, including student gender, student age, student race, and student achievement, will be included in each analysis. The basic regression equation for each model will be as follows: Avoidance =

constant + bullying victimization + female + age + minority + academic achievement + error.

In order to test Hypothesis Two, a series of five analyses will be performed where the avoidance scale will be regressed on the bullying victimization scale as well as each of the individual protective factors. These individual protective factors include: (1) participation in school activities; (2) school security measures; (3) positive adult influence at school; (4) positive friend influence at school; and (5) belief in future achievement. It is the interaction between the bullying victimization scale and each protective factor that is testing this hypothesis.

In order to test Hypothesis Three, a series of six analyses will be performed where the avoidance scale will be regressed on the bullying victimization scale as well as each of the individual aggravating factors. These individual aggravating factors include: (1) distraction from schoolwork; (2) unsafe home neighborhood; (3) unsafe school neighborhood; (4) fear; (5) fighting; and (6) bringing a weapon to school. It is the interaction between the bullying victimization scale and each aggravating factor that is testing this hypothesis.

## CHAPTER FOUR

This chapter explores the following general hypotheses: (1) Net of other factors, students who have experienced bullying victimization are more likely to avoid places in school; (2) There are protective factors that will decrease the relationship between bullying victimization and avoidance behaviors; and (3) There are aggravating factors that will increase the relationship between bullying victimization and avoidance behaviors. Variables were selected from the 2011 SCS based on direct and indirect bullying behaviors (e.g., physical harm or gossip), empirically and theoretically derived protective and aggravating factors (e.g., belief in future achievement or bringing a weapon to school), as well as avoidance behaviors (e.g., avoidance of the school cafeteria or avoidance of restrooms).

Of the 10,341 NCVS respondents that were eligible for inclusion in the SCS questionnaire, 6,547 (63.3%) completed the interview and 3,794 (36.7%) were noninterviews. In total, the 2011 SCS was completed by 3,305 males (50.5%) and 3,242 females (49.5%). All students who completed the SCS questionnaire were between 12 and 18 years of age. Students who were 13 years of age (N = 992) represented 15.2% of the total sample, which was the largest age group, and students who were 18 years of age (N = 804) represented 12.3 % of the total sample, which was the smallest age group. The 2011 SCS also collected data that measured the racial characteristics of respondents.

This survey has been collapsed into two racial categories, which include 5,229 White (79.9%) and 1,318 Minority (20.1%). The aforementioned variables were included as individual-level controls in addition to academic achievement. Students who received mostly B's (N = 2455) represented 43.0% of the total sample, which was the largest group of respondents, and students who received mostly F's (N = 31) represented 0.5% of the total sample, which was the smallest group of respondents (Table 5).

Notably, students reported more interpersonal bullying victimization experiences than cyberbullying experiences (Table 1), which supports the notion that cyberbullying is quite a low-prevalence phenomenon (Olweus, 2012). With regard to interpersonal bullying victimization, the variable "spread rumors about you or tried to make others dislike you" represented 18.6% of the total sample and was the largest group of respondents (N = 1078). Whereas, the variable "destroyed your property on purpose" represented 2.8% of the total sample and was the smallest group of respondents (N = 161). Students who reported cyberbullying victimization indicated that they were most often threatened or insulted through text messaging (N = 261 or 4.5% of the total sample), and least often had private information, photos, or videos on the Internet or mobile phones shared by others in a hurtful way (N = 63 or 1.1% of the total sample).

As research literature has highlighted, there are various unfavorable consequences for victims who experience interpersonal bullying victimization and cyberbullying victimization. Among these unfavorable consequences is school avoidance, which can include the avoidance of places in school due to fear of attack or harm or the avoidance of school altogether (Astor et al., 1999; Greeff & Grobler, 2008; Hutzell & Payne, 2012;

Juvonen et al., 2000; Mahady Wilton & Craig, 2000; Rapp-Paglicci et al., 2004; Sapouna, 2008; Slee, 1994; Storch et al., 2003; Whitney & Smith, 1993). Table 2 illustrates that students who reported school avoidance most frequently avoided hallways or stairs (N = 143), which represented 2.5% of the total sample. Whereas, students who reported school avoidance least frequently avoided classes (N = 43), which represented 0.7% of the total sample.

The current research predicts that there are protective factors that will decrease the relationship between bullying victimization and school avoidance as well as aggravating factors that will increase this relationship (Table 3 and Table 4). Of the empirically and theoretically derived protective factors, school security measures (N = 5806) represented 99.7% of the total sample, which was the largest group of respondents. Participation in school activities (N = 3954) was the smallest group of respondents, which represented 67.9% of the total sample. Differently, of the empirically and theoretically derived aggravating factors, unsafe school environment (N = 5613) was the largest group of respondents, which represented 96.8% of the total sample. Bringing a weapon to school (N = 146) was the smallest group of respondents, which represented 2.5% of the total sample.

Overall, there appears to be theoretical and empirical support for examining the association between bullying victimization and school avoidance, as well as the protective and aggravating factors that might impact upon this relationship. The results of these analyses are described below.

## Hypothesis One

Hypothesis one predicted that net of other factors, students who have experienced bullying victimization are more likely to avoid places in school. The logistic regression results in which the avoidance scale was regressed on the bullying victimization scale as well as the four control variables are illustrated in Table 6. As can be seen in this model, bullying victimization was statistically significantly related to avoidance behaviors in the expected direction ( $b = 1.736$ ,  $p < .001$ ), indicating that students who report bullying victimization are more likely to avoid locations in school or school altogether. Notably, data suggest that bullying victimization roughly increased the odds of avoidance by over five times. This is consistent with the unadjusted rates of avoidance for those bullied versus those not bullied: 17.9% versus 3.4% or a fivefold increase. Thus, bullying clearly has a large and meaningful impact on avoidance behaviors. Youth who are not bullied avoid at a very low rate compared to youth who are bullied.

**Table 6: Predicted Avoidance for Bullying Victimization Scale**

Variable	b	Std. Error	Exp(B)
Bullying Victimization Scale	1.736***	.109	5.676
Female	.194	.104	1.214
Student Age	-.068***	.028	.934
Minority	-.016	.130	.984
Academic Achievement	.254***	.060	1.289
Constant	-2.626***	.422	.072

### Model Summary

$\chi^2 = 338.134$ , d.f. = 5,  $p = .000$

### Hosmer and Lemeshow Test

$\chi^2 = 7.307$ ,  $p = .504$

\*\*\* Significant at the 0.001 level (2-tailed).

\*\* Significant at the 0.01 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

Additionally, nine of the individual bullying victimization items were also statistically significantly related to avoidance behaviors in the expected direction (Table 7). These variables included: “made fun of you, called you names, or insulted you, in a hurtful way” ( $b = .514, p < .001$ ), “spread rumors about you or tried to make others dislike you” ( $b = .641, p < .001$ ), “threatened you with harm” ( $b = .464, p < .05$ ), “pushed you, shoved you, tripped you, or spit on you” ( $b = .467, p < .01$ ), “tried to make you do things you did not want to do, for example, give them money or other things” ( $b = .843, p < .001$ ), “excluded you from activities on purpose” ( $b = .745, p < .001$ ), “posted hurtful information about you on the Internet, for example, on a social networking site like MySpace, Facebook, Formspring, or Twitter” ( $b = .696, p < .001$ ), “purposely shared your private information, photos, or videos on the Internet or mobile phones in a hurtful way” ( $b = 1.048, p < .01$ ), and “purposefully excluded you from online communications” ( $b = .853, p < .01$ ). The results demonstrate that students who report these types of bullying victimization are more likely to avoid school – a finding that is consistent with what has been hypothesized. Specifically, students were more likely to engage in avoidance behaviors if they were made fun of; had rumors spread about them; were threatened with harm; were pushed, shoved, tripped, or spit on; were made to do things they did not want to do; were excluded from activities on purpose; had hurtful information posted about them online; had private information shared purposely shared either online or via mobile phones; or were purposely excluded from online communication.



**Table 7: Predicted Avoidance for Individual Bullying Victimization Items**

<b>Variable</b>	<b>b</b>	<b>Std. Error</b>	<b>Exp(B)</b>
Made fun of you, called you names, or insulted you, in a hurtful way	.514***	.149	1.672
Spread rumors about you or tried to make others dislike you	.641***	.146	1.899
Threatened you with harm	.464*	.182	1.590
Pushed you, shoved you, tripped you, or spit on you	.467**	.167	1.596
Tried to make you do things you did not want to do, for example, give them money or other things	.843***	.201	2.324
Excluded you from activities on purpose	.745***	.169	2.105
Destroyed your property on purpose	.009	.235	1.009
Posted hurtful information about you on the Internet, for example, on a social networking site like MySpace, Facebook, Formspring, or Twitter	.696***	.211	2.005
Purposely shared your private information, photos, or videos on the Internet or mobile phones in a hurtful way	1.048**	.331	2.851
Threatened or insulted you through email	-.043	.292	.958
Threatened or insulted you through instant messaging or chat	-.200	.270	.819
Threatened or insulted you thorough text messaging	-.050	.218	.951
Threatened or insulted you through online gaming, for example, while playing XBOX, World of Warcraft, or similar activities	.095	.370	1.100
Purposefully excluded you from online communications	.853**	.321	2.346
Female	.154	.116	1.166
Student Age	-.051	.030	.950
Minority	.000	.136	1.000
Academic Achievement	.195**	.065	1.216
Constant	-2.681***	.461	.069

**Model Summary**

$\chi^2 = 484.506$ , d.f. = 18,  $p = .000$

**Hosmer and Lemeshow Test**

$\chi^2 = 14.345$ ,  $p = .073$

\*\*\* Significant at the 0.001 level (2-tailed).

\*\* Significant at the 0.01 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

### **Other Control Variables, Model Fit, and Diagnostics**

In the above models, other control variables related to avoidance were student age and academic achievement (see Table 6 and Table 7). Academic achievement was statistically significant across all models ( $b = .254, p < .001$ ;  $b = .195, p < .001$ , respectively), such that students with higher academic achievement are more likely to engage in avoidance behaviors. With regard to the logistic regression model in which the avoidance scale was regressed on the bullying victimization scale, student age was also statistically significant ( $b = -.068, p < .001$ ). This suggests that younger students are more likely to engage in avoidance behaviors.

The Hosmer and Lemeshow Test was used to evaluate the goodness of fit for these models, revealing low chi-squared values that are non-statistically significant ( $\chi^2 = 7.307, p = .504$ ;  $\chi^2 = 14.345, p = .073$ , Table 6 and Table 7 respectively). This suggests that the predicted and observed probabilities for each model match up nicely, implying that this is a plausible model for the data. Additionally, the model chi-squared values were statistically significant and other diagnostics performed showed no abnormalities, which indicates that the model overall is a statistically significant predictor of avoidance ( $\chi^2 = 338.134, d.f. = 5, p = .000$ ;  $\chi^2 = 484.506, d.f. = 18, p = .000$ , Table 6 and Table 7 respectively).

### **Hypothesis Two**

Hypothesis two predicted that there are protective factors that will decrease the relationship between bullying victimization and avoidance behaviors. A series of five analyses were performed where the avoidance scale was regressed on the bullying

victimization scale, each of the individual protective factors, the interaction between the bullying victimization scale and each protective factor, as well as the four control variables. It is the interaction between the bullying victimization scale and each protective factor that is testing this hypothesis.

***Sub Hypothesis A***

Table 8 presents the logistic regression model that tests for the protective effect of participation in school activities. The interaction between bullying victimization and participation in school activities was statistically significantly related to avoidance behaviors in the expected direction ( $b = -.605, p < .05$ ). This suggests that students who participate in school activities are less likely to avoid school due to bullying victimization as predicted. Notably, participation in schools activities was individually associated with school avoidance ( $b = .607, p < .01$ ), suggesting that students who participate in school activities are more likely to avoid school.

**Table 8: Predicted Avoidance for Bullying Victimization by Participation in School Activities**

<b>Variable</b>	<b>b</b>	<b>Std. Error</b>	<b>Exp(B)</b>
Bullying Victimization Scale	2.155***	.214	8.625
Participation in School Activities	.607**	.205	1.835
Bullying Victimization Scale by Participation	-.605*	.248	.546
Female	.192	.104	1.211
Student Age	-.069*	.028	.933
Minority	-.011	.130	.989
Academic Achievement	.279***	.061	1.321
Constant	-3.062***	.451	.047

**Model Summary**

$\chi^2 = 347.674, d.f. = 7, p = .000$

**Hosmer and Lemeshow Test**

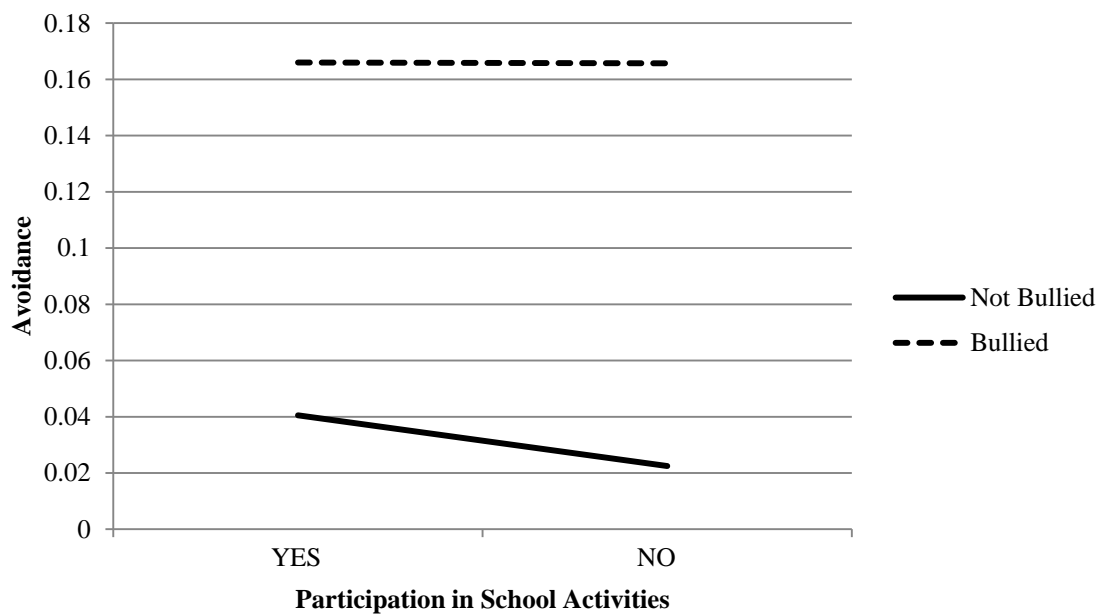
$\chi^2 = 10.342, p = .242$

\*\*\* Significant at the 0.001 level (2-tailed).

\*\* Significant at the 0.01 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

This was unexpected given research suggesting that participation in school activities, such as academic clubs or performing arts, can increase students' connection to school and reduce their feelings of alienation (Khoury-Kassabri et al., 2004). Predicted values show that students who reported bullying victimization avoided school at similar rates among those who participated in school activities and those who did not, whereas among students who did not report bullying victimization participation in school activities decreased avoidance (Figure 1).



**Figure 1: Predicted Avoidance for Bullying Victimization by Participation in School Activities Based on a Logistic Regression Model**

### ***Sub Hypothesis B***

The logistic regression model that tests for the protective effect of school security measures has been removed from the current analysis. When the avoidance scale was

regressed on these items, the standard error for the interaction term was too high to report a statistically valid value ( $SE = 29989.907$ ). This occurred due to the low frequency of students who reported that their school does not take security measures to make sure students are safe ( $N = 20$ ), resulting in a lack of adequate variability in this measure for modeling purposes.

### ***Sub Hypothesis C***

As occurred in sub hypothesis B, the logistic regression model that tests for the protective effect of a positive adult influence at school has been removed from the current analysis. When the avoidance scale was regressed on these items, the standard error for the interaction term was too high to report a statistically valid value ( $SE = 21918.977$ ). This occurred due to the low frequency of students who reported that they do not have an adult at school who has a positive influence on their lives ( $N = 16$ ), resulting in a lack of adequate variability in this measure for modeling purposes.

### ***Sub Hypothesis D***

Table 9 presents the logistic regression model that tests for the protective effect of a positive friend influence at school. The interaction between bullying victimization and having a positive friend influence at school was not statistically significant ( $b = -.379$ ,  $p = .510$ ). This suggests that students who report having a friend at school who has a positive influence on their lives are not less likely to avoid school due to bullying victimization. Having a positive friend influence at school was also not individually associated with school avoidance ( $b = -.289$ ,  $p = .580$ ). This was unexpected, as it is contrary to previous research, which suggests that having the support of a close friend can reduce the negative

effects of bullying victimization as well as prevent maladaptive outcomes (Bagwell, 2007; Bollmer et al., 2005; Yeung Thompson & Leadbeater, 2012).

**Table 9: Predicted Avoidance for Bullying Victimization by Positive Friend Influence at School**

<b>Variable</b>	<b>b</b>	<b>Std. Error</b>	<b>Exp(B)</b>
Bullying Victimization Scale	2.073***	.563	7.947
Positive Friend Influence at School	-.289	.522	.749
Bullying Victimization Scale by Positive Friend	-.379	.574	.685
Female	.219*	.105	1.245
Student Age	-.067*	.028	.936
Minority	-.017	.130	.983
Academic Achievement	.245***	.060	1.278
Constant	-2.374***	.667	.093
<b>Model Summary</b>			
$\chi^2 = 342.526$ , d.f. = 7, $p = .000$			
<b>Hosmer and Lemeshow Test</b>			
$\chi^2 = 7.869$ , $p = .446$			

\*\*\* Significant at the 0.001 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

### ***Sub Hypothesis E***

Table 10 presents the logistic regression model that tests for the protective effect of belief in future achievement. The interaction between bullying victimization and belief in future achievement was not statistically significant ( $b = -.369$ ,  $p = .384$ ). This suggests that belief in future achievement does not decrease the relationship between bullying victimization and avoidance behaviors, which was unexpected given that academic achievement is a precursor to graduating from high school and later professional success (Finn et al., 2005). Belief in future achievement was also not individually associated with school avoidance ( $b = -.205$ ,  $p = .543$ ).

**Table 10: Predicted Avoidance for Bullying Victimization by Belief in Future Achievement**

<b>Variable</b>	<b>b</b>	<b>Std. Error</b>	<b>Exp(B)</b>
Bullying Victimization Scale	2.063***	.409	7.868
Belief in Future Achievement	-.205	.338	.815
Bullying Victimization Scale by Future Achievement	-.369	.424	.691
Female	.211*	.106	1.235
Student Age	-.073**	.028	.930
Minority	-.008	.131	.992
Academic Achievement	.252***	.062	1.287
Constant	-2.352***	.541	.095

**Model Summary**

$\chi^2 = 328.164$ , d.f. = 7,  $p = .000$

**Hosmer and Lemeshow Test**

$\chi^2 = 10.522$ ,  $p = .230$

\*\*\* Significant at the 0.001 level (2-tailed).

\*\* Significant at the 0.01 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

**Other Control Variables, Model Fit, and Diagnostics**

In the above models, other control variables related to avoidance behaviors were student age, student gender, and academic achievement (see Table 8 to Table 10).

Student age was statistically significant across all models ( $b = -.069$ ,  $p < .05$ ;  $b = -.067$ ,  $p < .05$ ;  $b = -.073$ ,  $p < .01$ , respectively), such that younger students are more likely to engage in school avoidance. Academic achievement was also statistically significant across all models ( $b = .279$ ,  $p < .001$ ;  $b = .245$ ,  $p < .001$ ;  $b = .252$ ,  $p < .001$ , respectively).

This suggests that students with higher academic achievement are more likely to engage in avoidance behaviors. With regard to the logistic regression models that tested for the protective effect of having a positive friend influence at school and belief in future achievement, student gender was significantly related to school avoidance ( $b = .219$ ,  $p < .05$ ;  $b = .211$ ,  $p < .05$ , Table 9 and Table 10 respectively), demonstrating that that students who are female are more likely to avoid school.

The Hosmer and Lemeshow Test was used to evaluate the goodness of fit for each sub hypothesis included in the current analysis, revealing low chi-squared values that are non-statistically significant ( $\chi^2 = 10.342$ ,  $p = .242$ ;  $\chi^2 = 7.869$ ,  $p = .446$ ;  $\chi^2 = 10.522$ ,  $p = .230$ , respectively). This suggests that the predicted and observed probabilities for each model match up nicely, implying that this is a plausible model for the data. Additionally, the model chi-squared values were statistically significant and other diagnostics performed showed no abnormalities, which indicates that the model overall is a statistically significant predictor of avoidance ( $\chi^2 = 347.674$ ,  $d.f. = 7$ ,  $p = .000$ ;  $\chi^2 = 342.526$ ,  $d.f. = 7$ ,  $p = .000$ ;  $\chi^2 = 328.164$ ,  $d.f. = 7$ ,  $p = .000$ , respectively).

### **Hypothesis Three**

Hypothesis three predicted that there are aggravating factors that will increase the relationship between bullying victimization and avoidance behaviors. A series of six analyses were completed where the avoidance scale was regressed on the bullying victimization scale, each of the individual aggravating factors, the interaction between the bullying victimization scale and each aggravating factor, as well as the four control variables. It is the interaction between the bullying victimization scale and each aggravating factor that is testing this hypothesis.

#### ***Sub Hypothesis A***

Table 11 presents the logistic regression model that tests for the aggravating effect of distraction from schoolwork. The interaction between bullying victimization and distraction from schoolwork was not statistically significant ( $b = -.119$ ,  $p = .609$ ). This suggests that being distracted from doing schoolwork does not increase the school



avoidance effect of being bullied, which was unexpected given previous findings that support an association between negative classroom environments and either bullying victimization or avoidance behaviors (Hellman & Beaton, 1986; Khoury-Kassabri et al., 2004; Olweus, 1993a). Being distracted from schoolwork does, however, relate to school avoidance in the expected direction ( $b = .601, p < .001$ ), such that when students are distracted from doing their schoolwork they are more likely to avoid school. Thus, both being bullied and being distracted increase avoidance behaviors but they do not appear to interact.

**Table 11: Predicted Avoidance for Bullying Victimization by Distraction from Schoolwork**

Variable	b	Std. Error	Exp(B)
Bullying Victimization Scale	1.684***	.189	5.385
Distraction from Schoolwork	.601***	.177	1.824
Bullying Victimization Scale by Distraction	-.119	.233	.888
Female	.177	.104	1.194
Student Age	-.060*	.028	.942
Minority	-.032	.130	.968
Academic Achievement	.220***	.061	1.247
Constant	-3.011***	.438	.049

**Model Summary**  
 $\chi^2 = 359.270, d.f. = 7, p = .000$

**Hosmer and Lemeshow Test**  
 $\chi^2 = 6.742, p = .565$

\*\*\* Significant at the 0.001 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

### ***Sub Hypothesis B***

Table 12 presents the logistic regression model that tests for the aggravating effect of unsafe home environment. The interaction between bullying victimization and unsafe home environment was not statistically significant ( $b = .342, p = .430$ ). This suggests that students who report feeling unsafe in the neighborhood where they live are not more

likely to avoid school due to bullying victimization, which was unexpected given previous findings that support an association between unsafe neighborhood environments and either bullying victimization or avoidance behaviors (Espelage et al., 2000; Hong & Espelage, 2012; Khoury-Kassabri et al., 2004; Nansel et al., 2003; Wienke Totura et al., 2008). Unsafe home environment does, however, relate to school avoidance in the expected direction ( $b = -1.038, p < .01$ ), such that when students do not feel safe in the neighborhood where they live they are more likely to avoid school. Thus, both being bullied and unsafe home environment increase avoidance behaviors but they do not appear to interact.

**Table 12: Predicted Avoidance for Bullying Victimization by Unsafe Home Environment**

<b>Variable</b>	<b>b</b>	<b>Std. Error</b>	<b>Exp(B)</b>
Bullying Victimization Scale	1.391***	.419	4.019
Unsafe Home Environment	-1.038**	.363	.354
Bullying Victimization Scale by Unsafe Home	.342	.433	1.408
Female	.180	.104	1.198
Student Age	-.070*	.028	.933
Minority	-.044	.130	.957
Academic Achievement	.240***	.060	1.271
Constant	-1.587**	.548	.205

**Model Summary**

$\chi^2 = 351.798, d.f. = 7, p = .000$

**Hosmer and Lemeshow Test**

$\chi^2 = 11.397, p = .180$

\*\*\* Significant at the 0.001 level (2-tailed).

\*\* Significant at the 0.01 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

***Sub Hypothesis C***

Table 13 presents the logistic regression model that tests for the aggravating effect of unsafe school environment. The interaction between bullying victimization and unsafe school environment was not statistically significant ( $b = .353, p = .370$ ). This suggests

that students who report feeling unsafe in the neighborhood where they go to school are not more likely to avoid school due to bullying victimization. This was unexpected given research suggesting that bullying victimization problems can increase for youth who go to school in unsafe areas (Hong & Espelage, 2012). Unsafe school environment does, however, relate to school avoidance in the expected direction ( $b = -1.556, p < .001$ ), such that when students do not feel safe in the neighborhood where they go to school they are more likely to avoid school. Thus, both being bullied and unsafe school environment increase avoidance behaviors but they do not appear to interact.

**Table 13: Predicted Avoidance for Bullying Victimization by Unsafe School Environment**

Variable	b	Std. Error	Exp(B)
Bullying Victimization Scale	1.372***	.378	3.941
Unsafe School Environment	-1.556***	.326	.211
Bullying Victimization Scale by Unsafe School	.353	.394	1.424
Female	.205	.105	1.228
Student Age	-.078**	.028	.925
Minority	-.034	.131	.967
Academic Achievement	.230***	.061	1.258
Constant	-.985	.535	.373

**Model Summary**

$\chi^2 = 383.012, d.f. = 7, p = .000$

**Hosmer and Lemeshow Test**

$\chi^2 = 9.349, p = .314$

\*\*\* Significant at the 0.001 level (2-tailed).

\*\* Significant at the 0.01 level (2-tailed).

***Sub Hypothesis D***

Table 14 presents the logistic regression model that tests for the aggravating effect of fear. The interaction between bullying victimization and fear was statistically significantly related to avoidance behaviors in the expected direction ( $b = .653, p < .01$ ). This suggests that students who are fearful that someone will attack or harm them are

more likely to avoid school due to bullying victimization as predicted. Notably, fear was individually associated with school avoidance in the expected direction ( $b = 1.336$ ,  $p < .001$ ), such that students who are fearful are more likely to avoid school. Predicted values show fear increased avoidance for bullied and not bullied youth, but avoidance behaviors were considerably higher for youth you were bullied (Figure 2).

**Table 14: Predicted Avoidance for Bullying Victimization by Fear**

<b>Variable</b>	<b>b</b>	<b>Std. Error</b>	<b>Exp(B)</b>
Bullying Victimization Scale	1.187***	.155	3.278
Fear	1.336***	.182	3.802
Bullying Victimization Scale by Fear	.653**	.230	1.921
Female	.218*	.110	1.244
Student Age	-.037	.029	.964
Minority	-.024	.136	.976
Academic Achievement	.147*	.064	1.158
Constant	-3.346***	.451	.035

**Model Summary**

$\chi^2 = 605.201$ , d.f. = 7,  $p = .000$

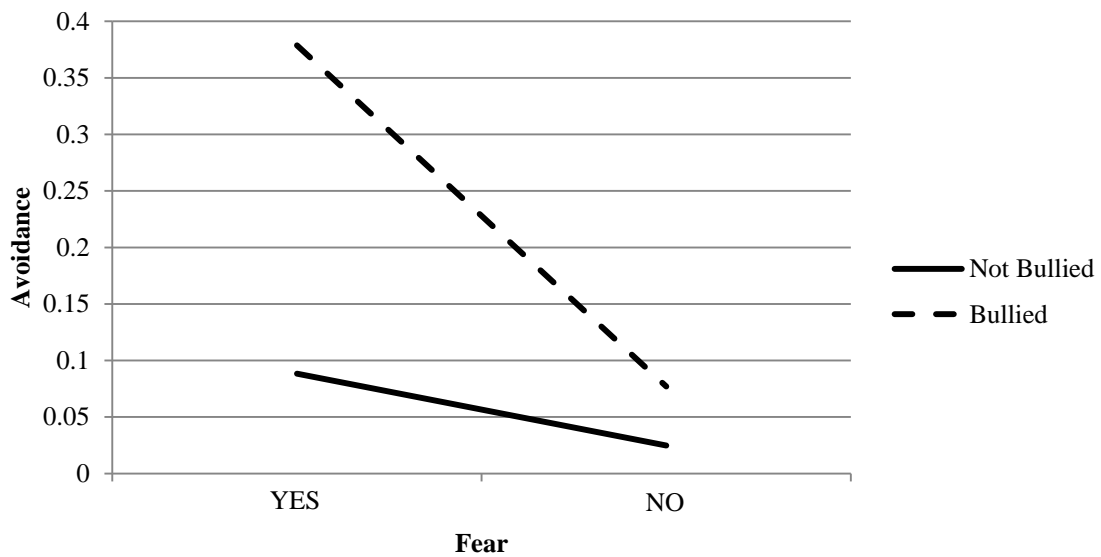
**Hosmer and Lemeshow Test**

$\chi^2 = 4.096$ ,  $p = .848$

\*\*\* Significant at the 0.001 level (2-tailed).

\*\* Significant at the 0.01 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).



**Figure 2: Predicted Avoidance for Bullying Victimization by Fear Based on a Logistic Regression Model**

### *Sub Hypothesis E*

Table 15 presents the logistic regression model that tests for the aggravating effect of fighting. The interaction between bullying victimization and fighting was not statistically significant ( $b = .352, p = .457$ ). This suggests that students who have been in one or more physical fights at school are not more likely to avoid school due to bullying victimization. Fighting was also not individually associated with school avoidance ( $b = .859, p = .051$ ). This was unexpected, as research suggests that violent victimization at school, including fights or physical attacks, can have a detrimental impact on the emotional and social development of targeted youth, such that victims tend to have attendance problems, exhibit lower self-esteem than non-victims, and have higher levels of anxiety and depression (Bastche & Knoff, 1994; Brockenbrough et al., 2002; Harris, 1994; Olweus, 1993b).

**Table 15: Predicted Avoidance for Bullying Victimization by Fighting**

<b>Variable</b>	<b>b</b>	<b>Std. Error</b>	<b>Exp(B)</b>
Bullying Victimization Scale	1.699***	.113	5.468
Fighting	.859	.439	2.362
Bullying Victimization Scale by Fighting	-.352	.473	.704
Female	.232*	.105	1.261
Student Age	-.064*	.028	.938
Minority	-.049	.130	.953
Academic Achievement	.228***	.061	1.256
Constant	-2.705***	.425	.067

**Model Summary**

$\chi^2 = 348.253$ , d.f. = 7,  $p = .000$

**Hosmer and Lemeshow Test**

$\chi^2 = 7.499$ ,  $p = .484$

\*\*\* Significant at the 0.001 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

***Sub Hypothesis F***

Table 16 presents the logistic regression model that tests for the aggravating effect of bringing a weapon to school. The interaction between bullying victimization and bringing a weapon to school was not statistically significant ( $b = -.392$ ,  $p = .439$ ). This suggests that students who report bringing a weapon to school are not more likely to avoid school due to bullying victimization. This was unexpected given research suggesting that victims tend to bring weapons to school for self-protection or intimidation, as they are fearful of past victimization, future violence, and generally do not feel safe at school (Ahlfors, 2010; Dukes et al., 2010; Ybarra et al., 2007). Bringing a weapon to school does, however, relate to school avoidance in the expected direction ( $b = 1.115$ ,  $p < .05$ ), such that students who bring a weapon to school are also more likely to avoid school. Thus, both being bullied and bringing a weapon to school increase avoidance behaviors but they do not appear to interact.

**Table 16: Predicted Avoidance for Bullying Victimization by Bringing a Weapon to School**

<b>Variable</b>	<b>b</b>	<b>Std. Error</b>	<b>Exp(B)</b>
Bullying Victimization Scale	1.721***	.112	5.592
Bringing a Weapon to School	1.115*	.440	3.051
Bullying Victimization Scale by Weapon	-.392	.506	.676
Female	.194	.105	1.214
Student Age	-.070*	.028	.933
Minority	.010	.130	1.010
Academic Achievement	.242***	.060	1.274
Constant	-2.631***	.424	.072

**Model Summary**

$\chi^2 = 348.043$ , d.f. = 7,  $p = .000$

**Hosmer and Lemeshow Test**

$\chi^2 = 8.363$ ,  $p = .399$

\*\*\* Significant at the 0.001 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

**Other Control Variables, Model Fit, and Diagnostics**

In the above models, other control variables related to avoidance behaviors were student age, student gender, and academic achievement (see Table 11 to Table 16). Academic achievement was statistically significant across all models ( $b = .220$ ,  $p < .001$ ;  $b = .240$ ,  $p < .001$ ;  $b = .230$ ,  $p < .001$ ;  $b = .147$ ,  $p < .05$ ;  $b = .228$ ,  $p < .001$ ;  $b = .242$ ,  $p < .001$ , respectively), such that that students with higher academic achievement are more likely to engage in avoidance behaviors. With regard to the models in Tables 11, 12, 13, 15, and 16 that tested for the aggravating effect of distraction from schoolwork, unsafe home environment, unsafe school environment, fighting, and bringing a weapon to school, student age was statistically significantly related to school avoidance ( $b = -.060$ ,  $p < .05$ ;  $b = -.070$ ,  $p < .05$ ;  $b = -.078$ ,  $p < .01$ ;  $b = -.064$ ,  $p < .05$ ;  $b = -.070$ ,  $p < .05$ , respectively). This demonstrates that younger students are more likely to engage in avoidance behaviors. Student gender was statistically significant for models in Tables 14 and 15 that tested for the aggravating effect of fear and fighting ( $b = .218$ ,  $p < .05$ ;  $b =$

.232,  $p < .05$ , respectively), such that students who are female are more likely to engage in avoidance behaviors.

The Hosmer and Lemeshow Test was used to evaluate the goodness of fit for each sub hypothesis, revealing low chi-squared values that are non-statistically significant ( $\chi^2 = 6.742$ ,  $p = .565$ ;  $\chi^2 = 11.397$ ,  $p = .180$ ;  $\chi^2 = 9.349$ ,  $p = .314$ ;  $\chi^2 = 4.096$ ,  $p = .848$ ;  $\chi^2 = 7.499$ ,  $p = .484$ ;  $\chi^2 = 8.363$ ,  $p = .399$ , respectively). This suggests that the predicted and observed probabilities for each model match up nicely, implying that this is a plausible model for the data. Additionally, the model chi-squared values were statistically significant and other diagnostics performed showed no abnormalities, which indicates that the model overall is a statistically significant predictor of avoidance ( $\chi^2 = 359.270$ , d.f. = 7,  $p = .000$ ;  $\chi^2 = 351.798$ , d.f. = 7,  $p = .000$ ;  $\chi^2 = 383.012$ , d.f. = 7,  $p = .000$ ;  $\chi^2 = 605.201$ , d.f. = 7,  $p = .000$ ;  $\chi^2 = 348.253$ , d.f. = 7,  $p = .000$ ;  $\chi^2 = 348.043$ , d.f. = 7,  $p = .000$ , respectively).

### **Overall Logistic Regression Results**

For hypothesis one, a series of analyses were completed where the avoidance scale was regressed on the bullying victimization scale as well as each of the individual bullying victimization items. Individual-level control factors were included in this model to guard against the possibility that the relationship between bullying victimization and school avoidance was spurious. The findings largely support the hypothesized relationship between bullying victimization and school avoidance, suggesting that students who report bullying victimization are likely to engage in avoidance behaviors.



Notably, data suggest that bullying victimization roughly increased the odds of avoidance by over five times.

For hypothesis two, a series of five analyses were completed where the avoidance scale was regressed on the bullying victimization scale, each of the individual protective factors, the interaction between the bullying victimization scale and each protective factor, as well as the four control variables. Two of these models, however, were removed from the current analysis, because the standard error for the interaction terms was too high to report a statistically valid value (i.e., sub hypothesis b: school security measures and sub hypothesis c: positive adult influence at school). Although the interaction between bullying victimization and participation in school activities was the only statistically significant protective factor interaction related to avoidance behaviors, the bullying victimization scale was significantly related to avoidance behaviors for all included models. Additionally, the variable participation in school activities was individually associated with school avoidance.

For hypothesis three, a series of five analyses were completed where the avoidance scale was regressed on the bullying victimization scale, each of the individual aggravating factors, the interaction between the bullying victimization scale and each aggravating factor, as well as the four control variables. Although the interaction between bullying victimization and fear was the only significantly significant aggravating factor interaction related to avoidance behaviors, the bullying victimization scale was significantly related to avoidance behaviors for all models. Additionally, the variables

distraction from schoolwork, unsafe home environment, unsafe school environment, fear, and bringing a weapon to school were individually associated with school avoidance.

## CHAPTER FIVE

This dissertation examined the impact of bullying victimization on school avoidance. Using victim-centered adaptations of general strain theory and routine activity theory, it proposed the following general hypotheses: (1) Net of other factors, students who have experienced bullying victimization are more likely to avoid places in school; (2) There are protective factors that will decrease the relationship between bullying victimization and avoidance behaviors; and (3) There are aggravating factors that will increase the relationship between bullying victimization and avoidance behaviors. The findings of this dissertation provide support for the overall effect of bullying victimization on school avoidance, such that students who have experienced overall bullying are more likely to avoid places in school. Additionally, results suggest that participation in school activities can decrease the relationship between bullying victimization and school avoidance and that fear can increase this relationship.

Hypothesis one anticipated that students who self-reported bullying victimization would also be likely to report school avoidance. Contrary to findings from Glew et al. (2005), Wolke et al. (2001), and Yen et al. (2013), results from the current study largely indicate support for this hypothesis. These findings parallel previous research that has reported an association between bullying victimization and school avoidance (Agatston et al., 2007; Beran & Li, 2005; Dehue et al., 2008; DeVoe et al., 2005; DeVoe et al., 2011;

Hinduja & Patchin, 2007; Hutzell & Payne, 2012; Li, 2010; Juvonen et al., 2000; Kochenderfer & Ladd, 1996a, 1996b; Kowalski et al., 2008; Mahady Wilton & Craig, 2000; Meyer-Adams & Conner, 2008; Parault et al., 2007; Parris et al., 2011; Puhl & Luedicke, 2012; Schenk & Fremouw, 2012; Skrzypiec et al., 2011; Slee, 1994; Smith et al., 2004; Smith et al., 2008; Storch & Esposito, 2003; Storch et al., 2003; Townsend et al., 2008). This replication of previous work suggests that bullying victimization can no longer be viewed as a “boys will be boys” or a “kids will be kids” mentality, as the effects of being a bully victim are both negative and harmful. School avoidance can have a considerable impact on victimized youth in both the short- and long-term, as students who engage in avoidance behaviors are likely to miss important learning and social opportunities that are essential to child and adolescent development.

Notably, five of the individual bullying victimization items were not statistically significantly related to avoidance. These items included: (1) destroyed your property on purpose; (2) threatened or insulted you through email; (3) threatened or insulted you through instant messaging or chat; (4) threatened or insulted you thorough text messaging; and (5) threatened or insulted you through online gaming, for example, while playing XBOX, World of Warcraft, or similar activities. As can be seen, the majority of these items are related to cyberbullying. Despite claims that cyberbullying is a very frequent phenomenon among youth and that the prevalence of this phenomenon has increased in recent years (Olweus, 2012), it is possible that this type of bullying is overrated and occurs less frequently than anticipated. It is also possible, however, that these types of bullying behaviors are becoming normalized in a culture that is

increasingly reliant on social technologies, such that students fail to acknowledge and report behaviors that would otherwise be considered cyberbullying victimization. Just as the lack of face-to-face interaction or anonymity can make it easier for cyberbullies to be hurtful to others, so too may these characteristics make it easier for cyberbully victims to ignore such hurtful actions.

The current research also predicted that there are protective factors that would decrease the relationship between bullying victimization and school avoidance. It was anticipated that students who participated in schools activities, attended schools that took security measures to make sure students were safe, had an adult at school who was a positive influence, had a friend at school who was a positive influence, and believed in future achievement would be less likely to avoid school due to bullying victimization. The interaction between bullying victimization and participation in school activities was the only statistically significant interaction related to avoidance behaviors and the variable participation in school activities was the only protective factor individually associated with school avoidance. It was expected that participation in school activities would decrease the relationship between bullying victimization and school avoidance, given results from previous research suggesting that participation in school activities, such as academic clubs or performing arts, can increase students' connection to school and reduce their feelings of alienation (Khoury-Kassabri et al., 2004).

Having a positive friend influence at school and belief in future achievement, however, did not decrease the relationship between bullying victimization and school avoidance nor were these items individually associated with school avoidance. This was

unexpected, as it is contrary to previous findings. Bollmer et al. (2005), Schmidt and Bagwell (2007), as well as Yeung Thompson and Leadbeater (2012) indicate that having the support of a close friend can reduce the negative effects of peer victimization and prevent maladaptive outcomes. It is possible, however, that having a friend at school who bullied youth can talk to, who cares about their feelings, and who cares about what happens to them is not sufficiently influential to reduce avoidance behaviors, as the prevalence and intensity of bullying victimization incidents might outweigh the protective effect of having a positive friend influence at school. On the other hand, a friend could encourage the avoidance of specific places in school or school altogether to prevent further victimization among bullied youth; thus, increasing the potential for avoidance behaviors, not decreasing it.

Because academic achievement is a precursor to graduating from high school and later professional success (Finn et al., 2005), it was expected that belief in future achievement would decrease the relationship between bullying victimization and school avoidance. Lack of statistically significant findings could result from bullying victimization experiences that hinder academic achievement so much so that bullied youth avoid places in school or school altogether due to fear of attack or harm without regard for achievement in school and future success (Gresham & Elliott, 1987; Nansel et al. 2001; Parault et al., 2007; Townsend et al. 2008).

Notably, there is a lack of variability in 2011 SCS participant responses with regard to the protective factors examined in the current study (Table 3). Lack of variation among data may have contributed to the non-significant interactions between bullying

victimization and having a positive friend influence at school as well as bullying victimization and belief in future achievement. It may also have contributed to a lack of significance for the main effects for these protective factors. It is possible that the observed low variability can be a measurement issue resulting from wording on the 2011 SCS survey, as questions assessing protective factors relied on the subjective understanding of these behaviors among students who completed the survey. For instance, having a positive friend influence at school can be interpreted in different ways. While one student could believe that this means having a friend who encourages prosocial attitudes and behaviors, another student who engages in socially unapproved behaviors could believe that this means having a friend who also participates in these types of behaviors. It is also possible, however, that the lack of variation observed for these protective factors is not a measurement issue, but that students are in fact likely to report that they, for example, have a positive friend influence at school and believe in future achievement. Given the potential number of positive friend influences that youth interact with in the school setting on a daily basis as well as the likelihood that they are encouraged to succeed academically leading to belief in future achievement, it can be suggested that the majority of youth would respond in a similar way to these questions.

The final hypothesis predicted that there are aggravating factors that would increase the relationship between bullying victimization and school avoidance. It was anticipated that students who were distracted from schoolwork, lived in unsafe areas, went to school in unsafe areas, were fearful, engaged in fighting, and brought a weapon to school would be more likely to avoid school due to bullying victimization. The

interaction between bullying victimization and fear was the only statistically significant interaction related to avoidance. It was expected that being fearful would aggravate the relationship between bullying victimization and school avoidance, given results from previous research suggesting that students who fear attack or harm are more likely to avoid places in school or school altogether (Astor et al., 1999; DeVoe et al., 2005; Greeff & Grobler, 2008; Hutzell & Payne, 2012; Juvonen et al., 2000; Mahady Wilton & Craig, 2000; Parault et al., 2007; Rapp-Paglicci et al., 2004; Sapouna, 2008; Slee, 1994; Storch et al., 2003; Whitney & Smith, 1993). Not only does fear of attack or harm make bullied youth more likely to avoid locations in school or school altogether, it also has the potential to impact their ability to learn. While the primary function of a school is to provide an education to all students, youth who are fearful may be more concerned about their vulnerability to bullying victimization and how to cope with such behaviors.

Additionally, the variables distraction from schoolwork, unsafe home environment, unsafe school environment, fear, and bringing a weapon to school were individually associated with school avoidance. These relationships were expected given research supporting an association between these items and either bullying victimization or avoidance behaviors (Ahlfors, 2010; Astor et al., 1999; DeVoe et al., 2005; Dukes et al., 2010; Espelage et al., 2000; Glew et al., 2008; Greeff & Grobler, 2008; Hellman & Beaton, 1986; Hong & Espelage, 2012; Hutzell & Payne, 2012; Juvonen et al., 2000; Khoury-Kassabri et al., 2004; Mahady Wilton & Craig, 2000; Nansel et al., 2003; Olweus, 1993a; Parault et al., 2007; Rapp-Paglicci et al., 2004; Sapouna, 2008; Slee, 1994; Storch et al., 2003; Whitney & Smith, 1993; Wienke Totura et al., 2008; Ybarra et



al., 2007), and because they very clearly have the potential to further detract from social and educational processes for youth who are bullied. The presence of these aggravating factors can considerably impact the mental and physical health of youth as well as increase the employment of negative coping mechanisms to deal with the situation, such as avoidance behaviors.

Fighting, however, was not individually associated with school avoidance. This was unexpected, as research suggests that violent victimization at school, including fights or physical attacks, can have a detrimental impact on the emotional and social development of targeted youth (Bastche & Knoff, 1994; Brockenbrough et al., 2002; Olweus, 1993b). Victims of fighting tend to have attendance problems, exhibit lower self-esteem than non-victims, and have higher levels of anxiety and depression (Brockenbrough et al., 2002; Harris, 1994; Olweus, 1993b). It is possible that statistically significant results were not found, because not all students who engage in fighting are negatively impacted either emotionally or socially. For some students, fighting may be an approved behavior among peers and lead to increased social status.

Distraction from schoolwork, unsafe home environment, unsafe school environment, fighting, and bringing a weapon to school did not aggravate the relationship between bullying victimization and school avoidance as predicted. This was contrary to previous findings supporting an association between these items and either bullying victimization or avoidance behaviors (Ahlfors, 2010; Brockenbrough et al., 2002; Dukes et al., 2010; Espelage et al., 2000; Glew et al., 2008; Harris, 1994; Hellman & Beaton, 1986; Hong & Espelage, 2012; Khoury-Kassabri et al., 2004; Nansel et al., 2003;

Olweus, 1993a, 1993b; Wienke Totura et al., 2008; Ybarra et al., 2007). Lack of statistically significant findings can result from student misperceptions of behaviors or experiences or underreporting on these items, especially those items that involve delinquent or illegal behaviors. It is also possible that some of these factors could be conceptualized as protective factors rather than aggravating factors. As suggested above, although both fighting and bringing a weapon to school were selected as aggravating factors for the current study based on previous findings supporting an association between these items and either bullying victimization or avoidance behaviors, students who engage in fighting or bringing a weapon to school might do so as a misguided effort to defend against or protect themselves from bullying victimization. Viewed in this way, these items would not aggravate the relationship between bullying victimization and avoidance behaviors, instead they would have the potential to decrease this relationship.

Notably, there is a lack of variability in 2011 SCS participant responses with regard to the aggravating factors examined in the current study (Table 4). Lack of variation among data may have contributed to the non-significant interactions between bullying victimization and distraction from schoolwork, bullying victimization and unsafe home environment, bullying victimization and unsafe school environment, bullying victimization and fighting, as well as bullying victimization and fear. It may also have contributed to the lack of significance of the main effect of fighting. It is possible that the observed low variability can be a measurement issue resulting from wording on the 2011 SCS survey, as questions assessing aggravating factors relied on the subjective understanding of these behaviors among students who completed the survey.

For instance, feeling unsafe in the neighborhood where you live or the neighborhood where you go to school can be interpreted in different ways. While one student could view this as living or going to school in an area characterized by little or no crime and other forms of disorder, another student could view this as living or going to school in an area where crime and disorder are normal and expected parts of everyday life. Said, differently, what one student perceives as a safe environment might not be perceived as safe by another student. It is also possible, however, that the lack of variation observed for these aggravating factors is not a measurement issue, but that students are in fact likely less likely engage in fighting at school and are less likely to bring a weapon to school, for example. Given the emphasis on decreasing disorder and violence in schools and the types of measures that are employed in these settings to do so, it can be suggested that the majority of youth would respond in a similar way to these questions.

Because previous literature has reported an association between school avoidance and the individual-level control variables, it was also anticipated that the association between school avoidance and student gender, student age, student race, and academic achievement would display statistically significant effects (Hutzell & Payne, 2012). In many instances, student gender, student age, and academic achievement were significantly related to school avoidance, indicating that students who are female, students who are younger, and students with higher academic achievement are more likely to engage in avoidance behaviors. The relationships were expected between the individual-level control of student gender and school avoidance as well as the individual-

level control of student age and school avoidance, as they mirror previous research (Chandler et al., 1995; Slee, 1994; Townsend et al., 2008).

However, the relationship between school avoidance and the individual-level control of academic achievement was unexpected given that academic achievement is a precursor to graduating from high school and later professional success. Notably, belief in future achievement, a protective factor in the current study, would suggest that students with higher academic achievement are those individuals that intend to graduate from high school and continue on to post-secondary education. School avoidance in this instance would be counterintuitive. It is possible, however, that higher achieving students are those individuals who are targeted by interpersonal bullying victimization and cyberbullying victimization; thereby, encouraging avoidance behaviors for these youth.

Additionally, the lack of a relationship between school avoidance and the individual-level control of student race was unexpected. Studies exploring avoidance behaviors suggest that racial minorities are more likely to engage in avoidance behaviors and drop out of school when compared to other racial groups (Addington et al., 2002; Chandler et al., 1995; Townsend et al., 2008). According to Hutzell and Payne (2012), it is possible that this is a result of wording on the SCS survey, as questions assessing bullying victimization and school avoidance relied on the subjective understanding of these behaviors among students who completed the survey. This may differ as a function of race.

The findings of this dissertation provide support for the overall effect of bullying victimization on school avoidance, such that students who self-report victimization are also likely to report avoidance behaviors. Additionally, it appears that participation in school activities can decrease the relationship between bullying victimization and school avoidance and that fear can increase this relationship. Notably, research on bullying victimization has been conducted largely in the absence of theory, which is especially true for research on cyberbullying (Tokunaga, 2010). This study contributes to the paucity of literature in this area. Consistent with victim-centered adaptations of general strain theory and routine activity theory, current findings support the potential for avoidance behaviors as a coping response to strain among victimized youth and draw attention to specific situations and places to avoid.

Research finds that avoidance behaviors can adversely impact students in a number of ways. These behaviors can significantly hinder academic success and increase the likelihood of school dropout (Nansel et al., 2001; Townsend et al., 2008). Although school avoidance is clearly a maladaptive coping mechanism, it can also be perceived as a self-protective behavior that allows bullied youth to create immediate relief from the experience causing discomfort or harm by decreasing the amount that these youth are bullied. Avoidance behaviors in school or avoidance of school altogether limit accessibility and exposure, rendering the bully less effective or incapable of targeting a victim (DeVoe, 2007). What is less clear, are the circumstances that influence bully victims to adopt these behaviors as well as engage in limited avoidance (e.g., avoidance of hallways or stairs) versus large scale avoidance (e.g., avoidance of school altogether).

It is possible that bully victims are more likely to engage in avoidance behaviors when they perceive a lack of capable guardianship from bullying victimization at school, as hypothesized by DeVoe (2007). Places and times, such as school playgrounds during recess, can facilitate the convergence of motivated offenders (i.e., youth who bully) as well as suitable targets (i.e., youth who are bully victims) in spaces where there is a lack of capable guardians (Astor et al., 1999). If the decision to avoid is influenced by student perceptions of unguarded places and times, perhaps patterns of avoidance, either limited or large scale, vary by these perceptions as well (e.g., student avoidance of hallways because there is not an authority figure present versus avoidance of school altogether because no authority figure is present on the routes to and from school).

### **Limitations and Future Research**

It is necessary to examine potential limitations of this research, despite significant findings suggesting that students who report bullying victimization are more likely to engage in avoidance behaviors, participation in school activities is a protective factor that can decrease the relationship between bullying victimization and avoidance behaviors, and fear is an aggravating factor that can increase the relationship between bullying victimization and avoidance behaviors. One limitation that arises when conducting a secondary data analysis is that the independent measures used to create the bullying victimization scale, the control measures used to assess protective and aggravating factors, as well as the dependent measures used to create the avoidance scale are limited to the forms of victimization, protective and aggravating factors, and avoidance behaviors on which information was collected by the 2011 SCS. For instance, although the data

employed in this research capture some of the objective indicators that someone has been bullied, it is important to note the potential for additional measures that could more fully illustrate victimization experiences for bullied youth. The measures included in the current study, while not perfect, adequately capture a degree of diversity of bullying victimization, but no indication of intensity of the events or the degree of repeated events. Including these additional indicators would provide a more complete picture of the magnitude of bullying victimization experiences as well as how often such incidents occur. Additionally, avoidance of other places inside the school building and avoidance of other places on school grounds were included as measures of avoidance in this analysis. These concepts are not specific enough to be positive about the intended meaning of these items, as they are included as a catchall for places inside and outside of the school that were not directly addressed by the other avoidance variables in the survey. Future research should include additional measures to develop a greater understanding of bullying victimization incidents as well as more specific measures in order to fully understand what each avoidance variable is attempting to capture.

Another limitation involves the cross-sectional nature of the data. It is not possible to clearly determine the causal direction or temporal ordering of the relationships identified in this research, because data for the SCS were collected at a single point in time (Hutzell & Payne, 2012). For instance, it was hypothesized that students who have experienced bullying victimization are more likely to engage in school avoidance. It is also possible, however, that these behaviors could have preceded the incidents of bullying victimization. This suggests that students were bullied because they avoided specific

places in school or school altogether (Hutzell & Payne, 2012). In order to address the issue of causality and proper temporal ordering, future research should be longitudinal in nature to allow more confidence in discussing the association between bullying victimization and avoidance behaviors.

A further limitation is that the SCS data are self-reported by students between 12 and 18 years of age. Students may, for example, underreport or overreport incidents of bullying victimization, protective or aggravating factors, or avoidance behaviors, as self-report measures capture perceptions of behaviors and experiences rather than actual behaviors and experiences. Boivin and Begin (1989) find that children who have difficulties in peer relationships may wish to present themselves in a more desirable way, or might lack self-evaluation or social perception skills. Hutzell and Payne (2012) report that some researchers have attempted to minimize such issues by using peer nomination procedures to distinguish between students who are victimized and those who are not (see Alsaker, 1993; Perry, Kusel, & Perry, 1988); however, Kochenderfer and Ladd (1996a) suggest that the employment of self-report measures may be a more reliable estimation of victimization experiences than peer nomination procedures when collecting information from students who are younger. The current study is in agreement with the latter perspective for all students, not just those who are younger, as the employment of peer nomination procedures has the potential to ignore relevant data. Although there are inherent issues with self-report instruments, much of social science relies on this reporting method because these types of surveys attempt to capture information in a way that other measurement tools do not and cannot. To ensure greater accuracy, it is



essential that self-report instruments are designed to reduce respondent error and overall measurement error (e.g., asking questions that are easily understood and straightforward).

Another limitation of this research is the absence of information to control for particular key constructs. Four self-report measures were included in the current analyses as individual-level control variables (i.e., student gender, student age, student race, and academic achievement); however, data to account for additional individual-level control variables as well as the influence of structural factors on school avoidance were not available (Hutzell & Payne, 2012). For instance, the National Audit Office (NAO) report (2005) identifies three factors that can be a precursor to absenteeism from school: 1) home influences (e.g., difficulties in getting to or from school, frequent movers, or parental attitudes to education); 2) school influences (e.g., attractiveness and relevance of the curriculum, quality of teaching, or school policies); and 3) pupil factors (e.g., behavioral problems, learning difficulties, or the influence of friends and peers). Additionally, although school type was not examined in the current study, Chandler et al. (1995) suggest that students who attend private institutions are less likely to engage in avoidance behaviors than students who attending public schools. Future research should include measures to control for additional individual-level and structural factors that are assumed to influence bullying victimization and avoidance behaviors, thereby strengthening the findings of future studies (Hutzell & Payne, 2012).

A final limitation involves the theoretical frameworks employed in the current research to explore the associations between bullying victimization and school avoidance. Notably, theories of victimization are varied and include those that focus on victimization

as a function of social division, those that focus on victimization as a function of the dynamics of social interactions between offenders and victims, and those that focus on victimization as a function of opportunity (Wilcox, 2010). There is no single theory that adequately provides a falsifiable set of propositions about which victims respond in what ways to the effects of bullying victimization. Nor is there a single framework that provides predictions about what factors protect against or aggravate the harmful effects of bullying. It stands to reason, however, that when bullying victimization reaches a certain level of intolerability, victims will engage in both normative and antinormative behaviors to cope with the problem. This study draws upon (a) extensions of Robert Merton's (1938) macro-strain theory into Agnew's (1992) general strain theory and (b) routine activity theory (Cohen & Felson, 1979) to explore such associations. Though originally developed to explain why individuals and classes of individuals commit crime, these theories have been extended to explain victimization and its consequences. Other theories of victimization might have been appropriate for these analyses, such as Marvin Wolfgang's (1958) victim precipitation theory or Christopher Schreck's (1999) theoretical understanding of how an individual's level of self-control contributes to victimization, as these perspectives are empirically supported in the research literature (Wilcox, 2010). However, because victimization is clearly a complex phenomenon and many theories have merit in providing an understanding of such experiences (Wilcox, 2010), it was of interest to choose two well-known perspectives to explore an area of study that has received little empirical attention with regard to the potential for bullied youth to engage in school avoidance as a coping mechanism.

## **Policy Implications**

Despite these limitations, findings of this dissertation suggest that the association between bullying victimization and school avoidance, as well as the protective and aggravating factors that impact upon this relationship (i.e., participation in school activities and fear), should be explored further. In recent years, elementary, middle, and high schools in the United States are expected to do more than provide an education to students. In addition to providing a physical environment that is conducive to learning, academic institutions are increasingly expected to serve an essential role in enhancing student safety and preventing crime and disorder in and around the school setting. This study is in agreement with previous research that encourages the development of bullying prevention and intervention strategies as well as anti-bullying school policies, because interpersonal bullying victimization and cyberbullying victimization can lead to a host of unfavorable consequences for targeted youth, including avoidance behaviors. These behaviors can significantly hinder academic success and increase the risk for dropping out of school altogether (DeVoe, Kaffenberger, & Chandler, 2005; Nansel et al., 2001; Townsend et al., 2008). Programs and policies designed to mediate bully/victim issues may have a considerable impact on bullying victimization and avoidance behaviors as well, leading to a more positive school environment for victimized youth and other members of the school community (Hutzell & Payne, 2012).

Traditional prevention and intervention programs largely follow the Olweus Bullying Prevention Program model first implemented in Norway in 1983 (Hutzell & Payne, 2012; Olweus, Limber, & Mihalic, 1999). This program builds on four principles

to be used at the individual, classroom, and school levels, establishing a school environment characterized by: (1) firm limitations on unacceptable behaviors; (2) consistent application of both nonphysical and nonpunitive sanctions for unacceptable behaviors or rule violations; (3) involvement, positive interest, and warmth from adults; and (4) adults who act as both authorities and positive role models (Olweus, 2003). In addition to research evaluating the Olweus Bullying Prevention Program that reports substantial reductions in bullying victimization by 32 to 49 percent (Olweus, 2005), a meta-analytic review of school-based programs to reduce bullying and victimization found that programs inspired by this model worked best to mediate bullying victimization (Farrington & Ttofi, 2009; Hutzell & Payne, 2012).

Departing from the traditional prevention and intervention program model, Rapp-Paglicci et al. (2004) present a cost-effective and efficient method for schools that are interested in reducing bullying victimization. They suggest that schools need to identify bully-prone location(s) and then address those areas specifically. In fact, Rapp-Paglicci et al. (2004) propose that the majority of bullying victimization generally occurs in two or three places at school, such as classrooms and playgrounds where an authority figure is not present. This model complements the routine activities framework employed in the current study, suggesting that there are places and times that can facilitate the convergence of youth who bully and youth who are bully victims in spaces where there is an absence or lack of capable guardians. By educating school personnel on hotspots for bullying victimization, and training them to intervene at those specific locations, schools

are able to more effectively utilize administrators, teachers, and school security guards for prevention purposes (Rapp-Paglicci et al., 2004).

Similarly, initiatives that seek to mediate bully/victim issues should focus on educating school personnel on the types of interpersonal bullying victimization and cyberbullying victimization that occur, so that they are able to identify and target these behaviors. Although no patterns were observed for cyberbullying victimization, 2011 SCS data show that students most frequently reported being made fun of, called names, or insulted, in a hurtful way, and that someone spread rumors about them or tried to make others dislike them. By encouraging school personnel to be more aware of bullying behaviors, especially those behaviors that are more prevalent in their school, they are able to more effectively intervene when bullying victimization takes place.

In recent years, in the United States and abroad restorative justice approaches have been implemented in schools as a reaction to bullying and other incidents of student misconduct (McCluskey et al., 2008). The practice of restorative justice as a whole-school approach is about reducing school disorder and violence. Whereas restorative justice at the individual level is concerned with building positive feelings, such as excitement and interest, as well as employing mechanisms that decrease or eliminate negative feelings, such as anger and shame (Morrison, 2003). Through restorative processes negative actions and conflict are transformed into cooperative behaviors (McDonald & Moore, 2001; Morrison, 2003). Such outcomes seek to promote feelings of safety and security among school community members and behavioral changes among students. Although the implementation of this framework will require considerable

adjustments across all school levels, the potential for effective outcomes for victims, offenders, and the school community encourages the employment of restorative processes (Calhoun & Daniels, 2008). Restorative justice programs that approach bullying victimization specifically use forgiveness, reconciliation, and reintegrative shaming techniques proposed by Braithwaite (1989) to restore the relationship between the bully and the bully victim (Ferguson, Miguel, Kilburn, & Sanchez, 2007). Research exploring the impact of these programs finds that prevention and intervention efforts developed from this framework are meaningful and hold important implications for policy and practice aiming to reduce bullying and victimization in schools (Hutzell & Payne, 2012).

Developing evidence-based programs to reduce bullying and victimization is of great importance, given the academic, behavioral, and psychological problems associated with bullying victimization (Attwood & Croll, 2006; Bauman, 2010; Bauman et al., 2013; Glew et al., 2005; Hinduja & Patchin, 2010; Kochenderfer & Ladd, 1996a; Kochenderfer & Ladd, 1996b; Nansel et al., 2001; Patchin & Hinduja, 2010; Townsend et al., 2008). Hutzell and Payne (2012) highlight current research suggesting that bullying prevention and intervention can be accomplished through strategies, such as providing school personnel with education on the signs of bullying victimization (Kochenderfer & Ladd, 1996b; Storch & Esposito, 2003), parent and peer training (Farrington & Ttofi, 2009), propagating rules that are firm and clear that specify limits to undesirable behaviors (Farrington & Ttofi, 2009; Meyer-Adams & Conner, 2008), implementing prevention programs early in the school year (Kochenderfer & Ladd, 1996b; Meyer-Adams & Conner, 2008), and enforcing disciplinary sanctions for undesirable behaviors (Farrington

& Ttofi, 2009; Meyer-Adams & Conner, 2008). Ttofi et al. (2013) further argue that programs should be designed to capitalize on positive resources, such as protective factors, and reduce negative influences, such as vulnerability factors. Within the context of the current research, bullying prevention and intervention programs that encourage participation in schools activities as well as programs that incorporate fear reduction strategies may be effective in reducing victimization and avoidance behaviors in schools. It is hoped that these findings will feed into future prevention and intervention planning for programs that target bullying victimization as well as more general multicomponent programs that seek to create a nurturing school environment for all youth.

### **Conclusion**

The results of this dissertation parallel those of previous studies that have found an association between being bullied and avoidance behaviors (Agatston et al., 2007; Beran & Li, 2005; Dehue et al., 2008; DeVoe et al., 2005; DeVoe et al., 2011; Hinduja & Patchin, 2007; Hutzell & Payne, 2012; Juvonen et al., 2000; Kochenderfer & Ladd, 1996a, 1996b; Kowalski et al., 2008; Li, 2010; Mahady Wilton & Craig, 2000; Meyer-Adams & Conner, 2008; Parault et al., 2007; Parris et al., 2011; Schenk & Fremouw, 2012; Slee, 1994; Smith et al., 2004; Smith et al., 2008; Storch & Esposito, 2003; Storch et al., 2003; Townsend et al., 2008). Not only do these findings highlight the pervasiveness of bullying victimization and its consequences for targeted youth, they clearly indicate that bullying victimization can no longer be viewed as boys being boys or kids being kids. The effects of being a bully victim are both negative and harmful, and these incidents can result in a variety of psychosocial outcomes that include negative

adaptations or coping mechanisms, of which school avoidance is one. Although bully victims who avoid places in school or school altogether may temporarily circumvent bullying incidents, avoidance behaviors can include both short- and long-term consequences. Students who engage in avoidance behaviors are likely to miss important learning and social opportunities that are essential to child and adolescent development. School avoidance, for example, can significantly hinder academic success and lead to dropping out of school altogether. Moreover, dropping out of school can dramatically increase the probability of having economic, emotional, and physical problems later in life (Townsend et al., 2008).

These findings suggest that there continues to be an immediate need for the development and implementation of comprehensive school-based policies and programs to mediate bully/victim issues. Such policies and programs should consider protective factors that will decrease the relationship between bullying victimization and avoidance behaviors, such as participation in school activities (Dworkin et al., 2003; Feldman & Matjasko, 2005; Khoury-Kassabri et al., 2004; Lamborn et al., 1992; Smith, 2003), and seek to ameliorate aggravating factors that will increase the relationship between bullying victimization and avoidance behaviors, such as fear (Astor et al., 1999; DeVoe et al., 2005; Greeff & Grobler, 2008; Hutzell & Payne, 2012; Juvonen et al., 2000; Mahady Wilton & Craig, 2000; Parault et al., 2007; Rapp-Paglicci et al., 2004; Sapouna, 2008; Slee, 1994; Storch et al., 2003; Whitney & Smith, 1993). It is essential for future research to engage in a more expansive investigation of bully-prone locations, avoidance behaviors, as well as those protective and aggravating factors that impact the relationship



between bullying victimization and avoidance, as such findings could provide further support for anti-bullying initiatives in schools.

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## **BIOGRAPHY**

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