University of Cincinnati

Date: 9/15/2011

I, Brooke A Gialopsos M.S., hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Criminal Justice.

It is entitled:

For Whom the School Bell Tolls: Explaining Students' Fear of Crime and Perceptions of Risk

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2019

For Whom the School Bell Tolls:
Explaining Students' Fear of Crime and Perceptions of Risk

A Dissertation Submitted to the:
Graduate School of the University of Cincinnati

In Partial Fulfillment of the
Requirements for the Degree of

Doctorate of Philosophy (Ph.D.)

In the School of Criminal Justice
of the College of Education, Criminal Justice, and Human Services

2011

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ABSTRACT

Although fear and perceived risk are well studied among adult samples, fewer works have explored these phenomena among samples of students. This dissertation provided an inquiry into the fear and perceived risk of secondary students across various schools in Kentucky. More specifically, though, this dissertation examined the extent to which indicators of vulnerability (i.e., sociodemographic characteristics and prior victimization) and lifestyle/routine activities (i.e., target attractiveness, exposure, and guardianship) predicted fear and perceived risk of sexual and nonsexual in-school victimization. The shadow of sexual assault is also assessed by examining the extent to which fear and risk of sexual victimization predict fear and risk of non-sexual victimization. The rationality of students' fear and risk perceptions are considered in light of findings from such analysis.

Using data from the Rural Substance Abuse and Violence Project (RSVP), the findings revealed that many of the indicators of vulnerability and lifestyle/routine activities significantly impacted students' fear and perceived risk. Overall, female students and prior victims of crime expressed more fear and perceived greater risk than males and nonvictims. Low self-control and believing illegal items at school were easy to obtain consistently increased students' fear and perceptions of risk. On the other hand, attachment to peers and the perceived willingness of teachers to intervene in violent situations reduced the fear and risk perceptions of students. Given the consistency of many of these indicators across the models, it is argued that much of students' fear and perceived risk appear rational. What is more, that data show that a portion of students' fear and perceived risk of nonsexual victimization is driven by their fear and risk of

sexual victimization. Policy implications for these findings are presented, as are recommendations for future works.

DEDICATION

As with all of my life's accomplishments, this dissertation is dedicated to the memory of my parents, Greg and Sherry. I love and miss you terribly. Rest in peace…proudly.

ACKNOWLEDGMENTS

The completion of this dissertation would not be possible without the love, support, and encouragement of several people. Before I acknowledge and extend my appreciation to my family and friends, I would like to thank my dissertation committee, especially my dissertation chair, for their contributions and assistance with this dissertation. To my chair, Dr. Pam Wilcox, I literally could not have done this without you. Since the first day I worked for you, I have been in awe of your brilliance, strength, and kindness. Quite simply, you inspire me. Thank you for being there for me professionally and personally over the years. Your patience, encouragement, and mentorship have been invaluable. I will never be able to fully express how much I appreciate all you have done for me. Thank you for all of your support and advice, as well as the research and publication opportunities. I appreciate it all and look forward to future collaborations. You really are the best!!

Drs. Frank Cullen and Michael Benson, thank you so much for serving on my committee. Your feedback, support, and assistance have been incredible. Thank you again for everything – especially for your patience. You both have made this a much better dissertation and I am extremely grateful. I would also like to thank Dr. Shayne Jones for agreeing to serve on my committee. I truly appreciate your assistance and time. You were a great addition to this amazing committee and I hope to meet you in person one of these days.

Perhaps most importantly, though, I would like to thank my husband, Theo. You left your family and friends, moved to a terrible city, and worked a job that you despise all so I could fulfill my dream. I am forever grateful for you and the sacrifices that you have made. Your patience and encouragement have carried me all of these years. Although it sounds trite, you

believed in me when I did not believe in myself. For this and so much more, I am thankful. I love you more than anything and am a better (and now, officially, a smarter) person because of you. Thank you for everything you do and everything you are. L.

To Corey, my favorite and only sister, I am so sorry that I left you. I know I was not physically there for you when you needed me the most, but I hope that one day you can forgive me and understand why I needed to do this. And despite what you think, I *am* looking forward to living close to you again. As always, though, thank you for your endless love and support. You are an amazing sister, best friend, and partner in crime. I honestly could not have done this without you. You have inspired me in ways I never knew possible. I strive to be the family, friend, and role model that you need and deserve. I love you dearly! To Casey, my favorite and only brother-in-law, thank you for not only your support, but also for spending Christmases in freezing Ohio and for marrying my little sister. You are wonderful and I am glad you are part of our family!

In addition to my immediate family, a few special grad school friends – Cheryl Jonson, Will Stadler, and Justin Heinonen – deserve recognition. Cheryl, you have impacted my life in ways that you will never realize. Your friendship, assistance, and encouragement have helped me not only to complete the program, but to succeed. You were a fantastic study buddy and made this program much more manageable and enjoyable. Although I leave this program with a doctorate, the true prize was finding you. Completing this dissertation and earning this degree pail in comparison to our friendship. And just like I am lucky to have you, Theo and I are fortunate that you have such a wonderful husband. Thank you, Paul, for your support and friendship. And thanks for entertaining Theo when I needed to get work done or study. You have been such a great friend to both of us.

Willie, I would have never in a million years thought that you would become one of my closest friends. I am truly sorry that I misjudged and, initially, "hated" you. I have never been so wrong about anyone before. You are without a doubt one of the sweetest and kindest people I know and I am very lucky to have you in my life. Thank you for your friendship and encouragement. Justin, unlike with Will, I knew from the moment that we met that we would become good friends. I just did not know how short-lived that friendship would be. I miss you and our friendship. And to the rest of my cohort – thank you for motivating me whether you knew it or not.

I would like to acknowledge a few other grad school friends whose support or assistance helped to make this possible. Jessica Dunham, thank you for being a wonderful friend and crime prevention comp buddy. I wish you lived closer, but hope that you find the happiness and success that you deserve. I would also like to thank Kristin Swartz for showing me the HLM ropes. I am grateful for your help and for our new friendship. Go Colts!! And thanks to Marie Skubak Tillyer for answering my data questions. I really appreciate your patience and assistance.

To my best friends – Charla, Bay, and Julie (in order of how long I have known you, of course) – thank you so much for all of your support. I am sorry I moved away and missed out in many of your important life events. Please know how much I love and miss you all. I am thankful for each of you and forever grateful to have friends like you. And to the members of the sac, especially Mendi, Renee, John, Brian, and Jason, thank you being wonderful neighbors and friends. You provided fantastic distractions and breaks when I needed them the most. Thank you for being so much fun! I would also like to thank my extended family, particularly the Goldman, Harvey, Savini, Kane, and Chattle families, as well as my "adopted" families, the

Carlsons, Grahams, and Nelsons. Thank you all so much for your continual love and encouragement. You have supported and inspired me from afar and I am fortunate to have you all in my life. My parents left us in great hands. I love you all!

In addition, I want to acknowledge all of the other UC professors and faculty for helping to make these last several years such a memorable part of my life. A special thanks to Dr. John Wright for giving me the incredibly motivational chat that I desperately needed. You helped me to understand that the best dissertation is a *done* dissertation. Thank you for kicking me into high gear – I never knew you could be so inspirational! I would also like to thank Shelley Paden for her continual support and encouragement. Thanks for always checking up on me and my progress. You are great!!

Thanks to my new colleagues and friends at Mount St. Joe, especially J.W. Carter and Cindy Stewart. I have appreciated your kindness and support and am delighted to be part of such a wonderful family at the Mount. I would also like to thank Drs. Joy Pollock, Quint Thurman, and Kim Rossmo from Texas State University. I never imagined that I had what it takes to successfully complete a doctoral program. Thank you for your guidance and for insisting that I continue on with my education – specifically at the University of Cincinnati. It was undoubtedly one of the best decisions of my life.

Thank you all from the bottom of my heart!

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Chapter One:

THE IMPORTANCE OF FEAR IN CRIMINOLOGY

This dissertation examines the extent to which indicators of individual vulnerability and lifestyle/routine activities are related to fear of victimization at school and perceptions of risk among a large sample of adolescents. In doing so, measures of target attractiveness, exposure to motivated offenders, and capable guardianship will be explored. What is more, this work will focus on the effects that these indicators have on students' fear and perceived risk of in-school sexual and non-sexual victimization, thus addressing the generalizability of vulnerability and lifestyle/routine activities (i.e., opportunity) as correlates of fear and perceived risk of distinctly different types of crime. Such an examination of the general applicability of vulnerability and lifestyle/routine activities to predicting fear and risk perception has implications for the "rationality" of fear and risk among adolescents across victimization type. However, before such an empirical endeavor begins, it is essential to discuss the evolution of fear and perceived risk research, as well as their current role in the field of criminology.

For decades, criminologists and victimologists have studied fear of criminal victimization. While fear has long been in the public's mind, it received national recognition in 1967 in the President's Commission on Law Enforcement and the Administration of Justice report. It was here that the Commission recognized that: "The most damaging of the effects of violent crime is fear, and that fear must not be belittled" (1967a, p. 3). In fact, a primary reason the historic Commission was formed was to address and, hopefully, curtail the public's deep-seated anxiety towards crime. While acknowledging that the public should be alarmed about the then-recent increase in crime, their mission was to identify: 1) what was causing Americans to be

afraid or anxious, 2) whether these emotions were realistic, 3) how citizens were adapting to these emotions, and 4) what the criminal justice system and government could do to calm this anxiety and fear (President's Commission, 1967a).

The Commission's report is riddled with accounts of feeling unsafe in neighborhoods at night, desires to move to other areas, hesitations towards strangers, and protective and avoidance behaviors undertaken in response to the crime (and fear) problem. However, the fear of strangers, specifically being attacked by one when out alone, was recognized as one of the leading concerns among Americans (Conklin, 1975; McIntyre, 1967, 1975; President's Commission, 1967a; Skogan, 1976). Personal or violent crimes, as well as those that involve a weapon, were also highly feared (Brooks, 1974; McIntyre, 1967; President's Commission, 1967b). What is more, according to Conklin (1975), this fear of violent crime at the hands of strangers had evolved into a fear of the streets, particularly the streets of downtown, inner-city areas.[1]

The findings of the Commission's report served somewhat as a turning point in the study of fear of crime. While much attention had previously been given to individuals directly victimized by crime, the Commission's report drew attention to those individuals *indirectly* victimized by crime (Conklin, 1975; Warr, 2000). In doing so, it became readily apparent that far more individuals experience fear of criminal victimization than actual criminal victimization. It is this range of the fear problem that makes it so difficult to tame. For instance, while crime victims experience the many costs of crime, only one of which is fear, anyone aware of instances of victimization may also experience fear of crime (Miller, 1973 as cited in Lewis & Salem,

[1] According to Garofalo and Laub (1978), this makes sense since there are more encounters with strangers in urban areas.

1988). This has lead some, such as Conklin (1975), to argue that the costs of fear likely surpass those of crime.

Research suggests that fear of victimization, both fear for ourselves and for our loved ones, is rampant in our society. Although it is difficult to pinpoint exact percentages, researchers typically agree that approximately half of Americans fear becoming a victim of crime (Erskine, 1974; Warr, 1995; Warr & Ellison, 2000). In fact, reports from the Bureau of Justice Statistics reveal that Americans fear violent victimization more than death caused by cancer or heart disease and more than injuries sustained from car accidents or fires (Haghighi & Sorensen, 1996). Similarly, accidents caused by living or working in industrial areas, as well as those involving inadequate medical care are substantially less likely to invoke fear even though they are more frequent occurrences (McIntyre, 1967). As a society, we are so fearful of crime that the majority of us are reportedly willing to surrender basic rights and liberties in order to improve our safety (Sherman, 1994).

What is more, fear of victimization is so prevalent in our society that Americans' responses to fear (i.e., our protective and precautionary measures) represent a fundamental and normative aspect of our culture (Warr, 2000). According to the report issued by the President's Commission (1967a), both crime and the fear and anxiety associated with crime have deteriorated the basic quality of life in our country. Quite simply, fear, particularly of strangers, is depleting the lives of many (McIntyre, 1967, 1975). Inherent in this fear is the risk of some sort of loss (Marks & Nesse, 1994). Loss, however, can be both tangible and intangible in nature. While damage to person or property is the proverbial form of loss, there is also emotional or psychological loss (Clark, 2003; Janoff-Bulman, 1985). Victimization, both directly and indirectly, can destroy our emotional possessions as well. It can shatter our

assumptions about the world, cultivate insecurity of life, dismantle our belief systems, and destroy our trust in ourselves and others (Clark, 2003; Clemente & Kleiman, 1977; Ferraro, 1996; Janoff-Bulman, 1985). At the societal-level, fear of crime has economic, cultural, and moral consequences that we must face. Not only can fear of crime reduce our opportunities for pleasure, sociability, and entertainment, but it can affect our cultural enrichment as well (Brooks, 1974; Conklin, 1975; McIntyre, 1976; President's Commission, 1967b). And just as it can cause individuals to lose faith and trust in others, it can wreck the social and moral order that underlies our society.

Fear of crime, therefore, is undoubtedly a major social problem that, according to Warr (2000) and others, should be viewed and treated separately from the crime problem. Quite simply, fear is an entirely different beast. High crime areas, for instance, may not necessarily be fear-provoking (Brantingham & Brantingham, 1997).[2] Not only is it quite possible to feel safe in areas with a lot of crime, but feeling unsafe in low crime areas is also likely. Studies have shown that this applies to both personal and property crimes (see Brantingham & Brantingham, 1997). For example, when looking at crimes on university campuses, the Brantinghams found that most crimes occurred in places such as the library or student union where students reportedly felt safe. This is but one of the many paradoxes in the fear of crime literature.

Moreover, the pervasiveness and severity of this issue, coupled with its seemingly irrational nature, make fear of crime arguably more difficult to treat and handle than crime and criminality (Brooks, 1974). Because of this, policies and programs tailored to reducing or preventing crime may not work on reducing or preventing fear of crime, particularly when the fear is not based on the frequency of crime (Brantingham & Brantingham, 1997). Not only can actual reductions in crime not correspond to reductions in fear (Brooks, 1974), but they may,

[2] Of course, places or areas can experience large amounts of crime *and* induce fear.

actually, increase the public's fear of crime (Balkin, 1979; Ferraro, 1995). On the other hand, interventions that reduce fear can, in reality, increase crime – for example, when it causes individuals to let down their guards and/or when it exposes them to people or situations that were previously avoided (Brantingham & Brantingham, 1997). Because fear of crime and its related prevention may be inherently different than the crime problem and its prevention, more research in this area is necessary.

CONTRIBUTIONS OF THE PRESENT STUDY

All things considered, fear of crime is just as important as crime itself (Clemente & Kleiman, 1977). But like the crime problem, there is still much to learn. This dissertation extends the current field of knowledge in several ways. First, while a large portion of the victimization literature focuses on the fear and perceived risk of adult respondents, a much smaller portion is derived from student respondents. Among the studies that do spotlight students, many of these are geared towards college students. However, the focus of this work is on fear and perceptions of risk among secondary students. While there is an assortment of literature on bullying and school violence in this particular context, the literature on fear and perceived risk of in-school victimization, in general, and sexual victimization, in particular, is quite limited. The research presented in this dissertation will help to close this gap in the literature.

Furthermore, the school setting is a particularly noteworthy context within which to examine fear of victimization and perceptions of risk. Interestingly, the 1967 President's Commission on Law Enforcement and the Administration of Justice report argued that crime,

and the fear that it generates, will not be curtailed without the help of several major institutions. The first of these institutions that was poised to make a difference was the schools. While it is definitely possible that the knowledge and resources gained in school can help control these social problems, the President's Commission failed to consider that the schools themselves can be crime ridden and quite fear provoking, especially for young females. While the school institution may, indeed, be important in reducing crime and fear of crime among the general public, reducing fear of crime in the schools requires a different set of weapons. Understanding how fear of crime and perceptions of risk operate in the school environment is vital to the creation of effective fear (and crime) reduction programs.

Second, while existing, relevant empirical studies have identified numerous individual-level indicators of vulnerability and lifestyle/routine activities that may affect students' fear and perceived risk, few works have done so in a meaningful theoretical fashion. This dissertation explores the true theoretical direction of some of these factors, ultimately questioning whether fear is rational. For instance, several variables – attachment to parents, low self-control, and self-reported delinquency – may each predict fear of victimization and perceptions of risk in a positive or negative manner. Both possibilities have some logical, theoretical, or empirical backing. This dissertation hopes to shed light on the functionality and rationality of risk and fear by examining the importance of indicators of vulnerability and lifestyle/routine activities on students' fear and risk perceptions. Although the rationality of adults' fear and perceived risk have been explored in detail, only one known study (i.e., Melde, 2009) has addressed the rationality of adolescents; however, his work focused on students' *general* fear and perceptions of risk. In doing so, Melde's (2009) research failed to examine the rationality of secondary students' fear and risk perceptions for *in-school* victimization.

Third, this dissertation is particularly interested in the gendered fear of crime and perceptions of risk, in general, and the fear and risk of female students, in particular. Based on the growing literature on the shadow of sexual assault hypothesis, this dissertation compares the perceptions of risk and fear of in-school victimization for sexual victimization and for other, nonsexual victimization. This is vital as fear of rape is theoretically and conceptually distinct from many other types of victimization. Moreover, the findings from prior works indicate that fear of sexual assault fuels many other fears for female respondents. Thus, sexual victimization is a completely different entity and should be studied separate from and in addition to the fear and perceived risk of other types of crimes. Also, by studying fear of sexual assault apart from other violent and property offenses, this dissertation will be able to isolate fear of rape without worrying whether or not this particular fear is driving the findings of a more general fear of crime or perceptions of risk measure. Additionally, because of the pervasiveness of the female fear of rape, any meaningful work that can shed light on this issue is justified.

Finally, while much of the prior literature on fear of crime mismeasures or confuses fear of victimization with perceived risk, this work clearly separates the two. Following in the footsteps of Ferraro and LaGrange, Warr, Wilcox Rountree, and others, this dissertation includes both perceptions of risk as well as fear of victimization as dependent variables. The benefits of this separation, as discussed in the next chapter, are immense and necessary to truly enhance the literature and practice of fear reduction. Fear of crime research that fails to distinguish between these two concepts discounts prior important empirical findings on the nature of fear and only partly enhances our knowledge base. The separation of these concepts, in and of itself, helps to fill an important void in the existing literature on secondary students.

In all, this dissertation hopes to provide an essential piece of the fear of crime puzzle by analyzing how gender, prior victimization, forms of attachment, low self-control, delinquent lifestyle, and guardianship all impact students' fear and perceived risk of sexual and nonsexual victimization. While a handful of studies have generally examined several of these indicators, none have used them to explored fear *and* perceived risk of sexual *and* nonsexual in-school victimization among secondary students. Only one other study (i.e., May, 2001a) comes close to this effort, yet his work only looked at *fear* of sexual and nonsexual victimization and was limited to high school students. However, no known studies have done so while treating risk perception as a distinct dependent variable. Also, none of the existing works have used a large sample of both middle and high school students to explore these crime-specific outcome variables. In this way, this dissertation theoretically and empirically supplements the existing state of fear of victimization literature.

DISSERTATION OVERVIEW

There are seven chapters in this dissertation. The chapter that follows – Chapter Two – discusses the definitional, conceptual, and measurement issues that commonly impede research studies in the fear of crime literature. Included within this is the ever-important discussion on how fear of crime is a very different phenomenon than perceived risk. Following this, chapter three includes a discussion of how indicators of individual vulnerability and lifestyle/routine activities affect fear of crime and perceptions of risk.[3] Although various demographic variables

[3] Please note that this dissertation focuses exclusively on individual vulnerability. However, there is a parallel branch of literature that focuses on *environmental* vulnerability and its effect on fear of crime and perceptions of risk. Such literature includes common structural or environmental fear generators, such as disorder (LaGrange, Ferraro, & Supancic, 1992; Lewis & Maxfield, 1980; Lewis & Salem, 1988; Merry, 1981; Skogan, 1990; Skogan &

that serve as proxies for vulnerability will be discussed in this section, particular attention will be given to gender and its impact on fear of crime and perceived risk. Indicators of vulnerability and lifestyle/routine activities are correlates of fear because fear is presumed to be, at least in part, rational. However, Chapter Three also explores the validity of this view and the rationality of fear and perceived risk. Chapter Four begins with a discussion on fear of crime and perceived risk in the school setting and concludes by outlining the research hypotheses of this dissertation.

In Chapter Five, the data for this dissertation, the Rural Substance Abuse and Violence Project (RSVP), is explored. Attention is also given to the measurement of key independent and dependent variables. Chapter Six presents an analysis of the data using hierarchical logistic regression, as well as a discussion of the key findings. Finally, in Chapter Seven, the policy implications of this dissertation are discussed, as well as the limitations of this study and suggestions for future research.

Maxfield, 1981; Taylor, 1999, 2001; Taylor, Koons, Kurtz, Greene, & Perkins, 1995; Wilson & Kelling, 1982), the built environment (Fisher & Nasar, 1992, 1995; Foster & Giles-Corti, 2008; Hunter & Baumer, 1982; Merry, 1981; Newman & Franck, 1982; Taylor, Gottfredson, & Brower, 1984; Wilcox, Quisenberry, & Jones, 2003), and community cohesion (Ferguson & Mindel, 2007; Franklin, Franklin, & Fearn, 2008; Gates & Rohe, 1987; Hartnagel, 1979; Liska & Warner, 1991; Skogan & Maxfield, 1981; Taylor, 2002; Taylor & Hale, 1996; Wilcox Rountree & Land, 1996a). For additional information on how the neighborhood influences fear and/or perceived risk, see Donnelly (1989), Franklin et al. (2008), Maxfield (1984), Scarborough, Like-Haislip, Novak, Lucas, and Alarid (2010), or Wyant (2008).

Chapter Two:

DEFINING AND MEASURING FEAR OF CRIMINAL VICTIMIZATION

Before a discussion on the correlates of fear of crime and perceptions of risk can commence, it is important to discuss the definitional and measurement issues that have plagued existing research and that continue to impede the fear of crime literature. While the study of fear has become validated in the field of criminology over the years, researchers still face obstacles when they attempt to conceptually define and empirically test fear of crime. In short, a large portion of the fear of crime literature is tainted with measurement mistakes (Ferraro & LaGrange, 1987). In this section, definitional problems, distinguishing fear of crime from other emotions as well as from perceived risk, and other measurement issues are carefully reviewed. It is important to shed light on these issues as they are hampering the theoretical and conceptual development of our understanding of fear of crime and may be generating misguided policies and fear reduction programs (Ferraro & LaGrange, 1987). What is more, some researchers are so suspicious of the validity and reliability of past measures and their concomitant findings that they argue the true nature of the fear problem has been misrepresented (Farrall, Bannister, Ditton, & Gilchrist, 1997). Rather than understanding the reality of the fear issue, they suggest our understanding of it is simply a product of our flawed measurement instruments and research processes.

Defining Fear of Crime

Fear is regularly used to refer to the existence of apprehension (Rachman, 1990). In everyday life, "fear" is tossed around in conversation without regard for the actual meaning or

true comprehension of the term. We assume that the definition and spirit of the word are universally understood. And in social conversation, this works fairly well. Problems surface, however, when we seek to use "fear" as a scientific term (Rachman, 1990). Though everyone is familiar with the concept of "fear," actually conceptualizing this notion for research purposes has proven quite difficult.

Part of this challenge, at least in the fear of crime literature, can be attributed to the inability of researchers to agree on a definition (Warr, 2000) or to presume such a definition was obvious and thus unnecessary (Ferraro, 1995). While numerous definitions of fear have been utilized over the years, several researchers have tried to create a hallmark definition of fear. Initially, DuBow, McCabe, and Kaplan (1979) defined fear of crime as "a wide variety of subjective and emotional assessments and behavioral reports" (p. 1). Although they also provided an important classification of perceptions of crime (to be discussed in this section), their definition itself is flawed, particularly because it fails to mention "crime." As a result, it is difficult to distinguish these emotional assessments and behaviors from those caused by reactions to death, for instance. DuBow et al.'s (1979) definition, like the next one discussed, also lacked precision. Garofalo (1981) defined fear of crime "as an emotional reaction characterized by a sense of danger and anxiety…produced by the threat of physical harm" (p. 840). Problems with this definition include the vagueness of the "emotional reaction" (e.g., is it a negative reaction, like panic, or a positive reaction, like excitement) and the explicit use of "physical harm." Plenty of non-violent, property offenses do not cause physical harm, yet lead to fear of crime.[4] Also, the definition employed by Garofalo (1981) did not explicitly refer to crime; therefore, any non-criminal event, like a car accident, could elicit the reaction he described.

[4] Garofalo (1981) viewed this as a strength of his definition due to the qualitative differences between losses caused by personal crime and those from property crime.

Shortly after, Ferraro and LaGrange (1987) proposed that fear should be defined as "negative emotional reactions generated by crime or symbols associated with crime" (p. 73). The obvious problem with this definition, as remarked by Warr (2000), is that "negative emotions" could include feelings other than fear, including anger, despair, or sadness. Years later, Ferraro announced a slightly more refined definition of fear of crime. In his eyes, fear of crime should be defined as "an emotional reaction of dread or anxiety to crime or symbols that a person associates with crime" (Ferraro, 1995, p. xiii). Not all have agreed with or utilized this definition, though Ferraro's definition has become a staple in the fear of crime literature. Still, much of what has been studied under the rubric of "fear of crime" is anything but fear of crime (Garofalo & Laub, 1978). This phrase, according to Warr (1984), has taken on so many conflicting meanings that "it is in danger of losing any specificity whatsoever" (p. 681).

Comparing Fear of Crime to Other Fears

Before continuing with a discussion on the problems of defining and measuring fear of crime, it is important to briefly discuss whether fear of crime is actually different than other fears that torment people. According to some researchers, such as Warr (2000), criminologists have mistakenly treated fear of crime as qualitatively distinct from other fears in life. He argues that the only true difference is the source of the fear (i.e., the stimulus). Instead of being afraid of heights, snakes, or flying, the object of the fear is actual crime itself, as well as its consequences and aftermath. However, when looking at the components and acquisition of fear of crime, it seems to parallel those of general fear. According to researchers outside of criminology, such as Rachman (1990), the components of general fear include a subjective experience of apprehension, psychophysiological changes when facing an identified stimulus, and attempts to

avoid said stimulus or fear-provoking situations. In this regard, it appears that fear of crime fits nicely within the broader fear framework. According to Clark (2003, 2004), while fear of crime definitely does generate apprehension and avoidance behaviors, the research on the physiological changes is scant, but seems to apply. It is suggested that future researchers better explore this avenue (Clark 2003, 2004) in order to more fully understand the nature of fear and how, if at all, it varies from other fears. In this vein, Warr (2000) proposes measuring actual fear in real time situations or laboratory settings by monitoring physiological changes and reactions.[5] Although Warr acknowledges that doing so in natural settings may make it difficult to reveal the actual source of fear (e.g., is it the scary man or the dark alleyway that is inducing fear?) or to differentiate fear of crime from other types of fear (e.g., is it the bad storm approaching or the car accident that just occurred that is causing fear?). In more controlled experimental settings, however, cues and stimuli can be isolated, which may help enhance our knowledge of fear while circumventing traditional problems with self-report measures, such as recall errors or the reluctance of some populations (i.e., men) to disclose information (Warr, 2000). This may be the future of fear of crime studies, particularly since people are not always willing or able to recognize their fears (Rachman, 1990).

Beyond the components of general fear, it appears that fear of crime is also similar to general fear in terms of the pathways to fear. Rachman (1990), for example, suggests that the acquisition of general fear consists of three paths: conditioning, vicarious acquisition, and transmission of fear-inducing information. There is some discrepancy on whether prior victimization (i.e., conditioning) causes fear of crime (to be discussed later), but these pathways to general fear seem applicable to fear of crime. For example, both general fear and the specific

[5] Gabriel and Greve (2003), however, question whether fear of crime will produce a pattern of reliable physiological reactions.

fear of crime can develop from directly or indirectly experiencing a distressing event or through the spread of information (Clark, 2003).

Nevertheless, while scores of empirical research and media accounts liken fear of crime to a crime phobia, being afraid of crime and having an actual clinical phobia is not the same (Clark, 2003). Using the Feelings about Crime Study (FACS), Clark (2004) examined whether fear of crime was related to other psychological phobias (i.e., social phobia, blood-injury phobia, and agoraphobia). Because previous works revealed that individuals who are more fear-prone usually score higher on measures of phobic affect, Clark (2004) proposed that there should be positive correlations between fear of crime and the other phobias. However, rather than finding significant positive correlations, she found negative ones. Clark (2004) argues that there is more than just fear in fear of crime; other emotions or feelings about crime should also be investigated.

Fear of Crime Distinguished from Other Judgments and Values

It is important to note that what we define, and subsequently measure, as fear of crime may not really be fear at all. It has been proposed that what many instruments actually tap into are other emotions associated with crime (see also Clark 2003, 2004). Aware of the importance of separating fear from other emotions or feelings, DuBow et al. (1979) set forth an original typology of perceptions of crime. In doing so, they outlined the conceptual ambiguities found in prior studies of fear of crime while arguing that many researchers who claim to measure fear of crime use questions that actually tap into the concepts of risk, danger, concern, worry, anxiety, or behavioral reactions to crime. Not only does this make it difficult for others to interpret prior research findings, but it also can lead to inconsistent or conflicting findings (DuBow et al., 1979). Furthermore, according to Ferraro and LaGrange (1987), the early inefficiency in

empirically defining and measuring fear has hindered our ability to fully understand and address this widespread social problem. They, like Warr, contend that there are so many differing interpretations of fear of crime that the phrase itself has become virtually meaningless.

DuBow et al.'s (1979) typology hoped to provide some definitional and conceptual clarity for future researchers. For instance, they classified crime perceptions into judgments, values, and emotions and separated perceptual references into general and personal. Whereas general references dealt with broad values, judgments, and emotions about other people, personal references were those based on an individual's own experiences (DuBow et al., 1979). Drawing from the work of Fowler and Mangione (1974 as cited in DuBow et al., 1979), they created six distinctions in perceptions of crime. Below is the classification of crime perceptions figure used by Ferraro and LaGrange (1987), which was adapted and slightly modified from DuBow et al.'s (1979) original typology.

Figure 2.1: Typology of Crime Perceptions (Adapted from Ferraro & LaGrange, 1987)

		TYPE OF PERCEPTIONS		
		COGNITIVE		**AFFECTIVE**
		Judgments	**Values**	**Emotions**
LEVEL OF REFERENCE	**General**	Risk to others; Safety assessments (i.e., perceived crime risk)	Concern about crime to others	Fear for others' victimization (i.e., altruistic fear)
	Personal	Risk to self; Safety of self (i.e., perceived risk)	Concern about crime to self	Fear for self victimization (i.e., personal fear)

In addition to reorganizing the layout, Ferraro and LaGrange (1987) labeled judgments as cognitive perceptions (i.e., our thoughts), emotions as affective perceptions (i.e., our feelings), and values as falling in between these two. They also elaborated on the descriptions of each type of perceptions. Because the Ferraro and LaGrange figure is commonly cited in articles and

books (see e.g., Lab, 2010), it is used here in lieu of the original DuBow et al. typology. However, the major benefit of both typologies is that it distinguishes these perceptions from one another and does so at both the individual and community levels (Ferraro & LaGrange, 1987). The following few paragraphs provide an integration of the modified typology with other noted definitional problems in the fear of crime literature.

Judgments. According to Ferraro and LaGrange's (1987) modified typology, *general* judgments deal with risk to others, as well as crime or safety assessments. This parallels the early definition in DuBow et al.'s typology where general judgments concentrated on rates of victimization and comparisons therein. *Personal* judgments, on the other hand, focused on the probability of personal risk (DuBow et al., 1979) and, more recently, on self safety assessments (Ferraro & LaGrange, 1987). DuBow et al. note that individuals may perceive the amount of crime (i.e., a general judgment) to be different from their own risk of victimization (i.e., a personal judgment). Because of differences in perceived vulnerability, some people may feel they are more or less likely to be victimized than the average person. Ferraro and LaGrange caution, however, that both types of judgments are "subjective interpretations of reality" and likely do not reflect the actual real risk. This important concept, perceptions of personal risk, will be expanded and compared to fear later in this chapter. For now, it is important to note that a large chunk of the fear of crime literature has mistakenly equated fear of crime with perceptions of risk, which, according to many researchers, is a serious mistake (DuBow et al., 1979; Ferraro & LaGrange, 1987). Substituting one for the other is problematic since they are distinct concepts and because the relationship between them is quite complicated.

Values. In both the original and revised typologies, *general* values focus on concern for crime, as well as public and political opinions on the seriousness of crime (DuBow et al., 1979),

while *personal* values are used to discuss personal tolerance or intolerance regarding deviant behavior (DuBow et al., 1979) or personal concern about crime (Ferraro & LaGrange, 1987). In both contexts, it is important to distinguish concern from fear of crime. Early measures of fear were used interchangeably with general concern about crime. This is problematic, Furstenberg (1971) argues, because compared to fear, concern deals more with approximations of the seriousness of the national crime problem.[6] He argues that it is entirely possible to be bothered by the country's crime situation, but not at all afraid of falling victim to it. In other words, a person may view crime as a major threat to society without being personally threatened by it (Furstenberg, 1971). This notion was tested and supported by Furstenberg's analysis of data from a public reaction survey in Baltimore. He found that respondents who reported more concern about crime were not more afraid of personal victimization.[7] In fact, fear and concern operated differently with area crime rates. While fear was strongly and positively related to area crime rates, concern was weakly and negatively related. Compared to individuals in high crime neighborhoods, individuals in low crime areas exhibited more concern about crime (Furstenberg, 1971). He cautioned that individuals living in high crime areas may be more concerned with other social issues, such as jobs and discrimination, but this example highlights the potential danger of poor or inappropriate operationalization of fear of crime, as well as the importance of separating fear from other emotions, i.e., concern.

Further, separating fear of crime from concern is necessary as Furstenberg (1971) and others have toyed with the idea that concern with crime may, in actuality, be targeting resistance to social or cultural change. Although written in an era marked by radical social transformations,

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[6] Problems with Furstenberg's definitions will be discussed shortly. Essentially, what he labels fear (perceptions of one's own likelihood of being victimized) is more consistent with the notion of perceived risk.
[7] Using different measures and samples than Furstenberg, Lotz (1979) did find a weak association between fear and concern in his replication study.

Furstenberg's analysis of the Baltimore data tentatively supports this idea that concern is often a proxy for commitment to the current social order. He argues that opposition to or discontent with the social transformations was associated with concern over the crime problem. The social change that faced the most resistance was racial integration (Furstenberg, 1971). In a similar vein, van Dijk's (1978) work in the Netherlands suggests that measures of perceptions of crime and fear of victimization may actually be picking up on the bitterness felt by residents regarding the then-recent cultural and political change. Taken collectively, such research suggests that public perceptions of crime tap into broader feelings regarding the social and political climate (Sacco, 1982). Because of this, public perceptions of crime should be reconceptualized (Sacco, 1982) and considered subjective, quality of life gauges (Garofalo & Laub, 1978; see also Hale, 1988).

Emotions. According to Figure 1, *general* emotions deal with fear for others, or altruistic fear, while *personal* emotions emphasize fear for self (DuBow et al., 1979; Ferraro & LaGrange, 1987). Although the focus of this dissertation is on personal fear of crime, when measuring and discussing fear, it is also important to distinguish it from altruistic fear.[8] According to Warr and colleagues, in addition to fear for oneself and one's own safety, the fear for loved ones (i.e., spouses, children, parents, siblings, and friends) and for their safety is extremely powerful (Warr, 1992, 2000; Warr & Ellison, 2000). For many, this fear may be stronger and more relentless than personal fear of crime. In fact, using the Texas Poll, Warr and Ellison (2000) found that while 63% of respondents were concerned about their own personal safety, 70% of respondents reported being worried over the safety of a loved one in their household. More specifically,

[8] Note that Snedker (2006) distinguishes between altruistic and vicarious fear of crime. She argues that altruistic fear, as proposed by Warr and colleagues, implies fear for others that is accompanied by a change in behavior that incites action. On the other hand, Snedker suggests that vicarious fear be used when referring to fear for others that fails to motivate action.

respondents were more likely to express fear for their spouses and children than for themselves (Warr & Ellison, 2000). Parents are particularly worried about their children being robbed at school or in their neighborhood (Lalli, Savitz, & Rosen, 1977). It is important to note that altruistic fear may be particularly heightened by the media's coverage of certain crimes. For example, Warr (2000) suggests that public reaction to the Columbine High School massacre, as well as other crimes against children, may be linked to fear or concern for one's own children. Even though vicarious or altruistic fear is gaining prominence in the fear of crime literature, most studies still focus on fear for oneself.

Most researchers do not confuse fear for self with fear for others, but many claim to measure personal fear while, in actuality, their measures tap into these other types of crime perceptions (i.e., judgments or values). For instance, when researchers (e.g., Baker, Nienstedt, Everett, & McCleary, 1983) ask respondents "how safe would you feel walking alone at night in your neighborhood," they are asking for judgments regarding risk rather than an emotional reaction to crime (e.g., personal fear) (Ferraro & LaGrange, 1987). Yet, these researchers interpret findings and make conclusions geared toward fear rather than perceptions of risk. By not actually measuring what they say they are measuring, the construct validity of these measures is also called into question. Consequently, much of the research is tainted by the inability of researchers to distinguish between perception, emotion, and cognition (Warr, 2000). Although DuBow et al. highlighted the importance of separating fear of crime from other crime perceptions, their typology was well cited by researchers, but not well received in practice. One of the exceptions to this, as already mentioned, is the work of Ferraro and LaGrange. Based on their critique of early fear of crime studies and their realization of the measurement crisis, Ferraro and LaGrange (1987) called for future researchers to be far more cautious in defining

and measuring fear of crime. In doing so, they recommend that an emotional state of fear (e.g., "how afraid") is a more reliable indicator of fear of crime than judgments or concerns about crime and should be used in future research endeavors.

Nevertheless, a great deal of the current literature on fear of crime continues to suffer from the same definitional and conceptual pitfalls as the early works. The only difference now is that because these poor definitions and measures have been used for so long, researchers justify their continued use as being consistent with the existing literature. As Warr (2000) points out, this disarray might actually be comical, if it were not dealing with the very important and serious issue of fear. The mishmash of definitions and measures of fear that has been used in the past is so bothersome that it has led some to argue that a more appropriate and reliable measure is one that substitutes "worrying" about crime for "fear" (Williams, McShane, & Akers, 2000; see also Gray, Jackson, & Farrall, 2008 or Jackson, 2005). In fact, Lupton (2000) and others have specifically chosen "worry" rather than "fear" with the hopes that it would allow men to more fully acknowledge and admit their emotions. The need for such a recommendation helps to further reveal the extent of the definitional and conceptual quagmire that exists in the fear of crime literature.

Distinguishing Fear of Crime from Anxiety. Although not discussed in the typology of crime perceptions, another glitch in the definitional and conceptual process is confusing fear with anxiety. Clinically speaking, fear is also distinct from anxiety. Even though the "Ferraro definition" of fear of crime mentioned "anxiety," other researchers, particularly those with a psychology background, have cautioned against this. Because fear focuses on more immediate threats from realistic dangers and anxiety refers to either future or past events, they should probably not be used interchangeably (Clark, 2003; Rachman, 1990). Also, with anxiety, not

only are the feelings of apprehension hard to identify, but linking them to tangible sources of stimulation is not easy. Fear, however, stems from more tangible sources of stimulation (Rachman, 1990). According to Clark (2003), this distinction between fear and anxiety lies in the identification of the causal stimuli (see also Freud, 1920). While the differences between fear and anxiety have been reviewed at length in the psychology literature (see e.g., Öhman, 1993), it seems that based on the given descriptions, fear and anxiety should be treated as distinct, but likely related, phenomena.

Separating Fear of Crime and Perceived Risk

As already noted, some of the most frequent mistakes found in the fear of crime literature involve perceptions of risk. One of these errors, according to Ferraro (1995), is the omission of risk or perceived risk from fear of crime studies. Many researchers have simply ignored this key concept even though studies that utilize risk have yielded important findings, several of which are discussed below. Besides overlooking perceptions of risk, arguably the biggest error of prior literature is to use fear of crime and perceived risk of victimization synonymously. Rather than specifically defining "fear," typical measurements imply that it is the perceived likelihood of becoming victimized (Yin, 1980). However, it is erroneous to assume that one can be substituted for the other. Although both perceived risk and fear are types of crime perceptions, fear is an emotion while perceived risk is a judgment. Unlike fear, perceived risk is the recognition of possible danger in a situation (Ferraro, 1995). To illustrate this difference, a person may be aware of the high risk of walking alone at night and avoid doing it, thus resulting in a lower level of fear (Ferraro & LaGrange, 1987). Likewise, a person may be afraid of violent crimes while at the same time aware that the risk of becoming a victim to one is quite low.

Despite these important definitional distinctions, many studies claim to be measuring fear of victimization while, in fact, they are tapping into perceptions of risk. Some of the earliest fear of crime pieces committed this conceptual faux pas. For example, Biderman, Johnson, McIntyre, and Weir (1967) and Reiss (1967) both used measures of perceptions of neighborhood risk while calling it fear or some related term.[9] Even Furstenberg's (1971) distinction between fear and concern (as mentioned above) seems to be more accurately described as perceptions of risk and concern. Also, some researchers combine fear and risk questions, but then analyze and discuss the findings from only the fear vantage point (Ferraro, 1995). Many of the most frequently used measures of fear, including the National Crime Victimization Survey (NCVS) questions (formally known as the National Crime Survey or NCS), may actually assess perceived risk or a combination of perceptions of risk and fear, yet results are typically construed in the context of fear (Ferraro, 1995; Ferraro & LaGrange, 1992; LaGrange et al., 1992).

Though there is a definite trend in the literature to equate fear of crime with perceptions of criminal victimization (for critiques of this problem see, e.g., DuBow et al., 1979; Ferraro 1995; Ferraro & LaGrange, 1987; Miethe & Lee, 1984; Yin, 1980), not all research has fallen into this conceptual trap. One of the earliest distinctions between fear of crime and perceptions of risk can be seen in the work of Ennis (1967). Although some of his measures are suspect for other reasons, he did have separate measures for fear (i.e., feelings of safety) and risk (i.e., the possibility of crime occurring). As already mentioned above, DuBow et al.'s (1979) typology referred to personal judgments, which essentially is perceived risk or likelihood of victimization. They note that across their classification system, personal risk (i.e., perceived risk) is the most direct indicator of how crime impacts an individual. What is more, they were among the first researchers to truly understand how personal risk perceptions varied from personal fear of crime.

[9] Reiss (1967) examines fear of crime, but calls it, instead, citizen perceptions about area crime.

Building off the work of DuBow et al. (1979), Ferraro and LaGrange (1987) identified perceptions of risk (aka: judgments) as *cognitive* perceptions and fear of victimization (aka: emotions) as *affective* perceptions. Quite simply, these two perceptions are inherently different psychological experiences (Ferraro, 1995). Because of this, Ferraro and LaGrange (1987) are so adamant about the separation of fear and perceptions of risk that they propose that any measures that fail to distinguish between emotional reactions (i.e., fear of victimization) and judgments (i.e., perceptions of risk) are invalid. As already illustrated, one's perception of the likelihood of being victimized is inherently different than one's feelings of fear of victimization. Even though these concepts are related, they need to be recognized as the distinct phenomenon that they are (Ferraro, 1995). Moreover, unlike perceptions of risk, Ferraro argues that because fear of crime is emotionally-driven, it may be more difficult to measure in the traditional survey question format. This provides yet another reason to separate these two conceptual frameworks.

To demonstrate why perceptions of risk and fear of crime should not be used as substitutes for one another, evidence of their conceptual and empirical distinctiveness is discussed. The work of Warr and colleagues is discussed first, as it was groundbreaking in unraveling the theoretical relationship between the two concepts. Following this are a few examples of studies whose findings validate the benefit of recognizing fear of crime and perceptions of risk as distinct and unique outcome measures.

Multiplicative Model. According to Warr and Stafford (1983), when trying to identify the proximate causes of fear of victimization, it is important to utilize offense-specific measures instead of global measures of fear. This distinction is necessary, as they contend that for any particular offense, the degree of fear elicited is a function of both the *perceived seriousness* and the *perceived risk* attributed to that particular offense. More specifically, they propose that the

relationship between fear and its causes is multiplicative in nature, rather than additive. In this way, both perceived seriousness and perceived risk must be high in order for fear to be high. On the other hand, if either perceived seriousness or perceived risk is low, then fear will be low (Warr & Stafford, 1983). For example, they suggest that although murder is typically perceived to be the most serious offense, the perceived risk or likelihood of it occurring is fairly low. Because of this, the degree of fear associated with murder should be less than other relatively serious offenses that are deemed more likely to occur.

In order to test this multiplicative model, they analyzed data from a mail survey of 339 Seattle residents (Warr & Stafford, 1983). In doing so, they examined a total of 16 offenses that covered a variety of personal, property, and public order crimes. For each of the 16 offenses, they asked respondents about their fear of victimization ("how afraid you are about becoming the victim of each type of crime in your everyday life"), their perceived risk of victimization ("how likely you think it is to happen to you during the next year"), and their perceived seriousness of the offense ("in your opinion about how serious is each type of crime"). Their analyses revealed that for those 16 offenses, neither perceived seriousness nor perceived risk alone strongly predicted fear. Instead, fear of victimization is a multiplicative function of *both* the perceived seriousness and the perceived risk associated with an offense (Warr & Stafford, 1983). Moreover, Warr and Stafford found that these two factors carried nearly identical weights, which suggests that they have the ability to precisely offset one another. For example, a decrease in the perceived risk of an offense can counteract a similar increase in the perceived seriousness of that particular offense (assuming standardized units are used).

Their findings also show that violent, personal crimes do not always evoke the greatest fear. For example, respondents, on average, ranked their fear of being murdered as 10th out of

the 16 offenses; the reason being that even though murder was listed as the most serious offense, they evaluated the perceived risk of being murdered as extremely low, giving it a 15 out of 16 (Warr & Stafford, 1983). As Warr and Stafford point out, respondents report a greater fear of seeing strangers loiter near their home than of being murdered. Although loitering was rated lower than murder in terms of perceived seriousness, its perceived risk was ranked quite high.

Sensitivity to Risk. Extending the work on fear of victimization, Warr (1987) explored how differences in *sensitivity* to risk affect the degree of fear experienced by various subgroups of the population, as well as the extent to which different offenses are feared. He described sensitivity to risk as the relationship between fear of any crime and the perceived risk (or the subjective probability) of that particular crime occurring. In his earlier work, Warr depicted sensitivity to risk and fear of victimization as uniformly linear in nature (Warr, 1984). Viewed as a simple regression line, sensitivity to risk is capable of linking fear with perceived risk. Essentially, this illustrates the relationship between perception and the emotional reaction that it produces (Warr, 1987).

In his discussion of sensitivity to risk, Warr (1987) explains its three chief parameters: the threshold that triggers fear (i.e., the necessary minimum amount of perceived risk needed to cause fear), the slope of fear (i.e., the rate that fear increases with perceived risk), and the maximum fear that a particular crime is capable of creating (at the maximum amount of perceived risk for that offense). By analyzing sensitivity to risk and its parameters, he is able to address a major shortcoming of prior studies – that a particular level of perceived risk will consistently generate the same amount of fear. According to Warr (1987), instead of viewing the relationship between fear and perceived risk as a constant, it is more productive to treat sensitivity to risk as variable in nature. Moreover, he suggests that sensitivity to risk serves to

condition the relationship between fear and perceived risk, and that fear of criminal victimization is a function of both perceived risk and sensitivity to risk. However, Warr (1987) finds that sensitivity to risk is not the same for all crimes. Instead, sensitivity to risk differs from crime to crime, but does so in proportion to the perceived seriousness of the offense. Therefore, in order to elicit fear, a more serious offense will require less perceived risk or, stated differently, a more serious offense will have a higher slope of fear and a lower threshold that triggers fear. In order to be feared, an offense needs to be both fairly serious and likely to occur. Because of this, less serious offenses that are more likely to occur (e.g., larceny-theft) are simply not capable of generating extreme fear.

Additional Empirical Support. Although the relationship between fear of crime and perceived risk is complex, Warr's work shows that they are truly separate constructs. While failure to separate perceived risk from fear of crime has been called one of the gravest methodological issues in the fear of crime literature (Haghighi & Sorensen, 1996), studies that do conceptually and methodologically split the two tend to find important differences. Researchers that recognize their distinctiveness often find perception of risk to be fairly predictive of fear of crime (Ferraro & LaGrange, 1992; Giles-Sims, 1984; LaGrange & Ferraro, 1989; LaGrange et al., 1992; Miethe & Lee, 1984; Ortega & Myles, 1987). However, some, like Rader, have questioned the theoretical direction of these variables and have found that in addition to perceptions of risk predicting fear, fear strongly predicts perceptions of risk (Rader, May, & Goodrum, 2007).

Further, it appears that several important correlates can operate differently with perceived risk than with fear of crime. In terms of individual vulnerability, gender is routinely found to be strongly correlated with fear. Rader et al.'s (2007) analysis, however, suggests that gender is

only a predictor of fear and not of perceived risk. Any initial relationship between the gender and perceptions of risk disappeared once controlling for fear whereas the relationship between gender and fear remains both with and without controlling for perceived risk. Some researchers, such as Ferraro (1995), found that gender had an effect on both outcome measures. Wilcox Rountree and Land (1996a), on the other hand, found that the relationship between gender and perception of risk was significant while the relationship between gender and fear of burglary was insignificant.

When measuring several risk factors of lifestyle/routine activities, Wilcox Rountree and Land (1996a) found that family income, which is a common measure of target attractiveness, was negatively related to perceptions of risk, but not significantly related to burglary-specific fear. Conversely, their other measure of target attractiveness, the number of expensive goods, had a positive effect on fear of burglary but no effect on perceived risk. Differences also emerged for some of the other measures of opportunity. A measure of guardianship (the number of guardian barriers) and exposure (living in a corner residence) were each positively related to the burglary-specific fear, but not significantly related to risk.

In addition to individual vulnerability, there is evidence that correlates of environmental vulnerability also react differently across the two variables. LaGrange et al. (1992), for example, found that the associations between incivilities (for both physical and social incivilities) and perceptions of risk were stronger than those between incivilities and fear. Wilcox Rountree and Land (1996a), however, found that although neighborhood incivilities positively affected both fear and risk, they produced very different interaction effects. Also, neighborhood integration and the local burglary rate affected risk perception, but not fear of burglary. For Ferraro (1995),

although official crime rates affected both perceived risk and fear, it did so in different directions.

Furthermore, perceived risk and fear of crime appear to function differently in terms of their effect on defensive behaviors (e.g., purchasing a firearm or installing a home security system). Rader et al.'s (2007) work revealed that even though fear of crime predicted defensive behaviors, perceived risk of victimization did not. It appears then that people may react differently when faced with fear than when they perceive their risk of victimization to be high.

These examples are just a few of the growing many that highlight the importance of distinguishing perceptions of risk from fear of crime. Collectively, they show that although there is a conceptual and empirical relationship between these two concepts, they are not perfectly or even strongly correlated with one another (see e.g., LaGrange & Ferraro, 1989; Lee, 1982a; Warr, 1984). Ultimately, fear of crime and perceptions of risk are discrete concepts that should be treated as separate outcome variables.

Measuring Fear of Crime

Most fear of crime researchers agree that many of the commonly used measures of fear are seriously flawed. Although no operationalization is perfect, several of the key measurement tools used by researchers are questionable at best. Because a sizable portion of the existing literature is replete with conceptual, operational, and measurement problems (Ferraro & LaGrange, 1987), it casts doubt on many of the existing empirical findings. Ironically, while many researchers note that prior measures are faulty, they justify their continued use under the classic "everyone else uses them" argument. While DuBow et al. (1979) acknowledge that this may permit some comparisons across studies, they are quick to recognize that the wording of

these questions and the respondents' interpretations will likely yield unreliable comparisons anyway. Below are several key problems with prior and current measures of fear of crime and perceptions of risk.

References to Crime. As already established, one of the principal problems in the conceptualization and measurement of fear stems from the failure of researchers to explicitly mention or define key terms. Surprisingly, some fear of crime questions fail to mention either "fear" or "crime" in their question wording. Some questions, such as the NCS measurement instrument (the predecessor to the NCVS), ask about "safety" rather than "fear" (Ferraro & LaGrange, 1987). Although it may seem like nothing more than semantic confusion, there are subtle differences in these words that may be important. This issue extends to the treatment of "crime" in fear of crime and perceived risk questions. In some studies, researchers (e.g., Garofalo, 1979; Liska, Lawrence, & Sanchirico, 1982; Maxfield, 1984) omit the word "crime" from their questions. Well-used measures, such as the NCS question, that ask respondents "how safe do you or would you feel being out alone in your neighborhood at night," fail to explicitly refer to crime (Ferraro, 1995; Ferraro & LaGrange, 1987, 1988; Garofalo, 1979; Hale, 1996). Although it is implicit in the context of the survey, this remains a serious mistake. In addition, questions that ask if there is anywhere within a mile where the respondent would be afraid to walk alone at night do not specify what the respondent should fear. As Ferraro and LaGrange (1987) point out, this question is so unspecific that it could be referring to fear of traffic or fear of getting lost.

Conversely, studies that use "crime" in their questions are also flawed, but for different reasons. Simply, the word "crime" is both ambiguous and unreliable (DuBow et al., 1979; Ferraro & LaGrange, 1987; Haghighi & Sorensen, 1996; LaGrange & Ferraro, 1989) and

respondents should not be left to decipher its meaning (Ferraro, 1995). While most people likely consider crime to be violent (Ferraro, 1995; Hale, 1996; LaGrange & Ferraro, 1987) or property offenses, it also includes other types, such as white-collar, public order, and political, which are becoming more recognized by researchers and the general public alike. As a result, researchers should explain the meaning of "crime" before asking questions about it (Ferraro & LaGrange, 1987; Gabriel & Greve, 2003). If researchers fail to provide a conceptual reference of crime in their indicators, then respondents will substitute their own, which threatens both the validity and reliability of these measures (Ferraro & LaGrange, 1987). Plus, Ferraro and LaGrange propose that global fear measures that do not differentiate between types of crime may mask important findings (see also Hale, 1996). Findings, such as those from Warr (1984), support this idea by showing that fear varies tremendously by crime type.

Related problems include the tendency to imply that the conceptual reference is violent, personal crime (Ferraro & LaGrange, 1987) or to focus exclusively on violent victimization at the expense of non-violent victimization (Haghighi & Sorensen, 1996). For instance, although the commonly used NCS question refers to nighttime activity, there is a parallel question that gauges daytime activity that many researchers ignore (Ferraro, 1995). The emphasis on the nighttime question is likely to summon images or thoughts of personal street crime for respondents (Ferraro, 1995; Warr, 1990). As discussed later, though, individuals are far more likely to experience property or non-violent crimes than personal or violent ones. Yet, a large chunk of the existing research suggests that we are more afraid of violent crime (see, e.g., DuBow et al., 1979). Consistent with this, Garofalo (1981) suggests that compared to violent crime, property loss invokes worry or concern instead of fear. He argues that the reaction to

property crime is more cerebral and calculating whereas the reaction to personal crime is more autonomic and emotional.

As a result, not only should all questions explicitly refer to crime, but using specific types or categories of victimizations will likely yield more reliable and valid responses (Ferraro & LaGrange, 1987, 1988). While many studies have used crime-specific measures (see e.g., Warr & Stafford, 1983), some scholars continue to rely on asking respondents about their fear of crime without inquiring about specific types of crimes. Such questions are inadequate and will likely lead to confusion (LaGrange & Ferraro, 1989). It is imperative that future researchers either utilize crime-specific items when measuring fear of crime and perceptions of risk (Jackson, 2005) or at least separate personal from property crime (for examples of this separation see Jackson, 2005, Thompson, Bankston, & St. Pierre, 1992, or Wilcox Rountree, 1998). This is so essential that Bernard (1992) argues that whether a study's empirical findings are labeled rational or irrational depends on if "concrete" (i.e., crime-specific) or "formless" (i.e., general) measures of fear were employed (see also Hale, 1996).

Using crime-specific measures, rather than global measures of fear, may help to untangle some of the true relationships while, at the same time, questioning trends that have been cemented in the fear of crime literature for years. For instance, while many studies that use crime-specific measures continue to find that violent crimes are more feared, some of the more recent work has failed to support this. Using traditional and revised British Crime Survey measures of fear of crime, Gray et al.'s (2008) study revealed that more respondents feared being burgled or having their car stolen than robbed. Consistent with Warr's work, this suggests that individuals are more fearful of property crime, perhaps because they are aware that their risk for these crimes is higher than for personal crimes.

Single Indicators. A large portion of studies that gauge fear of crime, especially the earlier works, have relied on a single indicator of fear or perceived risk (Ferraro & LaGrange, 1987, 1988; Hale, 1996; LaGrange & Ferraro, 1989; Teske & Hazlett, 1988) or have employed multiple variables but analyzed them separately (Ferraro, 1995). In their review of empirical fear of crime studies, Ferraro and LaGrange (1987) found that over 40% of all of the studies they examined relied on just one measure of fear, while another 28% utilized more than one measure, but analyzed them individually. Use of a lone measurement instrument likely produces inadequate results and possibly measurement error and, therefore, should be avoided. Moreover, establishing the reliability and validity of single indicators can be quite difficult (Ferraro, 1995). Walker (1994) argues that because measures are often correlated with other related items (e.g., fear of attack and worry about certain offenses), solitary questions are inadequate to capture the fear of crime phenomenon. According to Jackson (2005) and others, multiple indicators of fear or perceived risk should be employed instead. While the use of multiple measures is commonly found in social science research, it is particularly necessary when dealing with more abstract concepts like fear of crime (Miethe & Lee, 1984).

One of the commonly used solitary measures of fear deals with walking alone at night in one's neighborhood. As suggested by Walker (1994) and others, this question focuses on just one situation, which may or may not be relevant to everyone's personal experiences. Many people, for a variety of reasons, never find themselves walking alone in the evening. Although this single item measure does actually tap into fear of crime (compared to other emotions) (Clemente & Kleiman, 1977), it measures only fear for crimes that occur outside of the home (Yin, 1980). This can be problematic for some populations, like the elderly, whose likelihood of victimization is actually higher *inside* of the home (Antunes, Cook, Cook, & Skogan, 1977).

Although Ferraro and LaGrange (1987) warn that composite or multiple-item measures are not necessary free of error, they can be correctly constructed and verified with reliability coefficients and are usually superior to single indicators. They maintain that empirical findings based on single measures should be approached with skepticism. Additionally, Garofalo and Laub (1978) argue that fear of crime questions need to be set within a larger conceptual framework and suggest that the backdrop be quality of life and concern for the community. Moreover, the use of multiple items can allow for the creation of indexes of fear that can be used in addition to individual crime-specific measures (Ferraro, 1995).

Issues with Variables and Format. According to some researchers, prior works suffer because they hinge on the findings of dichotomous dependent variables that were designed to measure fear (Clemente & Kleiman, 1977; Teske & Hazlett, 1988). In addition, Farrall et al. (1997) question the use of Likert response scales because of their inability to capture the full spectrum of respondents' feelings. They are too simplistic, they argue, and will likely produce very generalized levels of fear. Interval, rather than nominal or ordinal, level data may provide stronger results and better our understanding of fear of crime. Related to narrowed responses, closed-ended questions affect the type and quality of analyses and the findings therein (Clemente & Kleiman, 1977; Teske & Hazlett, 1988). Farrall et al. (1997), for example, found differences when asking closed- versus open-ended questions (see also Yin, 1982). This is important, they contend, because the open question format typically yields higher levels of fear (see also Yin, 1982).

Agreeing with the problems of using dichotomous responses, Farrall and Gadd (2004) proposed that when studying fear of crime, researchers need to explore the frequency of fear. They argue that although many people may fear crime, not many people fear it frequently.

Allowing respondents to record the number of times they experienced fear in the last year, Farrall and Gadd found that most people only occasionally feared crime and when they did experience fear, the level or intensity of fear was low. Simply, very few people intensely and frequently feared crime.

Building off the recommendations of Farrall and Gadd (2004), Gray et al. (2008) used filter questions, as well as those that gauged both the frequency and intensity of episodes or events of fear. They also employed a narrow timeframe (i.e., within the last year), which they believed would improve the recall ability of respondents. In doing so, their findings revealed much less fear than traditional global measures. For robbery, burglary, and auto theft, they found fear to be less frequent and less intense (Gray et al., 2008). They argue that future measures of fear of crime should follow suit and that such a reassessment may paint an entirely different picture of fear.

While agreeing with most of the suggestions presented by Farrall and Gadd (2004), Jackson (2005) cautions that because emotions are fleeting, it may be difficult for respondents to summarize the intensity of them. Using intensity measures may promote the notion that fear is stable, even though it varies tremendously and is dependent on situational factors. Jackson (2005) adds that this may also lead to exaggerations in the frequency and intensity of experiences if respondents recall their scariest encounter and infer that to all other experiences. Nevertheless, other researchers, such as Ferraro and LaGrange (1987), agree with the idea of measuring degrees of fear or the full range of emotional reactions (see also Hale, 1996). Ferraro (1995) also advocates for future studies to utilize longitudinal data, specifically cohort or panel designs, to help understand how fear and perceived risk change with regards to personal and social change.

Doing so could allow researchers to more fully understand how stable these measures are over time, as well as how age and victimization influence fear of crime and perceptions of risk.

Failure to Distinguish between Actual and Anticipated Fear. Ferraro and LaGrange (1987, 1988) add that researchers should also avoid using hypothetical questions and, instead, ask about everyday situations (e.g., "in your everyday life…"). They argue that respondents are better able to relate to these questions and it avoids asking them about unlikely, abstract situations (e.g., walking alone at night) that many people purposely avoid (see also Hale, 1996). Similarly, some questions, like the NCS measure, are double-barreled in the sense that they ask respondents how "do you feel or would you feel" in certain situations (Ferraro, 1995; Ferraro & LaGrange, 1987; Garofalo, 1979; LaGrange & Ferraro, 1987). Combining hypothetical and actual assessments into one question is also a mistake, as these conceptual frameworks are not analogous and should not be used at the same time. Nevertheless, Farrall et al. (1997) found that some respondents still answered non-hypothetical questions in a hypothetical manner, which can also impact findings.

In this vein, Garofalo (1981) cautions that researchers must consider the difference between actual and anticipated fear when constructing measures of fear. He argues that actually being fearful when walking alone at night and anticipating that you would be fearful in this situation are distinct phenomena. Actual fear may be significantly higher or lower than one anticipates, but regardless, both types of fear are worthy of causing behavioral responses (Garofalo, 1981). Finding methods of measuring one's anticipated and actual fear, as well as the intensity of this fear, may be a daunting, but important task.

Respondent Interpretation Issues. Another difficulty is the fact that fear of crime is heavily dependent "on subjective factors for which there is no objective standard or valuation"

(Warr, 2000, p. 453). People may simply vary in their interpretation of the words "worry" or "fear" (Gray et al., 2008; see also Farrall et al., 1997). While some respondents may think of fleeting anxiety, others consider crippling physical fear (Hough, 1995 as cited in Gray et al., 2008). This was echoed in Farrall et al.'s (1997) findings where respondents substituted words such as distress, annoyance, shock, anger, awareness, and thinking about crime for "worrying" about it. Essentially then, interpretations of "fear of crime" will vary across different respondents and researchers. Additionally, Walker (1994) advocates that measures may be interpreted differently by different ethnic groups; thus, she urges future researchers to deconstruct the meanings of commonly used terms. Farrall et al. (1997) suggest the use of methodological triangulation, specifically employing both quantitative and qualitative instruments, to help with interpretational problems. In their experience, using more in-depth qualitative interviews not only helped to uncover the respondents' interpretations of key question wording, but ultimately produced more accurate responses. In fact, they found that most of the mismatches or discrepancies between their two instruments, including the more serious mismatches, were caused by the respondents' interpretations. To help reduce interpretational problems and uncover more accurate responses, researchers could experiment with variations in question-wording and -ordering (Ferraro, 1995).

Questions, like the NCS measure, that ask respondents about their level of fear when out in the neighborhood also suffer from interpretational issues. Using the neighborhood as a reference point may be challenging because people will vary in their understanding of this geographical area (Ferraro & LaGrange, 1987; Garofalo, 1979; Hale, 1996). While some may believe this to be their immediate street(s), others may conceptualize this as a much larger physical space. Yet, specifically including temporal, spatial, and social contexts in measurement

instruments remains important (Farrall et al., 1997). Researchers should follow some of these recommendations to reduce any ambiguity in the questions, thereby minimizing the amount of interpretation that remains left in the hands of the respondents.

Conclusion

Based on the review above, it appears that when looking at the meaning and measurement of fear, one of the few consistencies is the unanimous agreement that it is an important aspect of our social reality (Teske & Hazlett, 1988) and is worth continued exploration. Despite the definitional and conceptual cloudiness of prior works, defining, measuring, and understanding fear is crucial, as far more people are victimized by fear of crime than by crime itself (Warr, 2000). Just because fear of victimization is more of an indirect form of victimization does not mean it should be taken lightly. Rather, the consequences of fear can be just as deleterious as those of actual crime. In fact, the effects of fear may be *more* harmful than those of crime in general. As with the study of crime, one area of research that has received great attention is identifying the causes or correlates of fear of criminal victimization and perceptions of risk. Arguably, if the causes or correlates can be accurately identified, then levels of fear and perceived risk can be reduced. The following section will address many of these causes, as well as how they affect individuals' vulnerability, perceptions of risk, and fear of crime. However, given the conceptual and methodological concerns outlined above, the literature reviews in Chapters Three and Four should be viewed with caution.

Chapter Three:

THEORETICAL PERSPECTIVES AND EMPIRICAL SUPPORT

In one of the early attempts to identify correlates of fear of crime and perceived risk, Garofalo (1979) proposed that there are five general factors to consider: actual risk of victimization, past experience of victimization, role socialization (i.e., the process of teaching children the roles they are expected to fulfill in society), media content, and perceived protection (i.e., official barriers against crime). He argued that sex and age were "master" statuses, as they dictated all aspects of an individual's life. That is, we have different societal expectations for behavior depending upon one's sex and age. Using these as proxies for role socialization, Garofalo (1979) found that both sex and age had substantial effects on fear. He suggested that although men are socialized to be dominant and assertive, women are encouraged to be passive and submissive. One way to ensure this division is to instill in women the fear of crime, in general, and the fear of rape, in particular. Not only does this create a society where women are more afraid of victimization regardless of their actual risk, but it fosters an environment where women are reliant upon men for protection (Garofalo, 1979).

Although the fear of crime and perceived risk literatures have evolved tremendously in the last 30 years, demographic variables such as gender and age are still regularly used today. However, rather than serving as proxies for role socialization, these variables, along with past victimization and lifestyle/routine activities (i.e., opportunity) are used to gauge the *vulnerability of individuals* and, thus, their fear of crime and/or perceived risk of victimization. As the focus of this dissertation is on the effects of various indicators of individual vulnerability and lifestyle/routine activities on fear and perceived risk of victimization among middle- and high-

school adolescents, this chapter provides a detailed review of previous literature addressing the link. This chapter focuses more on the general, adult-based literature, while the next chapter – Chapter Four – will review the relevant works on fear and perceived risk of in-school victimization.

After a brief discussion of the general notion of vulnerability, several individual indicators of vulnerability, as measured by various demographic and social factors, will be discussed in this chapter. All major demographics will be presented, but a heavy emphasis will be placed on gender and the related shadow of sexual assault hypothesis. Besides being one of the most frequently researched demographics in the fear of crime literature, gender is one of the focal points of this dissertation given its analysis of fear and perceived risk of sexual versus nonsexual school-based victimization. Also included in this section is a discussion of prior victimization (as a source of personal vulnerability) and its questionable relationship to fear of victimization and perceived risk. Thoughts about fears and risks associated with victimization, however, go beyond demographic characteristics and previous experience with victimization. Rather, certain lifestyles and routine activities can increase exposure to dangerous people, places, or times, all of which can heighten feelings of vulnerability, perceived risk, and fear of crime. Thus, fear and risk from a lifestyle/routine activities standpoint will be covered here as well.

Following this is a discussion on how fear of crime and perceptions of risk are viewed as rational reactions to crime. Although indicators of individual vulnerability (i.e., sociodemographic factors and prior victimization) are used to gauge perceived risk and fear of crime, sometimes the levels produced are not commensurate with actual risk of victimization. Including indicators of lifestyle/routine activities (i.e., target attractiveness, exposure to motivated offenders, and capable guardianship), however, will not only help us to better

understand the fear problem, but also assist in assessing the rationality of fear and perceptions of risk.

FEAR/RISK AND INDIVIDUAL VULNERABILITY TO VICTIMIZATION

The idea that crime is patterned and nonrandom has become part of the bedrock of criminology and victimology. Some items, people, places, and areas are more likely to be victimized than others. Similarly, some people are more afraid and/or perceive greater risk of criminal victimization than others, and some places invoke more fear/risk in people than other places. Because people, in general, are more fearful of personal or violent victimization, fear of crime is increased when individuals are physically vulnerable to attack or when they lack control over the situation (Brantingham & Brantingham, 1997).[10] For example, factors such as gender, age, body structure and size, strength, and physical disabilities or limitations can increase feelings of susceptibility and vulnerability and, ultimately, fear. It is presumed that this fear makes sense for some demographics (e.g., women and the elderly) since assailants tend to be young men (Hindelang, Gottfredson, & Garofalo, 1978; Skogan & Maxfield, 1981). Similarly, and likely connected to physical vulnerability, is the capacity to exert control over a situation. Individuals who feel they are unable to adequately handle a potential crime situation experience more fear than those who feel capable or potentially capable of controlling such a situation (Brantingham & Brantingham, 1997). When individuals perceive themselves to be particularly vulnerable or when they feel they are not in control of a particular situation, not only are they more fearful, but they perceive their risk of being victimized as greater.

[10] Bernard (1992) refers to these as feelings of insecurity rather than vulnerability.

The vulnerability mentioned above is what Killias (1990) identifies as physical vulnerability (see also Skogan & Maxfield, 1981).[11] Although this type of vulnerability is one of the primary focal points of this dissertation, he also outlines two other types of vulnerability – social and situational – both of which may influence risk perceptions and fear of crime. Social factors, Killias (1990) suggests, include riskier jobs such as taxi drivers, prostitutes, or jobs with late closing hours. These factors appear to be dealing with exposure or proximity to offenders, as well as target attractiveness, and, in this way, they represent an integral part of one's lifestyle and routine activities. Some attention will thus be given to social vulnerability in the section on indicators of lifestyle/routine activities. Situational factors, which are not discussed in this dissertation, include living in areas with high crime rates or numerous incivilities or signs of disorder.

These three types of vulnerability, according to Killias (1990), are all affected by three *dimensions* of vulnerability – exposure to non-negligible risk, anticipation of serious consequences, and loss of control (including lack of successful defenses, protective measures, and/or possible escape routes). According to his proposal, these three dimensions are necessary, but are not individually adequate to cause fear. It may take more than just exposure to risk, the consequences of victimization, or the inability to control the situation to reach high levels of fear. Interaction effects likely exist which can require these dimensions to reach a threshold before they produce fear. This is consistent with Warr's (1987) discussion on sensitivity to risk, as sensitivity to risk is essentially an approximation of Killias' (1990) notion of seriousness of

[11] Before Killias (1990) created his typology of vulnerability, Skogan and Maxfield (1981) identified two primary types of vulnerability – physical and social. Although their definition of physical vulnerability was the same as Killias' (i.e., powerlessness to resist a possible attack), they suggested that part of this vulnerability involves potential physical and emotional consequences associated with a possible victimization. As with Killias' typology, women and the elderly are the quintessential examples of physical vulnerability. However, social vulnerability, as set forth by Skogan and Maxfield (1981), dealt with exposure to victimization based on factors such as race and socioeconomic status. For these individuals, social vulnerability involves potential social and economic consequences associated with a possible victimization.

consequences. In this way, these dimensions provide a nice framework within which vulnerability and sociodemographics can be explored while also being useful for understanding the highly gendered nature of fear of crime and perceptions of risk. The following sub-sections will address several indicators of individual vulnerability, namely sociodemographic characteristics (i.e., gender, age, ethnicity, and socioeconomic status) and prior victimization, as well as indicators of lifestyle/routine activities (i.e., target attractiveness, exposure to motivated offenders, and absence of capable guardianship).

Gender and Fear/Risk

In the pursuit to understand fear of victimization and perceptions of risk, one of the most common avenues of research has been the gender route. Unsurprisingly, most of the empirical studies and theoretical arguments have supported the notion that women are more fearful than men. While some findings have strayed from this path, the overwhelming majority of studies support this conclusion to the point that it is coined the "most consistent finding in the fear of crime literature" (Stanko, 1995, p. 48). Beginning with the 1967 President's Commission report, or the launching pad for fear of crime research, female fear has become a staple in the victimology literature. In fact, because most of the results show that women are more afraid of victimization than men, gender has been referred to "the most consistent and powerful predictor of fear" (Baumer, 1978, p.160).

When looking at the National Opinion Research Center (NORC) survey data used in the President's Commission on Law Enforcement and the Administration of Justice report, females, regardless of prior criminal victimization, were more fearful and worried about their safety than their male counterparts. Numerous other key studies have supported this notion that women are

more fearful than men (Braungart, Braungart, & Hoyer, 1980; Clemente & Kleiman, 1977; Cossman & Rader, 2011; Ennis, 1967; Ferraro, 1995; Giles-Sims, 1984; Gordon, Riger, LeBailly, & Heath, 1980; Haynie, 1998; Hindelang, 1974; Jackson & Stafford, 2009; LaGrange & Ferraro, 1989; LaGrange et al., 1992; May, Rader, & Goodrum, 2010; Ollenburger, 1981; Ortega & Myles, 1987; Parker & Ray, 1990; Skogan & Maxfield, 1981; Stafford & Galle, 1984; Toseland, 1982; Warr, 1990; Zhao, Lawton, & Longmire, 2010). Some studies, such as Scarborough et al.'s (2010) work, find the gender effect to be unconditioned by any other individual- or community-level factors. What is more, the female-fear trend is not exclusively an American phenomenon. Studies that utilize the British Crime Survey (BCS), find that women report higher levels of fear of crime (Box, Hale, & Andrews, 1988; Moore & Shepherd, 2006; Pantazis, 2000). Gender has also been identified as the strongest predictor of fear in Canadian samples as well, with women once again reporting higher rates of fear than men (Gomme, 1988; Weinrath & Gartrell, 1996). In the same way, studies conducted in The Netherlands (van Dijk, 1978), Belize (Bennett & Flavin, 1994), and Greece (Tseloni & Zarafonitou, 2008) report similar findings. This relationship holds in different contexts too, as evident by the growing body of literature that examines fear of crime on college and university campuses. These studies reveal that female college students are more fearful than their male counterparts (Brantingham & Brantingham, 1994; Fisher, 1995; Fisher, Sloan, & Wilkins, 1995; Jennings, Gover, & Pudrzynska, 2007; Sloan, Fisher, & Wilkins, 1996; Tomsich, Gover, & Jennings, 2011). Fisher and Sloan's (2003) work, additionally, shows that this trend applies to fear of both sexual and non-sexual violent victimization.

Studies that examine risk perception echo these findings. Although there are considerably fewer of these works, they, too, reveal that women perceive significantly more risk

than men (Chiricos, McEntire, & Gertz, 2001; Giles-Sims, 1984; Ferraro, 1995; Franklin et al., 2008; LaGrange & Ferraro, 1989; LaGrange et al., 1992; May et al., 2010; Warr, 1984; Wilcox Rountree & Land, 1996a, 1996b). Studies conducted overseas have produced similar results (Tseloni & Zarafonitou, 2008). Further, the finding that women express higher levels of perceived risk seems to hold regardless of age (Ferraro & LaGrange, 1992). While many of these studies have applied perceived risk to only personal crimes, LaGrange and Ferraro (1989) found that men and women had roughly equal assessments of risk for property crimes. This extends to the college setting as well, with female students perceiving greater risk of campus victimization, in general, (Fisher et al., 1995; Jennings et al., 2007; Tomsich et al., 2011) and violent victimization, in particular, than their male counterparts (Fisher & Sloan, 2003).

Despite the consistency in the literature, there are a few notable exceptions to the "female fear of crime" phenomenon. For example, although women were more fearful about walking alone at night than their male counterparts, one study found that they did not display more overall anxiety concerning their safety or the safety of their property (Lee, 1982a). Similarly, Haghighi and Sorensen (1996) found that women were significantly more worried about sexual assault and other violent crimes, but they were not more fearful of burglary. As discussed before, Wilcox Rountree and Land (1996a) also found that gender was a non-significant predictor of burglary-specific fear. In the university setting, although female students were more fearful of larceny theft at night, there was no significant difference for daytime larceny theft (Fisher & Sloan, 2003). Based on these findings, it appears that the gender difference in fear of property crimes may be smaller or non-existent compared to other, personal crimes.

A few departures from the "females perceive more risk" trend exist in the literature as well. Lee (1982a), for example, argues that while older women do not perceive their

environments as more dangerous than older men, they appear to be more threatened by or afraid of those specific dangers. Lee and Ulmer (2000) found that Korean American women perceived less risk than Korean American men. Fisher and Sloan (2003) did not uncover any gender differences when looking at perceived risk of larceny theft on college campuses. Relatedly, when looking at how perceived risk affects fear, Warr (1984) found that females were more fearful of burglary than their male counterparts only at low levels of risk. At high levels of risk, however, males were more afraid.

While the bulk of literature has focused on women's fear of crime, some researchers have begun to turn their attention to the overlooked subject of men's fear (Brownlow, 2005; Day, 1994; Goodey, 1997; Mehta & Bondi, 1999; Rader, 2010; Stanko & Hobdell, 1993). Most of these studies still find that women are more fearful than men (see e.g., Brownlow, 2005), but they argue that men's fears and coping mechanisms are simply different from their female counterparts. Additionally, although women's fear of crime is higher and has remained higher than men's fear over time, there is evidence that the gender gap has narrowed; more specifically, the gap appears to be closing due to an increase in men's fear of crime (Haynie, 1998).

Gender and Vulnerability to Victimization. Besides these few noted exceptions, the literature is clear in its assertion that women are more fearful than men. In efforts to explain this trend, the most common argument deals with women's vulnerability. In essence, women's fear of victimization is higher because they are more vulnerable. Their sense of physical vulnerability causes them to feel ill-equipped to defend themselves during an attack (Gordon et al., 1980; Hale, 1996; Riger, Gordon, & LeBailly, 1978, 1982; Skogan & Maxfield, 1981; Toseland, 1982; Wyant, 2008). Specifically, the size, strength, and speed of most women translate into physical vulnerability (Gordon et al., 1980; Riger et al., 1978) and hinder their

capacity for self-defense (Katz, Webb, & Armstrong, 2003; Smith & Hill, 1991a). Further, because of their perceived inability to protect themselves, they experience a greater fear of being victimized. Women feel vulnerable when merely thinking of or experiencing victimization or dangerous situations (Junger, 1987). What is more, vulnerability appears to play a larger role in the fear of women than men (Gordon et al., 1980). Some researchers clarify, though, that women's higher fear is due to their greater *perceived* vulnerability rather than their actual vulnerability (Baker et al., 1983; Maxfield, 1987).

This vulnerability, or perceived vulnerability, affects their behaviors in other ways too. For instance, women are more likely than their male counterparts to utilize avoidance strategies (Gordon & Riger, 1989; Miethe, 1995; Stanko, 1990, 1995) or to engage in constrained behaviors (Ferraro, 1995; Jennings et al., 2007; Tomsich et al., 2011; Woolnough, 2009). In efforts to lower their perceived risk and fear of victimization, they engage in certain acts that make them appear less vulnerable or attractive as potential crime targets. Mehta and Bondi (1999), for instance, suggest that women employ "sensible" control measures to reduce their risk of rape. Examples of these behaviors include traveling in large numbers or with a man, as well as dressing more conservatively (Stanko, 1995; Valentine, 1989; Warr, 1985). To combat their fear, women try to reduce their exposure to potentially dangerous people, places, and situations. However, by limiting or altering their activities and behaviors, they are simultaneously restricting their freedom (Gordon et al., 1980).

Because of this vulnerability, studies that examine altruistic fear, rather than personal, fear of victimization report a very different trend than those that focus on personal fear. For instance, Warr and Ellison (2000) found that due to the increased vulnerability of women,

husbands were more worried about the safety of their wives than vice versa.[12] They were more concerned about the safety of their wives than they were for themselves (see also Snedker, 2006).[13] Also, while both husbands and wives worried over the safety of their children, they expressed more concern for the safety of daughters than sons (Warr & Ellison, 2000). Furthermore, the duration of their concern varied – for daughters, parents remained worried into adulthood, but their concern of sons tapered off in the later teenage years. Viewing daughters as more vulnerable and perceiving them to be at a greater risk for victimization provides additional, yet slightly different, support for the susceptibility of females.

Regardless of whether it is vulnerability or perceived vulnerability, women worry about being able to protect themselves or their property in the face of potential victimization. However, their heightened fear and vulnerability may also stem from feelings of dependency, timidity, or submissiveness (Garofalo, 1979; Hindelang et al., 1978) or from the power imbalance in our society as a whole (Stanko, 1995). Our gendered socialization process may also affect vulnerability, fear, and perceptions of risk, as women are often taught that they are unable to defend themselves (Goodey, 1997; Rader, 2008; Reid & Konrad, 2004). Moreover, studies find that women are simply more likely to acknowledge or admit their fear of victimization than their male counterparts (Clemente & Kleiman, 1977; DuBow et al., 1979; Stanko, 1990; see also Garofalo, 1979 or Snedker, 2006). If this is true, then men may actually experience more fear than they express in surveys or interviews. From a socialization standpoint, females are taught and encouraged to be more expressive emotionally than their male counterparts (see e.g., Maccoby, 1998; Rader, 2010). At a young age, young girls exhibit more

[12] These authors suggest that because women spend so much time fearing for their own safety, they have less concern left to offer for their husbands. Snedker (2006), however, suggests that for women, altruistic or vicarious fear is added to their personal fear while for men, the only fear exhibited is fear for others.
[13] Warr and Ellison (2000) found that women exhibited more concern for their children than for their husbands.

of a willingness to express fear in general than young boys (Maccoby & Janklin, 1974). Likewise, girls also express more vulnerability than boys (Brody, 2000).

Even in adolescence, research from other disciplines suggests that females and males differ in their willingness to publically display or discuss any sort of fear, as well as their ability to handle fear and its consequences (Bronstein, Briones, Brooks, & Cowan, 1996). As already mentioned, much of this variation stems from gender differences in socialization and role expectations. Goodey (1997), for instance, argues that admitting fear of crime is unmasculine and likely leads to disingenuous findings in the literature. Consistent with Goodey's suggestion, Sutton and Farrall (2005) found support for the underestimation of men's fear of victimization. They suggest that if social desirability can be controlled, men may express higher, even comparable levels, of fear. Nevertheless, it is important to mention that even though men's fears may be underestimated, research suggests that women's fears are not exaggerated (Sutton & Farrall, 2005).

Gender and Sexual Vulnerability to Victimization. A great deal of research suggests that women's feelings of vulnerability likely come from their underlying fear of sexual assault. One of the first to put forth such an idea was Warr (1984). He used the term "perceptually contemporaneous offenses" to refer to the idea that some offenses evoke a high degree of fear simply because they are associated with, or viewed as preludes to, more serious crimes. To illustrate this point, Warr (1984) argues that women fear having their residence burglarized while they are at home primarily because they fear the perceptually contemporaneous offenses – assault, rape, and/or homicide – that might ensue. Warr (1984) adds that even at similar levels of perceived risk, men will have substantially lower levels of fear because these perceptually contemporaneous offenses do not exist. Moreover, women possess a greater sensitivity to risk

because of the sheer generality of their fear. These differences in sensitivity to risk and perceptually contemporaneous offenses are argued to be the driving force of the gender differences in fear of crime and perceptions of risk. For women, the core fear that lies beneath all other fears is sexual assault. According to Warr (1984), not only is rape the "master offense," but "for younger women in particular, fear of crime *is* fear of rape" (p. 700).

The idea that women's fear of all crime is driven by their deep-seated fear of sexual assault has been examined by many. Known as the shadow of sexual assault, this hypothesis proposes that women's fear of rape heightens their fear for all other crimes (Ferraro, 1995, 1996; Fisher & Sloan, 2003; May, 2001a; Riger et al., 1978; Warr, 1984, 1985). Women are more fearful of crime, in general, because of their fear of being sexually assaulted. Simply, women fear that most any crime can or will turn into a sexual attack (Ferraro, 1996). In this way, their fear of rape overshadows their other fears of victimization.

Although there are several crimes that women are less likely to be the victim of, sexual assault is not one of them. Women are clearly more likely to endure sexual victimization than men (Ferraro, 1996). This greater vulnerability, in and of itself, may be responsible for their higher perceptions of risk (Smith & Torstensson, 1997). What is more, women appear to be well aware of their exceptionally higher risk for sexual crimes. In fact, they are taught from a very young age to specifically fear sexual offenses and to engage in certain behaviors to lower both their risk of being sexually victimized and their vulnerability to these crimes. Besides being more vulnerable and experiencing a higher risk of sexual offenses, women are simply more sensitive to theses risks (Smith & Torstensson, 1997; Warr, 1984, 1985). Furthermore, part of this shadow effect is derived from the particularly serious consequences of sexual attacks. Not only are the traumas sustained by rape victims more enduring than with other types of crimes

(Kilpatrick, Saunders, Veronen, Best, & Von, 1987; Resick, 1987), but, depending upon the type of perpetrator (i.e., stranger or acquaintance), they can produce more physical harm than other victimizations (Hindelang et al., 1978; Killias, 1990). Collectively, this is all consistent with Killias' (1990) work in that women's loss of control, greater risk of sexual victimization, and anticipation of severe consequences combine to contribute to their high levels of fear (Pantazis, 2000). This may explain, at least in part, why women are less likely to actually be victimized than men, but are far more fearful of victimization than men. Coined one of the "irrationalities" or "paradoxes" in the fear of crime literature, this topic will be discussed more fully later in this chapter.

Even though women who have been sexually victimized are more fearful of crime in general than those who have not been victimized (Culbertson, Vik, & Kooiman, 2001), it is important to mention that the shadow of sexual assault is not derived from actual personal experiences with sexual victimizations. If that were the case, substantially fewer women would be cloaked in this shadow. Rather, it is a nearly universal reality for women and is perpetuated by, among other things, a lifetime of personal experiences with sexual harassment and other inappropriate behaviors. Harassing behaviors, or "little rapes," (e.g., cat calling, whistling, staring, groping) serve as constant reminders of their vulnerability, in general, and their sexual vulnerability, in particular (Pain, 1995; Painter, 1992; Smith & Torstensson, 1997; Stanko, 1995). While such harassment need not be extreme, serious, or even criminal, it nags at the minds of women and arouses their already-heightened sense of vulnerability. Coupled with this is the influence of the mass media on feelings of vulnerability and fear of crime (Gilchrist, Bannister, Ditton, & Farrall, 1998). In all, because of their fear of rape, women carry "more of the emotional burden of the crime problem than men" (LaGrange & Ferraro, 1989, p. 707).

The shadow of sexual assault is much more than speculation; rather, it has garnered much empirical support over the last few decades. For instance, not only do women fear rape more than men (Ferraro, 1996; Fisher & Sloan, 2003; Lane & Meeker, 2003), but when asked to identify the crime they most feared, female respondents consistently reported rape (Riger et al., 1978; Warr, 1985). This extends to countries outside of the United States, as well (Softas-Nall, Bardos, & Fakinos, 1995). In fact, fear of rape ranked high among all age groups (Warr, 1985), but is particularly high among younger women (Ferraro, 1995, 1996; Softas-Nall et al., 1995; see also Cubbage & Smith, 2009). Additionally, there is support for this notion of rape as a perceptually contemporaneous offense in that fear of rape was strongly related to fear of other offenses, such as threats with a weapon, robbery, assault by a stranger, and murder (Warr, 1985). Simply, rape casts a fairly large shadow across several offenses. Indeed, results from a national survey reveal that women are more afraid of being raped than of being murdered (Ferraro, 1996). In a sample of college students, even though the most feared offense was sexual assault by a stranger, sexual assault, in general, did shadow other offenses (Wilcox, Jordan, & Pritchard, 2006). Yet, Lane and Meeker (2003) argue that although fear of rape is an important component of women's fear, fear of assault (non-sexual) is more predictive for men *and* women.

Nevertheless, despite some contradictory evidence, the bulk of the research on the shadow of sexual assault, especially among college students, has produced ample support for this hypothesis (see, e.g., Dobbs, Waid, & Shelley, 2009; Fisher & Sloan, 2003; Hilinski, 2009; Lane, Gover, & Dahod, 2009; Wilcox, Jordan, & Pritchard, 2006). While the shadow effect is particularly strong for understanding fear of crimes that involve face-to-face contact (Ferraro, 1996; Fisher & Sloan, 2003, see also Schafer, Huebner, & Bynum, 2006), prior studies typically find that including fear of sexual assault improves the explanatory power of their models, even

those that seek to explain non-violent or -sexual fears (Ferraro, 1996; Hilinski, 2009; May, 2001a). What is more, once fear of sexual assault is taken into account, the gendered difference in fear of crime is greatly reduced or the effect is altered in such a way that men become more fearful (Dobbs et al., 2009).

While men can also fear sexual assault (Lane & Meeker, 2003; May, 2001a), their exposure to this risk is typically only elevated in certain environments (i.e., prison) (Killias, 1990). Moreover, because of their size, strength, and speed, they may be better equipped to defend themselves, which likely makes them feel less vulnerable than their female counterparts. Plus, differences in gender-role expectations and socialization may account for why men are less fearful of sexual assault. Also, some men may incorrectly believe that because they are male, they are unable to be raped. This belief parallels the former definitional trend of rape statutes to treat rape as only a female-victim, male-perpetrator offense. Although this dissertation recognizes that rape is a gender-neutral offense, this work is more interested in the fear of crime and perceptions of risk that consume females and the extent to which this fear overshadows their other fears.

Age and Fear/Risk

Just as women are typically found to be more fearful than men because of their increased physical vulnerability, much of the literature, particularly the early works, focused on the positive relationship between age and fear of crime. Specifically, such studies repeatedly found that the elderly are more fearful than younger age groups (see e.g., Clemente & Kleiman, 1976, 1977; Hindelang, 1974; Hindelang et al., 1978; Ollenburger, 1981; Parker & Ray, 1990; Pollack & Patterson, 1980; Thomas & Hyman, 1977; Weinrath & Gartrell, 1996). The sheer number of

early studies to support this led some to conclude that for the elderly, fear of crime is more of a pressing issue than crime itself (Clemente & Kleiman, 1976). Their high levels of fear, especially in light of their lower levels of victimization, have been identified as one of the primary paradoxes in the fear of crime literature. However, because of mortality differences, a disproportionate amount of the elderly population is female, which was thought to possibly contribute to their higher fear of crime (Ferraro & LaGrange, 1992). Nevertheless, although the age effect is usually found to be smaller than the gender effect, studies have identified age as an important determinant of fear of crime. Not only were the elderly deemed more fearful, but it was assumed that fear steadily increased with age in a very linear fashion. Despite these findings, some scholars caution that fear of crime among the elderly has likely been overestimated (Ferraro & LaGrange, 1988; LaGrange & Ferraro, 1987; Mawby, 1986; Yin, 1980, 1982). They argue that the operational and methodological shortcomings of many fear of crime works has simply overstated the elderly's fear. For instance, Ferraro and LaGrange (1992) attribute measurement, sampling, data collection, and analytical issues to the mis-measurement of elderly's fear, while Yin (1982) brings attention to the temporal ordering of fear and behaviors. As evidence of the measurement issues, LaGrange and Ferraro (1989) found that when the traditional NCS measure of fear was utilized, the results supported the "elderly are more fearful" argument. However, when they used supplemental measures of fear of crime, different results emerged.

More recent studies have revealed that the relationship between age and fear may be more complex than originally thought. Some scholars, such as Clemente and Kleiman (1976) suggest that the elderly should not be viewed as a homogeneous group, as other factors impact their levels of fear. Yin (1982) adds that fear of crime is simply not one of the leading fears

reported by elderly respondents. Rather, he found that poor health and financial problems outranked fear of crime. Consistent with this idea, several studies have found the relationship between the two to be negative rather than positive. For instance, Ferraro's (1995) work suggests that young adults and middle-aged adults had the highest levels of fear. Lower fear among the elderly is also seen when using crime-specific measures or measures that separate personal from property crime (Acierno, Rheingold, Resnick, & Kilpatrick, 2004; Ferraro & LaGrange, 1992; LaGrange & Ferraro, 1989). In fact, elderly respondents had the second lowest level of fear of victimization – the absolute lowest level belonged to the middle-aged group (LaGrange & Ferraro, 1989). LaGrange and Ferraro (1987) argue that when crime-specific measures are used, the elderly report less fear than their younger counterparts; however, when non-specific (or formless) measures are used, the elderly report being more afraid than younger groups. For example, using a burglary-specific measure of fear, Wilcox Rountree and Land (1996a) found evidence that younger respondents had the highest fear. Haghighi and Sorensen's (1996) work revealed that in addition to being more afraid of burglary, younger individuals were also more fearful of sexual assault compared to their older counterparts. Some also suggest that the age-fear relationship does not always function monotonically and may be more curvilinear in nature (LaGrange & Ferraro, 1989; Sundeen & Mathieu, 1976; Toseland, 1982; Warr, 1984; Warr & Ellison, 2000). In this way, there is evidence that elderly women and younger women have similar levels of fear (Pain, 1995).

In terms of risk perception, Ferraro (1995) did not find a significant relationship between age and perceived risk of crime (see also, Ferraro & LaGrange, 1992), but Franklin et al.'s (2008) work revealed a positive relationship. Wilcox Rountree and Land (1996a, 1996b), on the other hand, reported a negative relationship between the two (see also Wilcox, Quisenberry, &

Jones, 2003). McCoy, Wooldredge, Cullen, Dubeck, and Browning (1996) found that most elderly perceived themselves at low risk for victimization and did not view fear of crime as a serious issue.

Age and Vulnerability to Victimization. Because most of the earlier works and some of the newer ones find that the elderly are more fearful, researchers have examined this trend through the lens of vulnerability. In this way, the elderly's higher levels of fear could be attributed to differences in their sensitivity to risk and perceived seriousness of the offenses (Warr, 1984). Related to their heightened sensitivity to risk and perceived seriousness is their greater physical vulnerability (McCoy et al., 1996). On many levels, it makes perfect sense that the elderly would be more fearful of victimization than other age categories. With age comes a decline in both physicality and strength, as well as the onset of many illnesses and injuries (Braungart et al., 1980). Quite simply, in the face of a possible attack, elderly individuals may be unable to defend themselves or to flee. Because of this, it is unsurprising that older women have less confidence in their ability to protect themselves (Lee, 1982a).

What is more, any physical, emotional, or financial damage caused by victimization can be especially burdensome for the elderly. With increasing age comes a decrease in the recuperative powers needed to recover from injuries sustained from violent victimization (Ollenburger, 1981). While physical injuries take longer to heal in the elderly, some may never fully recover from their injuries (Skogan & Maxfield, 1981) while others may be forced to surrender their autonomy as a result and move into an assisted care facility (Killias, 1990) or the home of a relative or friend. Also, elderly individuals without strong social and financial support may be even more fearful of the consequences of crime (Killias, 1990). Many elderly live on fixed incomes and cannot afford to pay medical bills or replace stolen or damaged possessions.

Plus, many may fear having memorable items taken and not being able to replace them. Consistent with Killias' (1990) dimensions of vulnerability, not only do the elderly perceive themselves at risk for victimization, but their loss of control and awareness of the severity of the consequences impacts their fear of crime.

Ethnicity/Race and Fear/Risk

Although not often included in discussions of vulnerability to victimization, Miethe and Lee (1984) offer that perceived vulnerability of ethnic or racial minorities may be useful in explaining their rates of fear. This demographic is far less researched than some of the others, but there is much evidence to suggest that African Americans or non-whites experience higher rates of fear than whites (Clemente & Kleiman, 1976, 1977; Cossman & Rader, 2011; Ferraro, 1995; Hindelang, 1974; Hindelang et al., 1978; Parker & Ray, 1990; Skogan, 1995; Skogan & Maxfield, 1981; Stafford & Galle, 1984; Stinchcombe, Adams, Heimer, Scheppele, Smith, & Taylor, 1980; Thomas & Hyman, 1977; Warr, 1994; Warr & Ellison, 2000), as well as higher rates of altruistic fear for spouses (Warr & Ellison, 2000).[14] Haghighi and Sorensen's (1996) work showed that compared to non-Hispanics, Hispanics were more worried about sexual assault, and that both African Americans and Hispanics were more concerned about being murdered than other ethnic groups. In addition to this, some have examined differences among minority groups. Parker, McMorris, Smith, and Murty (1993), for example, found that Hispanics were more fearful of crime in general than African Americans. Yet, Walker (1994) and Moore and Shepherd's (2006) works reveal that Asians are more fearful than other racial or ethnic groups.

[14] Warr and Ellison's (2000) work on altruistic fear also revealed that African-American parents were more concerned with their sons' safety than their Caucasian counterparts.

In contrast to the studies that show that minorities report more fear, Furstenberg (1971) found that white respondents expressed greater concern for crime than other racial or ethnic groups, while Walker's (1994) work revealed that whites were more afraid to walk the streets at night than African Americans. Using a burglary-specific measure of fear of crime, Wilcox Rountree and Land (1996a) found that whites were more fearful than non-whites. When looking at whites' fear of crime, Skogan (1995) found that residential proximity to African Americans mattered. Moreover, prejudiced whites expressed even more fear of crime than non-prejudiced whites. Some argue that the relationship between race and fear is heavily dependent on the racial composition of the areas (Stinchcombe et al., 1980). Others, such as Liska et al. (1982), focus on city-level factors, such as the city's crime rate, segregation, size, and minority population, and how these affect interracial crime and, ultimately, fear of crime. Yet, for some researchers, such as Reid and Konrad (2004), no racial differences emerged.

Compared to the abundant research on the relationship between ethnicity/race and fear, only a handful of studies have examined the relationship between ethnicity and risk perception. Ferraro's (1995) study, for instance, revealed that non-whites perceived more risk of victimization, in general, as well as more risk of personal and property victimization, than their white counterparts. Franklin et al.'s (2008) and LaGrange and Ferraro's (1989) work also showed that minorities perceived greater risk than whites. On the contrary, Wilcox Rountree and Land's (1996a) work showed that non-whites perceive less risk in general than whites, but especially when living in disordered neighborhoods, thus suggesting that the relationship between race and perceived risk may be conditional upon neighborhood conditions (see also Wilcox Rountree & Land, 1996b or Wilcox, Quisenberry, & Jones, 2003).

Ethnicity/Race and Vulnerability to Victimization. In many ways minorities represent an extremely vulnerable group in our society. For instance, African Americans are routinely more likely to experience actual victimization and to reside in inner-city areas where crime flourishes (Skogan & Maxfield, 1981; Skogan, 1995). Such areas are plagued by physical decay and social disorder, both of which are fear-provoking. Essentially, their fear of victimization stems from criminogenic conditions that flourish in their neighborhoods (Liska, Sanchirico, & Reed, 1988; Ortega & Myles, 1987). Thus, unlike physical vulnerability, which had an impact on gender and age, the type of vulnerability used to portray the fear of minorities is social (Donnelly, 1989) and/or situational in nature. Additionally, African Americans are more likely to be portrayed in the media, both in news and entertainment, as violent crime victims (Parker & Ray, 1990). Collectively, these factors can serve to increase their sense of vulnerability and, ultimately, fear of crime and perceived risk (Box et al., 1988; Jones, MacLean, & Young, 1986).

Socioeconomic Status and Fear/Risk

In addition to the demographic factors discussed thus far, socioeconomic status and its correlates (e.g., educational level and occupational prestige) have also been examined both in the fear of crime literature and under the umbrella of vulnerability.[15] Much of the research suggests that some sort of relationship exists between socioeconomic status and fear of crime. The more common finding is that members of the lower class are more fearful of crime than other socioeconomic groups (Hindelang, 1974; Hindelang et al., 1978; Skogan & Maxfield, 1981).

[15] Also linked to socioeconomic status is residential location or community size. Residents living in larger areas tend to be more afraid of crime (Baumer, 1978, Clemente & Kleiman, 1976, 1977; Conklin, 1971; DuBow et al., 1979; Erskine, 1974; Lawton & Yaffe, 1980; Lebowitz, 1975; Ollenburger, 1981; Stinchcombe, Heimer, Iliff, Scheppele, Smith, & Taylor, 1977), while individuals residing in urban areas are more fearful than those in rural areas, suburban areas, or smaller cities (Conklin, 1971; Haghighi & Sorensen, 1996; Hindelang, 1974; President's Commission, 1967; Thomas & Hyman, 1977; van Dijk, 1978). Relatedly, fear of crime is affected by the relative dangerousness of one's area (Garofalo, 1979; Parker & Onyekwuluje, 1992).

Stated differently, as income decreases, fear of crime increases (Cossman & Rader, 2011; Moore & Shepherd, 2006; Pantazis, 2000; Parker & Onyekwuluje, 1992; Warr & Ellison, 2000). Mimicking this trend, several scholars report a negative relationship between risk perception and family income (i.e., individuals with lower incomes perceive more risk of victimization) (Franklin et al., 2008; Wilcox Rountree & Land, 1996a, 1996b; Wilcox, Quisenberry, & Jones, 2003).

Related to socioeconomic status, findings regarding the relationship between education and fear of crime and risk perception have yielded mixed findings. For instance, some have found no significant relationship between these two variables (Ollenburger, 1981; Reid & Konrad, 2004; Warr & Ellison, 2000), while others have found an inverse relationship between education level and fear of crime (Clemente & Kleiman, 1977; Cossman & Rader, 2011; Ferraro, 1995; Hindelang, 1974; Moore & Shepherd, 2006; Warr, 1994; Weinrath & Gartrell, 1996; Zhao et al., 2010). Both Akers, LaGreca, Sellers, and Cochran (1987) and Thomas and Hyman (1977) found that those with lower incomes, as well as those with less education and/or occupational prestige, were more fearful of and concerned with crime than their counterparts (see also Jackson & Stafford, 2009).

Smith and Hill (1991b), however, suggest that income and education are separate constructs that affect fear of crime differently. In their study, the effect of income on fear was insignificant, but a significant negative relationship was found between education and fear. Further, there is only one known study that found a positive relationship between education and fear (Donnelly, 1989); however, this finding was explained in terms of the drastically changing neighborhood context. More specifically, middle class neighborhoods underwent extreme economic and community disruption that led to unemployment, foreclosures, and a general

decline in the area's image, all of which increased fear. In terms of perceived risk, Mesch (2000a) found an insignificant relationship with education; however, others report a significant inverse relationship between education and perceived risk of victimization (Chiricos et al., 2001; Franklin et al., 2008; LaGrange & Ferraro, 1989). Ferraro (1995) found that education mattered for perceived risk of personal victimization, but not for risk of property victimization or overall total risk.

Socioeconomic Status and Vulnerability to Victimization. On the whole, it appears that socioeconomic status and its correlates are prime indicators of individual vulnerability. First and foremost, members of the lower class are more likely to reside in impoverished, inner-city areas that are marked with incivilities and crime (Hope, 1995). Living in such places, in and of itself, is likely to enhance vulnerability, fear of crime, and perceptions of risk. Similar to the vulnerability of ethnic and racial minorities, this type of vulnerability is socially- or situationally-based (Donnelly, 1989). What is more, individuals in lower socioeconomic groups are financially less able to protect themselves and their property. For instance, not only do they live in less secure areas and buildings, but they are less likely to have security systems or other target hardening devices (Cossman & Rader, 2011; Pantazis, 2000). Also, because they reside in riskier places, they are also exposed to more dangerous people and situations (Cossman & Rader, 2011). More simply, they are more likely to reside in close proximity to offenders. They are also more likely to have to rely on public transportation, which further places them in potentially dangerous situations (Pantazis, 2000). As a whole, this proximity to crime and criminals contributes to feelings of increased vulnerability, fear of crime, and risk perception.

Not only are members of the lower class at a higher risk of victimization, but they are likely to be more devastated by the consequences of potential victimization. The lower class will

often lack the financial resources necessary to rebound from property or personal victimization and, thus, may view the consequences of victimization as more serious than classes above them. They may not, for example, have property or health insurance (Pantazis, 2000), which can cause additional hardships and stress in the wake of victimization. According to Hale (1996), not only do they, as individuals, lack these material and social resources, but as a community, they have fewer contacts and networks, as well as less organizational ability. Together these represent a general lack of control, which may be sufficient to increase fear of crime in these individuals. It appears that the dimensions of vulnerability Killias (1990) identified apply to those living in poverty – they are exposed to risk, feel a loss of control, and anticipate serious consequences of victimization. Collectively, these can account for their higher levels of fear of crime. Further, Smith and Hill (1991b) suggest that having lower education can also be construed in terms of social vulnerability as those individuals tend to have lower self-images and may feel less able to control their lives.

Nevertheless, there are some who suggest that members of the lower class have "bigger" problems to focus on than crime and fear of crime. Although the lower class does worry about victimization, they are plagued with other "non-human" dangers such as vermin, inadequate plumbing, hazardous electrical wiring, fear of fire or freezing to death, and, of course, financial concerns (Rainwater, 1966). These threats, coupled with the threats of violence and property crime, gangs, and alcohol and drug subcultures, can all lead to physical and moral harm, as well as to the disruption of interpersonal relations (Rainwater, 1966). Quite simply, the lower class has more immediate and, arguably more important, problems to focus on besides (or in addition to) fear of crime. Perhaps this is why occasionally researchers fail to find a significant relationship between income and fear of crime (see e.g., Haghighi & Sorensen, 1996).

Other Sociodemographic Indicators of Vulnerability and Fear/Risk

In addition to the main demographic indicators of vulnerability – gender, age, ethnicity/race, and socioeconomic status – there are some additional "individual statuses" that may denote vulnerability and impact fear and perceived risk of victimization. For instance, some researchers, such as Weinrath and Gartrell (1996), fail to find a significant relationship between marriage and fear of crime (see e.g., Haghighi & Sorensen, 1996). Others, however, have found that marital status does matter (Moore & Shepherd, 2006) or that it interacts with other demographic factors for some subpopulations (DeFronzo, 1979; Parker & Ray, 1990). This work suggests that individuals who are not married have higher levels of fear than their married counterparts (Lee, 1982a; Parker, 1988; Toseland, 1982; see also Akers et al., 1987) or, stated alternatively, married individuals express less fear (Cossman & Rader, 2011).

Likely related to marital status is living alone. While Donnelly (1989) found that living alone increased fear (Toseland, 1982; see also Akers et al., 1987), Silverman and Kennedy (1985) found that this applied only for women. Braungart et al. (1980) concluded that unmarried older women who lived alone were among the most fearful. These findings are potentially important as Braungart et al. argue that individuals who are not married or who are living alone are isolated and can be viewed as potentially vulnerable groups in our society. According to Donnelly (1989), individuals who live by themselves are less likely to have someone there to help them if a dangerous situations arises (i.e., if an offender enters the residence). Thus, living alone increases fear because it, too, increases feelings of vulnerability (Antunes et al., 1977; Ward, LaGory, & Sherman, 1986). Moreover, both living alone and marital status influence

one's lifestyle and routine activities, which also affects levels of fear (discussed later). Relatedly, Will and McGrath (1995) reported that having fewer or no children increases fear.

Feelings of isolation can also serve as indicators of vulnerability. Research shows a positive relationship between levels of fear and feeling socially isolated (Acierno et al., 2004). Among the elderly, Yin (1982) reported that involuntary isolation, as well as low morale and neighborhood dissatisfaction affected their fear of crime. Similarly, McCoy et al.'s (1996) work revealed that dissatisfaction with life, housing, and the neighborhood also impacted fear of crime. For instance, the less satisfied individuals are with their living arrangements and residences, the more fear they reported (Toseland, 1982). Likely related to isolation and satisfaction with living arrangements is the amount of time at one's current residence. Ferraro (1995), for example, found an indirect relationship between fear of crime and length living at one's residence. Another psychosocial variable – perceived helpfulness of other people – was also associated with fear. Individuals who demonstrated more interpersonal trust tended to be less fearful (Toseland, 1982).

Perhaps the quintessential example of physical vulnerability, several researchers, particularly those in other disciplines, have examined physical and mental disorders and their affect on fear of crime (see e.g., Akers et al., 1987; Chandola, 2001; McCoy et al., 1996; Ross, 1993). Ollenburger (1981), for example, found that individuals with limited physical mobility had significantly higher levels of fear. Respondents with longstanding illnesses (Jackson & Stafford, 2009) and those with prior depression were more fearful of crime (Acierno et al., 2004; Jackson & Stafford, 2009). Similarly, those with poorer self-reported mental health had higher levels of fear (Cossman & Rader, 2011). In terms of risk perception, Ferraro (1995) found that respondents with poorer health felt more vulnerable to victimization than those with better

health. While many prior studies examine *perceived* health status, Stiles, Halim, and Kaplan (2003) used actual objective measures of disability in their study. Measured in this manner, individuals with such physical limitations were more fearful than those without such disabilities. They, along with Yin (1985), argue that such measures provide a better measure of health than self-reported measures.

Additionally, as part of their study Killias and Clerici (2000) had interviewers' silently rate several physical characteristics of the participants, including physical handicaps, weight, physical shape/outward health, self-confidence, and potential vulnerability in hypothetical victimization situations. Although the participants' self-reported vulnerability proved to be a better predictor than the interviewer-assessed vulnerability, some important findings emerged. For example, the vulnerability assessed by the interviewers was significantly related to the participants' fear of walking in their neighborhood at night, riding public transportation in the evening, perceived risk of burglary, and use of safety precautions. In many instances, the interviewer-assessed vulnerability overlapped with the self-assessed measures, suggesting a potentially interesting new avenue for fear of crime research.

Prior Victimization and Fear/Risk

Another individual factor to consider when studying fear or risk perception is prior victimization. Typically this relationship is weaker than expected to the point where it has been labeled "one of the most curious findings" of crime and fear research (President's Commission, 1967a, p. 51). Early studies, for instance, did not find direct experience with victimization to be related to fear of crime. Stated differently, prior victims and non-victims did not differ significantly in terms of their fear of crime (Baker et al., 1983; Biderman et al., 1967; Block &

Long, 1973; Conklin, 1971; Hindelang, 1974; McIntyre, 1967; President's Commission, 1967a). According to Garofalo (1977), the research suggested that a weaker relationship exists between fear of crime and actual encounters with crime (i.e., being victimized in the past) than between fear and demographic characteristics.

It has been almost 50 years since the Commission's groundbreaking research and, in that time, numerous studies have supported the finding that there is little to no relationship between prior victimization and fear of future victimization. In this way, they conclude that individuals who have suffered victimization are not the most fearful of it (e.g., Alvi, Schwartz, DeKeseredy, & Maume, 2001; Furstenberg, 1971; Thomas & Hyman, 1977). Some studies, like Baker et al.'s (1983), fail to uncover a direct relationship between the two. Baker et al. (1983), however, did find that recent victimization influenced perceptions of the crime rate, which in turn, affected fear of crime. Individuals who have recently been victimized become afraid of crime when they perceive the crime rate as increasing. Overall, though, many concluded that prior victimization had a very limited role in fear (Skogan & Maxfield, 1981). Some scholars, such as Toseland (1982), contend that the relative rarity of criminal victimization yields highly skewed data, which may be responsible for the weak effect of prior victimization and fear of future crime.

Even though a large segment of the literature found no relationship between victimization and fear, several problems, particularly with the early works, have been identified. According to DuBow et al. (1979), many of these studies only inquired about victimization within a relatively short period of time (i.e., six months to a year). As a result, many respondents who experienced victimization early in life, or at any point other than the last six months to a year, are classified as non-victims. Also, many of these studies are cross-sectional, yet they attempt to draw

longitudinal conclusions (DuBow et al., 1979). In reality, identifying the temporal order of the victimization-fear relationship is difficult to do with the type of data typically used.

In addition to these issues, others have concentrated on the underreporting of victimization. While this is fairly common in official crime statistics, Hindelang et al. (1978) argue this occurs in surveys and interviews as well. This is particularly likely to occur with sexual victimization or in situations where the perpetrator is known to the victim (Sacco, 1990). This is extremely problematic as women are more likely to suffer sexual victimization at the hands of someone they know. Because of this, what we know, or think we know, about the crime-fear link is called into question. Others argue that not all types of relevant victimizations are included in survey instruments. Not only should questions inquire about sexual harassment (Keane, 1995), but they should ask about other types of violence, including "visual violence" or flashing (Hanmer & Saunders, 1984) and "verbal violence," which includes obscene phone calls (Kelly, 1988). Scott (2003) found that several of these acts (e.g., obscene calls, unwanted attention, and being followed), especially when committed at by unknown men, increased women's fear of crime. Potentially, then, surveys or interviews are missing different types of prior victimization, which not only may affect the association between victimization and fear, but are also important in understanding the shadow effect.

In stark contrast to the works mentioned already, there is an equally sizable portion of the literature that finds the relationship between prior victimization and fear of crime to be quite important (see e.g., Baumer, 1985; Ditton, Bannister, Gilchrist, & Farrall, 1999; Garofalo, 1979; Giles-Sims, 1984; Katz et al., 2003; Lee, 1992b, 1993; McCoy et al., 1996; Mears & Stewart, 2010; Smith & Hill, 1991b; Wilcox Rountree, 1998; Wilcox Rountree & Land, 1996a, 1996b; Zhao et al., 2010). Ollenburger (1981), for instance, found that victimized individuals, in

general, were significantly more fearful than non-victimized respondents. In fact, prior criminal victimization was one of the most important correlates in her study. Across their sample and subsamples, Parker and Ray (1990) also found prior victimization to be the most consistent predictor of fear, even more so that gender, age, or race. Some, nonetheless, find significant, but small effects (Gomme, 1988). Moreover, this positive relationship between prior criminal victimization and fear of future crime is apparent in other countries as well. For instance, Weinrath and Gartrell's (1996) analysis of the Canadian Urban Crime Survey and Hough's (1995) work with the British Crime Survey revealed that prior victimization did, indeed, matter. Tseloni and Zarafonitou's (2008) study replicated this finding in Greece as well. Studies that focus on risk perception and prior victimization produce similar results (Baumer, 1985; Ferraro, 1995; Fisher et al., 1995; Giles-Sims, 1984; Lee & Ulmer, 2000; Tseloni & Zarafonitou, 2008; Wilcox Rountree & Land, 1996a, 1996b; Wilcox, Quisenberry, & Jones, 2003). Lee's (1982b) work with the elderly, for example, reveals that risk perception was significantly correlated with experiencing an actual victimization within the prior five years.

In addition, Garofalo (1977) examined whether the number of prior victimizations impacted the level of fear of crime. In doing so, he found that those with several prior victimizations had slightly higher levels of perceived risk than those with one or zero prior victimizations. More recently, studies have begun to distinguish between type of prior victimization and fear of crime. The underlying thought was that because earlier studies typically relied on general measures of prior victimization, potentially important findings were masked (Miethe & Lee, 1984). Using crime-specific measures on a sample of elderly respondents, Miethe and Lee (1984) found that fear of violent crime was higher among individuals who endured a prior violent victimization and, similarly, fear of property crime was

higher for those who had experienced prior property crime victimization. Although Teske and Hazlett's (1988) study did not differentiate between types of fear, they found that both prior property and violent victimization were significantly related to fear of crime. In her analysis, Wilcox Rountree (1998) discovered that prior violent victimization increased both fear of violent crime *and* burglary. However, the effect on fear of burglary was indirect, operating via perceived incivilities. Prior burglary victimization, on the other hand, only affected fear of burglary. Individuals who had been the victim of burglary were more fearful of future burglaries, but were not more afraid of violent crime. In this way, it is very possible that prior studies missed an important link in the fear of crime-prior victimization nexus. And although beyond the scope of this dissertation, the relationship between neighborhood crime rates and fear of crime are also important since such rates represent the community's prior victimization (see e.g., Liska et al., 1982; Wilcox Rountree, 1998).

While finding prior victimization to be an important predictor of fear of crime, Skogan (1987), however, did not find any variation across different subgroups of the sample. For example, prior victims who were more vulnerable expressed similar levels of fear than vulnerable individuals who had not previously been victimized. Further, some have found while the prior victimization-fear relationship is significant, it is conditioned by other factors. Lalli et al. (1977), for example, found that among juveniles, prior personal victimization and fear of crime were not significantly related. However, adults who had continuously experienced household victimization expressed the most fear while those who had occasionally or never been victimized reported low levels of fear. Additionally, when measuring prior victimization that occurred within and outside of one year, Weinrath and Gartrell (1996) found that both recent and more-distant personal victimization experiences increased fear of crime in younger women, but

not in elderly women. In addition, Box et al. (1988) finds that prior victimization may interact with neighborhood incivilities.

Prior Victimization and Vulnerability to Victimization. Although the empirical relationship between prior victimization and fear of crime is still in limbo, the link between prior victimization and vulnerability appears, at least at first glance, to be far less complicated. By all accounts, prior victims of crime really should be more fearful than non-victims. They should consider themselves acceptably vulnerable since they were already viewed, on at least one occasion, as an attractive or vulnerable target by an offender. Because of their experience with victimization and the related feelings of vulnerability (see Janoff-Bulman, 1985), they should consider themselves to be at a higher risk for future victimizations. Perhaps in support of this heightened vulnerability, prior victimization has been found to significantly predict handgun ownership (Arthur, 1992).

Nonetheless, if in response to prior victimization, individuals adjust their lifestyles and daily activities or if they utilize target hardening measures and other protective behaviors, then perhaps they will perceive themselves as being *less* vulnerable to future victimizations. In this way, a learning effect may occur that facilitates a reduction in fear (Skogan, 1987). Similarly, Sparks, Genn, and Dodd (1977) suggest that because many individuals are so fearful of crime that when they actually are victimized and survive, their fear of future offenses is reduced. Another possibility is that prior victims engage in techniques of neutralization to help them cope psychologically with their experiences (Agnew, 1985). Under these various circumstances, prior victims may not necessarily be more fearful of future victimizations nor consider themselves to be more susceptible targets.

Also, some have argued that the effect of victimization likely wears off after some amount of time (Friedman, Bischoff, Davis, & Person, 1982; see also Box et al., 1988 or Skogan, 1986). Others boldly suggest that for some people, victimization may not be that important of a life event. They contend that because most incidents of victimization are actually very minor, they do not seem to make a strong or permanent impact on those individuals (McIntyre, 1967, 1975) unless they are extremely recent (Biderman et al., 1967; McIntyre, 1975). In this way, prior victimization does not appear to strongly impact attitudes regarding crime or fear of crime.

Indirect Victimization and Fear/Risk

In addition to personally experiencing a prior victimization, there is evidence to suggest that knowing a victim of a crime can also influence one's fear of crime and perceptions of risk (Baumer, 1978, 1985; Ferraro, 1995; Katz et al., 2003; Lee & Ulmer, 2000; Mesch, 2000a; Teske & Hazlett, 1988; Tseloni & Zarafonitou, 2008; Yin, 1980). Furstenberg (1971), for example, found that individuals who were acquainted with recent victims reported more fear of crime than those who lacked this personal contact. Referred to as indirect or vicarious victimization, knowing others who have been victimized can raise fear of violent or property crime (Miethe & Lee, 1984). Because crime victims are likely to share their accounts with other people, their victimization creates a "ripple effect," that reaches many (Baumer, 1978; LeJeune & Alex, 1973). Indirectly, then, these individuals feel affected by crime and, as a result, perceive themselves as being more vulnerable. This is particularly true if the vicarious victimization in question occurred in one's area (Skogan & Maxfield, 1981). Also, knowing others who have been victimized can increase one's awareness of the consequences of victimization, making it a

more realistic fear (see e.g., Lupton, 2000). However, some have found limited support for indirect victimization affecting fear (Hale, Pack, & Salked, 1994).

Furthermore, a discussion of fear of crime, perceived risk, and/or vulnerability is arguably incomplete without briefly mentioning the impact that the mass media has on these outcomes. As the primary vehicle for crime-related information, the media has a powerful hold on our perceptions and fear. Whether through news coverage, television shows, or movies, the biased and exaggerated coverage of crime undoubtedly impacts the perceptions of millions of people. Some, but not all, of the research in this field suggests and finds support for the notion that increased exposure to media outlets affects perceptions of crime (Gerbner & Gross, 1976) or fear of victimization (Gomme, 1988). For instance, Sacco (1982) found a direct relationship between watching television and crime-related perceptions of one's neighborhood. While the media may be partly to blame, it is important to note that some individuals might also be more inclined to pay attention to sensationalized news coverage (van Dijk, 1978).[16]

Conclusion

As identified by many, vulnerability, or perceived vulnerability, affects both fear of crime and perceptions of risk. In this way, indicators of vulnerability, such as the social and demographic characteristics discussed in this section, are crucial in identifying which groups of people are afraid of crime and perceive greater risk, as well as why this is the case. In the next section, the extension of the opportunity perspective to fear and risk research, as well as the rationality of such fears and perceptions of risk will be discussed.

[16] However, some research suggests that media coverage does not *directly* lead to fear of crime (see Skogan & Maxfield, 1981).

Before this is possible, however, it is important to emphasize the relationship between fear of crime and perceptions of risk. Although this dissertation treats risk perception as a separate outcome variable, it is necessary to briefly discuss its role as a predictor of fear of crime. Virtually all of the studies that examine the impact of risk perception on fear of crime find that it is of great importance (see e.g., Box et al., 1988; Ferraro, 1995; Fisher & Sloan, 2003; LaGrange & Ferraro, 1989; Lane & Meeker, 2003; Lee & Ulmer, 2000; Wilcox Rountree, 1998). Although the work by Warr and colleagues that was previously discussed highlights the potentially complex nature of fear of crime and perceptions of risk, it also helped to identify risk as a key link to fear of crime. As set forth by Killias (1990), one of the three dimensions of vulnerability is exposure to non-negligible risk. Because individuals may not know their actual risk of being victimized, they rely on perceived risk. In this way, perceived risk is essentially a proxy for perceived vulnerability. When treating risk perception as a predictor variable, it has a positive effect on fear of crime. More specifically, individuals who perceive more risk are more fearful than those who perceive less risk (Fisher & Sloan, 2003; Heath, Kavanagh, & Thompson, 2001; Hilinski, 2009; May et al., 2010, Mears & Stewart, 2010; Mesch, 2000a; Miethe & Lee, 1984; Ortega & Myles, 1987; Wyant, 2008). What is more, perceived risk affects all types of fear of crime and routinely is one of its chief predictors (see e.g., Ferraro, 1996; Hilinski, 2009). For instance, the most significant predictor of fear of rape is perceived risk of rape (Ferraro, 1996, see also Gordon et al., 1980; Thompson, Bankston, & St. Pierre, 1991). Again, because of its theoretical and conceptual distinctiveness (as already discussed), this current work treats risk perception as a dependent variable; yet it recognizes the role that it has played in predicting fear of crime.

THE ROLE OF LIFESTYLE/ROUTINE ACTIVITIES ON FEAR OF CRIME AND PERCEPTIONS OF RISK

In addition to using sociodemographic characteristics and prior victimization to gauge vulnerability, several scholars, led by Ferraro and Wilcox and their colleagues, have used measures of lifestyle/routine activities to better understand fear and perceived risk. The notion of opportunity emerged onto the criminological stage in the late 1970s. At that time, an important theoretical and empirical shift occurred. Rather than focusing on the motivation or propensity of criminals, scholars such as Hindelang et al. (1978) and Cohen and Felson (1979) began to explore the opportunity structure of crime. The product of their works showed that variations in demographic characteristics, lifestyles, and daily routine activities affect the likelihood of victimization. Essentially, some people are differentially exposed to criminal victimization because of who they are, where they live, or what they do. Risky or dangerous lifestyles, as defined by exposure to motivated offenders, reduced or absent guardianship, and enhanced target suitability, affect the likelihood of victimization (Cohen & Felson, 1979).

While the lifestyle/routine activities (i.e., opportunity) approach has been empirically supported in various contexts and at multiple levels of analysis (Cohen, Felson, & Land, 1980; Cohen, Kluegel, & Land, 1981; Miethe, Stafford, & Long, 1987; Sampson & Wooldredge, 1987; Wilcox, Land, & Hunt, 2003), scholars such as Ferraro (1995),Wilcox Rountree (1998), and Wilcox Rountree and Land (1996a, 1996b) have recognized its utility in explaining *fear* and *perceived risk* of criminal victimization. Just as victimization is affected by the confluence of exposure to motivated offenders, target suitability or attractiveness, and capable guardianship, individuals' fear and perceptions of risk are also guided by such factors. This theoretical

extension works, in part, because opportunity theory is built on the premise that individuals (both potential offenders and victims) are, to some degree, rational. For instance, offenders will select targets that are suitable, are close in terms of proximity, are easy to access, and that lack adequate guardianship. In selecting targets, offenders will utilize individual and environmental cues to make rationally-based decisions about their opportunities for crime.

In a similar fashion, when individuals perceive themselves as suitable targets that are both exposed to offenders and are without proper guardianship, their fear and perceived risk should be amplified. Just as offenders utilize cues to gauge risk, individuals, in general, will also rely on clues or signs to judge their risk of potential victimization in various situations. Thus, opportunity impacts both perceptions and interpretations of risk of victimization (Wilcox, Quisenberry, & Jones, 2003). In a fairly rational manner, potential victims will use indicators to evaluate their threat of or opportunity for victimization (Ferraro, 1995). Although they will likely employ both individual and environmental cues as barometers for their fear and risk, this dissertation focuses on the individual-level indicators. Though beyond the scope of this work, it is important to note that ecological indicators (i.e., neighborhood crime rates, incivilities, and community cohesion) also serve as rational indicators of potential victimization, affecting both perceived risk and fear of crime (Ferraro, 1995). In addition to the works of Ferraro and Wilcox Rountree, Cook (1986) also commented on the importance of considering exposure as a function of lifestyle/routine activities, as well as examining its impact on fear and perceived risk. He further proposed that individuals will choose, in a fairly rational manner, to alter their exposure (i.e., routine activities) based on their anticipation of and concern with victimization (i.e., fear of crime).

Support for a Lifestyle/Routine Activities Framework of Fear/Risk

This natural extension of lifestyle/routine activities theory to fear and risk perception is quite valuable. Even before this conceptual expansion occurred, other scholars hinted at the importance of including exposure in models of fear and/or risk. Balkin (1979), for instance, proposed that official crime rates (i.e., objective measures of crime) fail to consider or account for exposure to crime. He suggested that some individuals actually have a higher "real" risk of victimization, but because they take the necessary steps to lower their exposure to victimization, their official rates of victimization appear much lower. Essentially, the crime rates reported and used by researchers mask any behavioral adaptations that lower exposure and risk of victimization. To account for this, he examined the probability of victimization per exposure to risk and found that these adjusted rates of victimization corresponded better with fear of crime than official rates of victimization (Balkin, 1979).

Warr (1984) also noted that not all segments of the population are equally exposed to opportunities for victimization. He suggested that women and the elderly are less exposed to risk and danger because of their lifestyles and activities and that this explains their lower victimization. Additionally, Warr (1984) recommended that future works examine victimization rates per unit of exposure. Although women and the elderly may not be victimized frequently because of their lifestyles, it would make more sense to analyze their victimization in light of their *actual* exposure. Perhaps their victimization rates are actually quite high given their limited exposure to risky situations and motivated offenders.

In many ways, Stafford and Galle (1984) answered this empirical call when they contended that differential exposure to risk is key in understanding fear and perceived risk. Similar to the work of Balkin (1979), they argue that individuals' risk of victimization hinges on

exposure, but, in their version, exposure is contingent upon lifestyle and routine activities. Stafford and Galle (1984), like Balkin, propose that most prior scholars have used conventional crime rates, which is less than ideal. Stafford and Galle's (1984) results showed that the correlation between fear of crime and the adjusted victimization rate was much stronger than the one between fear of crime and the unadjusted victimization rate. Thus, those who report more fear of crime are more exposed to risk.

Since then, a handful of scholars have put forth conceptual diagrams outlining the role that indicators of lifestyle/routine activities theory plays on perceived risk and/or fear. Wilcox Rountree and Land (1996b), for instance, provided a multilevel conceptual model wherein both individual- and contextual-level variables affect perceptions of risk. More specifically, traditional measures of vulnerability (i.e., sociodemographic factors), indicators of lifestyle/routine activities (i.e., target attractiveness, exposure, and guardianship), and prior victimization all affect both individuals' perceived risk *and* their subsequent lifestyle/routine activities. Perceived risk, also, has a direct impact on the routine activities of individuals. Additionally, the model provided by Wilcox Rountree and Land (1996b) also illustrated how neighborhood or contextual factors (e.g., busy places, incivilities, and social integration) have direct and moderating effects on the aforementioned variables and relationships.

In a similar fashion, Mesch (2000a) laid out a conceptual model to help explain how opportunity affects fear of crime. In doing so, certain sociodemographic factors (such as gender, age, and marital status) were thought to influence both lifestyle activities *and* perceived risk. Furthermore, experience with victimization, both directly and indirectly, should also affect perceived risk. Finally, perceived risk and lifestyle activities are both proposed to have an impact on fear of crime. For the most part, Mesch's (2000a) model makes sense since those

demographic factors and prior experiences with victimization, as discussed before, serve as proxies for or indicators of individual vulnerability. As demonstrated earlier, they affect perceived risk and fear of victimization. However, indicators of vulnerability also influence lifestyles and routine activities, which impact fear as well. Mesch's (2000a) model, nevertheless, is somewhat lacking, as he did not treat perceived risk as a separate outcome measure.

Individual-Level Indicators of Lifestyle/Routine Activities

These conceptualizations coupled with the findings outlined next suggest that levels of fear and perceived risk are related to not only sociodemographic vulnerability, but also to lifestyles and routine activities. Individuals whose lifestyle increases their opportunity for victimization tend to be more afraid or perceive greater risk of victimization than those with less risky lifestyles or routine activities. Although Wilcox Rountree and Land's (1996a) work shows that these lifestyle/routine activities variables may do a better job predicting fear than risk (see also Tseloni & Zarafonitou, 2008), this effect may stem from their measure of perceived risk (i.e., whether one perceives his/her neighborhood to be unsafe from crime). Perceived neighborhood safety and perceived likelihood of becoming a victim are not necessarily the same. Regardless, studies that have set out to examine the effect of indicators of lifestyle/routine activities theory on fear and perceived risk, as well as some more general findings from prior works, gives credence to studying fear and risk from an opportunity perspective. The three indicators of lifestyle/routine activities – target attractiveness, exposure to motivated offenders, and suitable guardianship – and their relationship with fear and risk perception will now briefly be covered.

Target Attractiveness. Individuals who perceive themselves to be suitable targets or vulnerable to victimization should be more likely to experience fear and perceive greater risk than those who consider themselves to be less suitable (see e.g., van der Wurff, van Staalduinen, & Stringer, 1989). Many of the indicators of physical or social vulnerability that have been covered can be construed in terms of target attractiveness. For instance, gender, age, income, and physical or mental health can all serve as indicators of target suitability. In considering risk, Garofalo (1981) suggested that individuals will think about their vulnerability, specifically their physical characteristics and/or ability to resist or protect themselves in the wake of a possible victimization.

In this vein, Dussich and Eichman (1976) propose that there are two modes of vulnerability that are related specifically to target attractiveness. The first, which was just mentioned, is passive vulnerability. They contend that this deals with the exploitation of a victim's status (e.g., gender, age, race, and/or physical stature). The other mode, active vulnerability, occurs when the behavior of an individual contributes to victimization. Examples of this mode of vulnerability include seduction, aggression, and antagonism (Dussich & Eichman, 1976).

Both of these modes fit nicely within the broader victimization literature, which has also tried to unravel the precise role of target suitability. Finkelhor and Asdigian (1996), for instance, proposed that three characteristics affect youth's risk of victimization – target vulnerability, gratifiability, and antagonism. Although these were originally developed to apply to the study of victimization from an opportunity perspective, the theoretical extension of this perspective to the fear literature makes these relevant as well. Target vulnerability (i.e., Dussich and Eichman's notion of passive vulnerability), as already discussed, refers to characteristics that make it easier

to be victimized or more difficult to resist victimization (Finkelhor & Asdigian, 1996). Factors such as physical size and weakness, as well as psychological issues, fall into the target vulnerability category. Target gratifiability, the second characteristic, deals with possessing a particular attribute, trait, skill, or item that an offender would like to have, use, or manipulate. The classic example of gratifiability involves the female gender and sexual victimization. This parallels the earlier discussion on female's sexual vulnerability and its connection to perceived risk and fear. Target antagonism, as described by Finkelhor and Asdigian (1996), pertains to characteristics or behaviors that arouse hostility, jealousy, or anger in an offender. This characteristic appears to be analogous to Dussich and Eichman's concept of active vulnerability.

To illustrate the importance of target suitability, Wilcox Rountree and Land (1996a) found that individuals with more expensive and/or portable goods reported being more afraid of burglary. Possessing attractive items can also be considered an example of target gratifiability. Similarly, Wilcox Rountree (1998) found that owning more desirable goods increased fear of burglary and that carrying values in public increased fear of violence. However, the effect of family income on fear of burglary and violence is mixed (Wilcox Rountree & Land, 1996a; Wilcox Rountree, 1998). Support for target attractiveness affecting perceptions of crime risk was found to be fairly weak, as family income was negatively related to perceived risk of victimization (Wilcox Rountree & Land., 1996a, 1996b).[17]

In a more qualitative study, however, Lupton's (2000) work produced several examples of how target attractiveness impacts both fear and perceived risk of victimization in a manner consistent with Finkelhor and Asdigian's (1996) conceptualization of target suitability. For instance, some of the interviewees suggested that their risk of car theft and its related fear was

[17] As previously mentioned, the measure of perceived risk used by Wilcox Rountree and Land (1996a, 1996b) and Wilcox, Quisenberry, & Jones (2003) assessed whether an individual perceived his/her neighborhood as safe or unsafe, which is somewhat different than asking an individual to evaluate his/her likelihood of victimization.

based on the attractiveness or appeal of their car to others. Several of the male respondents additionally felt their risk of sexual assault was non-existent because their gender would not facilitate such an offense. Their related fear was also low because they did not consider themselves to be suitable as targets or particularly at risk for sexual victimization. While these last two examples provide support for the idea of target gratifiability, there was also evidence of target antagonism. Specifically, Lupton (2000) found that some subjects did not worry about homicide and perceived the risk of it occurring as low because they felt their behavior had not been antagonistic to others. One respondent, in particular, believed his risk of being murdered was negligible because he had not angered or annoyed anyone enough to cause such an offense to occur.

Exposure to Motivated Offenders. As already mentioned, individuals whose routine activities place them in contact with motivated offenders should experience more fear and perceive greater risk than those who are less exposed to dangerous places or risky situations. In fact, within Killias' (1990) dimensions of vulnerability, the first facet deals with exposure to risk, which includes interactions with or proximity to risky people and places. In addition, several other scholars have mentioned exposure as a potentially important factor to consider or have used it to try to explain particular empirical findings. Garofalo (1981), for instance, proposed that both the prevalence of and exposure to criminal places and situations influenced risk assessment. In Toseland's (1982) explanation for the curvilinear effect of age on fear, he proposed that younger respondents are exposed to more dangerous people and places (e.g., they have to rely on public rather than private transportation and spend more time away from home in the evenings). He also noted that mere fact that a large portion of the individuals in the younger age category (both offenders and victims) are juveniles is also important. This was interpreted to

mean that juveniles are more exposed to risky people and potentially dangerous situations than their older counterparts.

Also, van Dijk (1978) hinted that lifestyle factors might be a possible solution for explaining why female college students that are more liberated are also more fearful of rape. He suggested that such women are "out and about" more, which increases their risk of being sexually assaulted or harassed by strangers. Hilinski (2009) reported that extracurricular activities, which included Greek membership and participation in competitive school athletics, increased students' fear of various types of victimizations. In a similar fashion, Sloan et al. (1996) found that number of nights on campus affected perceptions of risk, but not fear, for college students (c.f., Fisher et al., 1995 and Brantingham & Brantingham, 1994).

Lupton's (2000) qualitative work also revealed that individuals considered the activities they engaged in and places they visited as factoring into their perceived risk and fear of victimization. A couple of interviewees, for instance, reported that being out at bars alone could facilitate victimization because of the effects of alcohol and presence of rowdy bar patrons. They felt such lifestyle activities increased risk for offenses such as assault and muggings. Also, when looking at perceived risk of residents in Greece, Tseloni and Zarafonitou (2008) found that exposure was especially important for perceptions of risk (see also Wilcox Rountree & Land, 1996a). Specifically, individuals in the paid workforce, as well as those residing in the city's commercial center were more likely to perceive a high risk of future victimization than those not in paid work or living in a city-center. They attribute the greater risk to the heightened exposure to risky people and places experienced by these individuals during their daily activities. Zhao et al. (2010) also found that proximity to crime events predicted individuals' fear of crime. Using buffers at 0.5 and 1.0 mile radiuses, they found that the propinquity of crimes to individuals'

residences increased fear. Additionally, living in high crimes areas, which can be construed as increasing risk of victimization via exposure to crime and criminals, is also important (Ortega & Myles, 1987).

When specifically examining the effects of indicators of lifestyle/routine activities, Wilcox Rountree (1998) discovered that individuals who engaged in more dangerous activities reported more fear of violent crime than their counterparts. In addition, Wilcox Rountree and Land (1996a) found that two of their three measures of exposure were important in predicting fear of burglary. That is, individuals with more access points to the house (i.e., ground floor windows or doors) and those who lived on corner residences expressed greater fear of burglary than those with fewer access points or those living in the middle of a street. Wilcox Rountree's (1998) work also revealed a positive effect of the amount of time the residence is left unoccupied and fear of burglary. In terms of perceived risk, Wilcox Rountree and Land (1996a, 1996b) reported that the number of access routes into the house positively affected perceived risk of victimization.

Individuals' response to fear and perceived risk, specifically their avoidance behaviors, also supports the application of an opportunity perspective to fear and risk research. In this vein, when considering responses to fear of crime or perceived risk, one of the chief adaptations employed is to avoid a certain location, person, or time (Lab & Whitehead, 1994). Essentially, what this does is limit exposure or risk. Sundeen and Mathieu's (1976) work with elderly respondents revealed that they often changed their behaviors and opted to stay home because they viewed the nearby environment as dangerous. Similarly, Warr (1985) suggests that fear of rape affects the places women travel to and from, as well as how they travel. In support of this, Softas-Nall et al. (1995) found that compared to men, women were more likely to avoid going

out late in the evening. Fisher and Sloan (2003) found similar results with women avoiding specific areas on campus in the evening.

Further, Mesch (2000a) reported that individuals who perceived more risk of victimization and reported more fear were less likely to go out in the evenings for leisure activities (i.e., his lifestyle exposure measure). Rather, such individuals were more constrained, staying at home instead of venturing out. However, Liska et al. (1988) suggest that limiting how frequently one goes out in the evening for entertainment purposes actually increase fear, but adds that it is likely because of a larger, escalating feedback loop between fear of crime and constrained behavior. In a similar fashion, Ortega and Myles' (1987) work revealed that individuals who employed more avoidance strategies (which actually included minimizing exposure and increasing guardianship) to reduce risk of victimization were more fearful.

Capable Guardianship. Individuals who lack guardianship or, at least, capable guardianship should be more fearful and perceive greater risk than those who are better guarded or protected. Researchers have long recognized that individuals choose to engage in protective behaviors based on their estimations of the likelihood of being victimized (Block & Long, 1973). There are, however, multiple types of protection or guardianship – personal, physical, social, and natural. Support for each of these forms of guardianship can be seen in the literature. Further, several of these examples may be considered applicable to more than one type of guardianship.

In terms of social guardianship, fear is related to the support, security, and protection received from neighbors (Sundeen & Mathieu, 1976). Softas-Nall et al. (1995) reported that women avoided going out at night alone. According to Fisher and Sloan (2003), college women were more likely to ask others to walk with them in the evening or to carry keys in a defensive manner. Lupton's (2000) work also showed that individuals measured their risk and fear in

terms of who they were with while going to certain places at particular times. Additionally, Scott (2003) found that living alone increased fear for women. Not only does living by oneself increase feelings of vulnerability, but it reduces social guardianship.

While examining fear among elderly, Sundeen and Mathieu (1976) found that fear was related to respondents' precautionary behaviors (i.e., physical or personal guardianship). Not only has defensive gun ownership been linked to perceptions of crime risk (Smith & Uchida, 1988), but some, such as Softas-Nall et al. (1995), report that women are more likely to purchase a gun for protection than their male counterparts. According to Wilcox Rountree and Land (1996a), those with more safety precautions or physical measures of guardianship (i.e., locks, alarms, etc…) reported greater fear of being burglarized. In the same way, Wilcox Rountree (1998) found a positive effect of safety precautions on both fear of burglary and violent victimization. In terms of risk perception, Wilcox Rountree and Land (1996a, 1996b) and Wilcox, Quisenberry, and Jones (2003) found a positive relationship between safety precautions and perceived risk of crime. Their interpretation of this trend is that such precautionary measures are employed *because* of perceived risk.

Additionally, Wilcox Rountree and Land (1996a) reported that respondents with more natural guardianship barriers (i.e., factors that reduce the surveillance capability of neighbors, such as tall fences or vacant lots) expressed more fear of burglary victimization. Forms of physical guardianship employed by colleges and universities are also important. For example, Barberet and Fisher (2009) reported that some, but not all, types of guardianship can reduce students' fear of victimization. While security measures designed to increase the risk of offenders being caught (i.e., forms of surveillance) appear to reduce fear of burglary among students, features that are geared towards increasing the effort needed to access the target (e.g.,

target hardening techniques) seem to increase fear (Barberet & Fisher, 2009).[18] As discussed later, there is an interesting balance when it comes to security or guardianship measures. While they should, in all actuality, reduce fear and perceived risk, they often have the opposite effect *because* they serve as reminders or cues that the area is potentially dangerous. Simply, for many individuals the presence of safety measures suggests there something or someone to fear.

CONCLUSION: THE RATIONALITY OF FEAR OF CRIME AND PERCEPTIONS OF RISK

There is an inherent assumption that fear of criminal victimization is rational. After all, crime itself has been viewed by criminologists as a rational choice, or at least a rational choice that is bounded or limited by the decision-maker's personal and situational factors, as well as his/her social context (Clarke & Cornish, 1985; Cornish & Clarke, 1986). However, the social science research produced in the 1970s began to label fear as both dysfunctional and paradoxical (Lotz, 1979). Mounting examples suggested that quite a bit of fear may actually be *ir*rational. For example, although national crime levels were decreasing, the fear of crime was increasing (Brantingham & Brantingham, 1997). Similarly, the crimes that are universally the most feared (e.g., murder, rape, and other violent crimes) are the ones that are the least likely to occur (Conklin, 1975; McIntyre, 1967, 1975; President's Commission, 1967a; see also Heath et al., 2001). According to the President's Commission on Law Enforcement and the Administration of Justice report (1967a), although most individuals have never witnessed a serious or violent

[18] See Clarke (1980, 1995), Cornish and Clarke (2003), and Wortley (2001) for a discussion on situational crime prevention – i.e., techniques that reduce crime by increasing the effort and risk, reducing the rewards and provocations, and removing excuses.

crime, nearly everyone has observed a petty offense or breach of the peace. Yet, generally speaking, we are less afraid of those types of crimes.

Another irrationality that received attention dealt with *who* we fear. As highlighted by the report issued by the President's Commission (1967a), our fear of crime is largely equated with a fear of strangers (Conklin, 1975). Unfortunately, for many crimes, fearing the unknown is not necessary; rather, fearing the known is much more appropriate. Many of the most commonly feared crimes are actually committed at the hands of someone acquainted with the victim including, but not limited to spouses, lovers, relatives, friends, and coworkers (Conklin, 1975; Stanko, 1995). In fact, the likelihood of being attacked by a non-stranger in a familiar environment is twice that of being attacked by a stranger in an unfamiliar environment (McIntyre, 1967; President's Commission, 1967b). Likewise, individuals are usually more fearful of signs of disorder (such as abandoned streets or buildings) than homes, which is where much violent crime actually occurs (Lewis & Maxfield, 1980).

What is more, researchers began to tout that the most fearful individuals in our society – women and the elderly – were the least likely to be victimized (Biderman et al., 1967; Braungart et al., 1980; Brooks, 1974; Clemente & Kleiman, 1977; DuBow et al., 1979). In fact, research consistently supports the idea that men and the young are the most victimized groups in society (Garofalo, 1979; Hindelang et al., 1978; Maxfield, 1984; Sundeen & Mathieu, 1976; Taylor & Hale, 1986). Although there are a few notable exceptions – such as with sexual offenses – research has historically shown that women and the elderly are significantly less likely to experience criminal victimization. Because of this anomaly, the fear expressed by women and the elderly was deemed by many scholars to be irrational. Countless works have tried to understand and explore the fear of women and/or the elderly with the hopes of unraveling this

apparent theoretical and empirical contradiction (Ferraro & LaGrange, 1992; Jaycox, 1978; LaGrange & Ferraro, 1987, 1989; Lee, 1982a, 1982b; Lindquist & Duke, 1982; Mawby, 1988; Pain, 1995; Riger, 1981; Warr, 1984, 1985; Yin, 1980).

Scholars were also quick to point out that not all indicators of vulnerability were this irrational. In stark contrast to gender and age, some indicators – particularly race, socioeconomic status, and living in inner-cities –appear perfectly appropriate and, therefore, are rational reactions (Biderman et al., 1967; Clemente & Kleiman, 1977; Ennis, 1967; Erskine, 1974). That is, the fear expressed by minorities, the lower class, and urbanities is actually proportionate with their risk. Much data exists to support the claim that African Americans and Hispanics are victimized more frequently than Caucasians (Conklin, 1975). It makes sense, then, that minorities would exhibit more fear and perceive greater risk that their white counterparts. Similarly, the lower class, many of which are members of an ethnic minority, frequently reside in inner-city, urban areas. Not only are residents of larger cities more fearful of crime, but they also live in more crime-ridden areas. This finding seems fitting since victimization tends to decrease as distance from the central city increases (Skogan, 1976). Thus, the actual crime rates in these areas support the residents' higher levels of fear (Conklin, 1975).

What is more, as discussed in the last section, the literature is fairly split in terms of whether prior victimization affects fear of crime and risk perception. Theory and common sense, however, dictate that previous victimization should heighten fear and perceived risk of future crimes. Yet, a fairly substantial portion of the literature, particularly the early works, suggest that prior personal victimization is not a significant predictor of fear or that fear and past experience with criminal victimization are loosely related (van Dijk, 1978). These suggest that fear of crime is independent of past victimization, which gives off an aura of irrationality. To

illustrate, according to the President's Commission on Law Enforcement and the Administration of Justice report (1967a), experiencing prior criminal victimization did not increase protective behaviors employed at the home. Instead, the percentage of prior victims and non-victims that reported using "strong" household security measures mirrored one another (57% and 58%, respectively).

As a result of these various paradoxes, much of our fear of crime was deemed irrational.[19] Specifically, there appeared to be a great disconnect between the fear of falling victim to a crime and the actual probability or likelihood of being victimized (Brooks, 1974; Clemente & Kleiman, 1977). Simply, according to the President's Commission and countless empirical findings, fear of victimization is not consistently commensurate with objective risk (Brantingham & Brantingham, 1997; McIntyre, 1967). Collectively, it appeared that many indicators of "real" risk are misinterpreted, misunderstood, or outright ignored.

However, scholars soon began to delve into the theoretical underpinnings of fear and risk and, in doing so, began to reclaim the rationality of fear of crime. Studies revealed, for instance, that fear is not based on official crime data (Warr, 1987) or, stated differently, that the effects of fear are simply separate from the distribution of crime (Lee, 1982b). Instead, as discussed in chapter two, we tend to evaluate fear in light of variables such as perceived risk, perceived seriousness of the offense, and sensitivity to risk (Warr, 1984, 1985, 1987, 2000; Warr & Stafford, 1983).

Beyond the conceptual contributions of Warr, other scholars have theoretically and empirically supported the idea that factors other than *actual* crime rates, victimization risk, and prior victimization impact the subjective risk and fear of crimes (Block & Long, 1973; Garofalo,

[19] Some scholars, such as Balkin (1979), Jaycox, (1978), and Lee (1982a), maintained that the discrepancies that emerged for women and the elderly are not necessarily irrational.

1979; Skogan, 1986; Stafford & Galle, 1984; Stinchcombe et al., 1980). As discussed earlier in this chapter, the theoretical extension of lifestyle/routines activities theory (i.e., the opportunity perspective) is an appropriate vehicle with which to examine these "other" factors that influence fear and risk perceptions, with the notion of victim rationality underlying this perspective. This focus on vulnerability, in combination with lifestyle/routine activities, now constitutes a popular model of fear and risk in contemporary criminology (Ferraro, 1995; Wilcox Rountree 1998; Wilcox Rountree & Land 1996a, 1996b; Wilcox, Land, & Hunt, 2003). Following upon this conceptualization, this dissertation examines vulnerability in conjunction with lifestyle/routine activities (or opportunity) to better understand fear of crime and risk perception of sexual and non-sexual victimization among secondary school students. Previous literature addressing fear and risk perception among secondary students is thus reviewed in the following chapter.

Chapter Four:

FEAR OF CRIME AND PERCEIVED RISK IN THE SCHOOL CONTEXT

A small subset of criminological literature concentrates on crime and victimization in the school setting. Within the works on school-based victimization, an even tinier portion is devoted to the fear of crime and/or perceived risk among students, and a preference for college-aged students exists among such studies (see e.g., Fisher, 1995; Fisher & Sloan, 1995, 2007; Fisher et al., 1995; Sloan et al., 1996; Smith, 1988a; Whitaker & Pollard, 1993). However, this dissertation explores the fear of crime and perceptions of risk among students in *secondary schools*.[20] Thus, only that corresponding literature will be reviewed here.[21]

Included in this section is the prevalence of students' fear, as well as the areas in and around school that are deemed dangerous or fear-provoking. Indicators of individual, rather than environmental, vulnerability among students will also be discussed, as will the very limited research on adolescent students' sexual vulnerability (i.e., the shadow of sexual assault hypothesis). While many of these indicators parallel those highlighted in the adult body of literature (e.g., sociodemographics, prior victimization, perceptions of risk, lifestyle/routine activities), there are some that are unique to adolescents and schools (e.g., attachment to conventional social institutions, involvement with delinquency, presence of gangs and/or drugs). Correlates of fear and risk are reviewed here and interpreted in light of the "rationality" of

[20] It is important to note that many studies administered surveys to students in class, but asked about fear of crime or perceived risk in their neighborhoods rather than in the school setting (Feyerherm & Hindelang, 1974; Leitman, Binns, & Duffett, 1995; Rasmussen, Aber, & Bhana, 2004). As a result, such studies will typically not be discussed in this dissertation. Similarly, studies that sampled students in other contexts, such as correctional facilities, will not be discussed (May, 2001b).

[21] For more on crime in schools, see the Annual Reports on School Safety, Gottfredson (2001), Lawrence (2007), Robers, Zhang, Truman, and Snyder (2010), or Toby (1983) or for victimization of students, see Fitzpatrick (1999), Gottfredson and Gottfredson (1985), or Toby (1983). Likewise, for information on teachers or school personnel's fear of crime in school, see Kenney and Watson (1996), Roberts, Wilcox, May, and Clayton (2007), Toby (1983), or Williams, Winfree, and Clinton (1989).

students' fear and perceived risk of victimization at school. This chapter will close with a discussion of the gaps in the student fear literature that this dissertation hopes to fill, as well as the specific hypotheses that will be tested.

PREVALENCE AND LOCATION OF STUDENTS' FEAR OF SCHOOL-BASED VICTIMIZATION

As with adult fear of crime, estimating how many students are afraid or the number of students who perceive a high risk of victimization at school is a difficult task. Some of the earliest studies suggest that a sizable portion of secondary students reported being fearful, at least occasionally, of school-based crime.[22] For example, Wayne and Rubel's (1982) analysis of the national Safe School Study revealed that over 3.7 million students are afraid of being victimized at school. In particular, they found that roughly one in four junior high school students and one in seven senior high school students were moderately or severely afraid (see also Nolin, Davies, & Chandler, 1996). Others, such as Hepburn and Monti (1979), suggest this number is closer to 40%, while Kenney and Watson (1996) found that almost half of students either sometimes or always feared being hurt or bothered while at school. According to Robers et al. (2010), students fear victimization at school more than victimization outside of school. What is more, a sizable portion of students are forced to alter their behavior (e.g., avoiding places or people at school) because of their fear of in-school victimization (Astor, Meyer, & Pitner, 2001; Hepburn & Monti, 1979; Randa & Wilcox, 2010; Robers et al., 2010; Toby, 1983).

[22] It is important to note that some of the earlier studies were set in a time where many schools were experiencing desegregation, which may influence their findings. McDermott (1980) suggests that especially in urban schools, fear of victimization might be tapping into racial tensions.

However, Lalli and Savitz (1976) propose that a sizable portion of fear of victimization is "space-coded," meaning that certain places or social settings invoke more or less fear.[23] Paralleling the literature on student victimization in schools (see e.g., Astor, Meyer, & Behre, 1999; Benbenishty & Astor, 2005), there are certain hotspots of fear in the school setting – some places are inherently more fear-inducing and/or risk-enhancing. Evidence from multiple studies supports the notion that certain places in and around the school are fear generators. For instance, juveniles identified the streets on their journey to and from school as extremely fear-inducing (Kenney & Watson, 1996; Lab & Clark, 1997; Lalli & Savitz, 1976; Lalli et al., 1977). Additionally, juveniles reported that because the danger going to and from school is so pronounced, they wanted buses to reduce fear and enhance feelings of safety (Lalli & Savitz, 1976).

Additionally, Kenney and Watson's (1996) work concluded that students were also fearful of school parking lots, primarily because they feared having to walk past groups of harassing students to enter or exit the school. School yards were also considered to be dangerous places because they perceived their likelihood of being assaulted or robbed there as high (Lalli & Savitz, 1972, 1976; Lalli et al., 1977; Savitz, Lalli, & Rosen, 1977). Juveniles' fear and risk of victimization were elevated in these locations, Lalli and Savitz (1976) argued, because said places were less monitored by school personnel. Having fewer capable guardians around, especially in light of the number of potentially motivated offenders and suitably vulnerable targets, presents an opportunity for fear to materialize.[24] Students likely feel more vulnerable in these places because they realize that their risk for victimization is high. As with adult

[23] The works of Lalli and colleagues use a sample that contains only male respondents.
[24] For similar results among college students, see Brantingham and Brantingham (1994).

respondents, feelings of vulnerability strongly affect both risk perception and fear of victimization.

While several areas outside of the school have been deemed by students to be fear-inducing, several locations within the school are capable of generating fear as well. In fact, Kenney and Watson (1996) found that roughly half of students, at least sometimes, felt unsafe in their school building. More specifically, school hallways, stairs, cafeterias, and restrooms have been reported as dangerous or fear-provoking places (Astor et al., 2001; Bastian & Taylor, 1991; Kenney & Watson, 1996; Lab & Clark, 1997; Lalli et al., 1977; Savitz et al., 1977). Lalli and Savitz (1976), however, propose that school rooms and hallways are probably viewed as less dangerous because of the increased guardianship in those locations.

INDICATORS OF INDIVIDUAL VULNERABILITY IN THE SCHOOL CONTEXT

Paralleling the adult fear of crime literature, certain indicators of individual vulnerability influence both fear of crime and perceptions of risk in the school setting.[25] Demographic factors, as well as other indicators of individual vulnerability – including prior victimization, perceived risk, and opportunity for victimization – will be covered next. These findings can also be seen in Table 1.[26]

[25] It is necessary to note that as with the adult literature, there are several articles that focus on or incorporate indicators of environmental vulnerability. Although those are outside of the scope of this dissertation, factors such as perceived incivility are nonetheless important in the study of adolescent fear (see e.g., May, 2001a, 2001b; May & Dunaway, 2000).

[26] Only studies that looked at fear and perceptions of risk of *in-school* victimization are included in Table 1. Studies that examined adolescents' fear and perceived risk in general or those that asked students about fear and risk in environments other than the school are omitted.

Table 4.1: Studies that Examine Students' Fear and Perceived Risk of In-School Victimization

Authors (Year)	Sample Size	Type of Data	Relevant Findings
FEAR			
Hepburn & Monti (1979)	1,799	Survey from one St. Louis high school	Students who are the most afraid of being hurt or bothered at school are: 1) younger, and 2) white
Wayne & Rubel (1982)	31,373	Safe School Study	Students who are the most afraid of being hurt or bothered at school: 1) are younger, 2) are minority, 3) have parents who are less educated, 4) attend urban schools, 5) reported violence in their neighborhoods 6) are prior victims (robbery, assault), 7) have poor grades, 8) have lower reading ability, 9) have fewer close friends, 10) have less understanding parents, 11) have less self-worth, 12) are new to the school, and 13) have hostile attitudes toward school or other students
Pearson & Toby (1991)	Not provided	School Crime Supplement (SCS) to the National Crime Survey (NCS)	Students who are the most afraid of being attacked at school: 1) are younger, and 2) report street gang presence at school Students' fear of attack while going to and from school depends upon their mode of transportation
Alvarez & Bachman (1997)	10,449	School Crime Supplement (SCS) to the National Crime Survey (NCS)	Students who are the most afraid of being assaulted at school: 1) are younger, 2) have lower family income, 3) attend public schools, 4) are prior victims (assault and theft), 5) notice gang presence at school, 6) feel it was easy to get drugs/alcohol, 7) attend school where teacher was attacked/threatened by a student, and 8) attend school in city

Lab & Clark (1997)	11,805	Survey from 44 junior and senior high schools in Lucas County, Ohio	Students who are the most fearful of victimization at school or in transit to school: 1) are female, 2) are younger, 3) attend public schools, 4) are prior victims (robbery, theft, assault), and 5) experience vicarious victimization (robbery, theft, assault)
May & Dunaway (2000)	742	Mississippi High School Youth Survey	Students who are the most afraid of school victimization: 1) are female (mixed support), 2) are younger, 3) perceive school as unsafe (higher risk), and 4) perceive neighborhood incivility Interactions with: 1) gender and race (African American males more fearful), and 2) gender and prior victimization (female victims more fearful)
May (2001a)	725	Mississippi High School Youth Survey	When including fear of sexual assault as a dependent variable, students who are the most afraid: 1) are female, 2) are younger, 3) are African American, 4) perceive greater risk, and 5) perceive neighborhood incivility When adding fear of sexual assault as an independent variable, students who are the most afraid of nonsexual victimization: 1) are more fearful of sexual assault, 2) are younger, 3) are African American, 4) perceive greater risk, and 5) perceive neighborhood incivility
Welsh (2001)	4,640	Survey of middle school students in Philadelphia	Students who felt less safe at school: 1) are male, 2) are younger, 3) have negative peer associations (peer delinquency), 4) do not believe in school rules, and 5) are more involved in school activities
Astor et al. (2002)	3,518	National survey of Israeli students	Students who perceive school violence to be a serious problem: 1) are prior victims, and 2) observe more risky behaviors at school

Benbenishty et al. (2002)	3,518	National survey of Israeli students	Students who perceive school violence to be a serious problem: 1) are prior victims, and 2) observe more risky behaviors at school
Schreck & Miller (2003)	6,418	National Household Education Survey (NHES)	Students who worry more about crime at school: 1) are female, 2) are younger, 3) are Hispanic, 4) attend public school, 5) are prior victims, 6) have delinquent friends, 7) are aware of fighting gangs, 8) are aware of other students carrying weapons, 9) are aware of drug dealers, 10) have hostile attitudes toward school, and 11) perceive school rules as unfair
Wallace & May (2005)	2,136	Survey of public school students in a rural state	Students who are more fearful of victimization at school: 1) are female, 2) have weak attachments to their family, 3) feel isolated, and 4) are prior victims
Wilcox et al. (2005)	3,610	Rural Substance Abuse and Violence Project (RSVP)	Across several types of fear, students who are more afraid of in-school victimization: 1) are female, 2) are non-white, 3) are prior victims, and 4) perceive greater risk
Wilcox et al. (2006)	3,968	Rural Substance Abuse and Violence Project (RSVP)	Students who are more afraid of being victimized at school: 1) perceive greater risk, 2) are prior victims, and 3) engage in less delinquent behavior
Melde & Esbensen (2009)	1,450	Survey of students aged 10-16 in schools across four states	Students who are more afraid of school-related victimization: 1) perceive greater risk, 2) have less delinquent lifestyles (a positive, indirect effect was also found via victimization and perceived risk), and 3) perceive school disorder

Swartz et al. (2011)	11,643 observations	Rural Substance Abuse and Violence Project (RSVP)	Female students who are more fearful of in-school victimization: 1) are younger, 2) are prior victims, 3) perceive greater risk, 4) are impulsive, 5) have higher SES, and 6) are less attached to peers Male students who are more fearful of in-school victimization: 1) are younger, 2) are prior victims, 3) perceive greater risk, and 4) are impulsive
Tillyer et al. (2011)	2,503	Rural Substance Abuse and Violence Project (RSVP)	Students who more fearful of in-school violent victimization: 1) are female, 2) are prior victims, 3) perceive greater risk, and 4) are impulsive
PERCEPTIONS OF RISK			
Wilcox et al. (2005)	3,610	Rural Substance Abuse and Violence Project (RSVP)	Students who perceive greater risk of in-school victimization (assault, theft, and harassment): 1) are female, 2) are non-white, 3) have higher SES, and 4) are prior victims
Wilcox et al. (2006)	3,968	Rural Substance Abuse and Violence Project (RSVP)	Students who perceive greater risk of in-school victimization: 1) are prior victims, 2) are white, and 3) are more fearful of victimization
Melde & Esbensen (2009)	1,450	Survey of students aged 10-16 in schools across four states	Students who perceive greater risk of school-related victimization: 1) are prior victims, and 2) perceive school disorder
Tillyer et al. (2011)	2,503	Rural Substance Abuse and Violence Project (RSVP)	Students who perceive greater risk of in-school violent victimization: 1) are female, 2) are prior victims, 3) are impulsive, 4) are delinquent, and 5) are less attached to school

Gender and Fear/Risk

As with adults, there is evidence to suggest that female students are more fearful of school victimization than their male counterparts (May, 2001a; Wallace & May, 2005; Wilcox, Campbell Augustine, Bryan, & Roberts, 2005). Schreck and Miller (2003), for instance, found unanimous support for this regardless of the context or type of crime (theft, robbery, and assault). Tillyer, Fisher, and Wilcox's (2011) work provided further evidence in that female students were significantly more afraid of violent victimization at school than male students. They also reported that female students perceived greater risk of violent, in-school victimization. Wilcox et al. (2005) reported that compared to males, female students also perceived more risk of being sexually harassed and having their property stolen while at school. Far less researched than fear, it appears that risk perception can be treated as conceptually distinct in school-based research, as well as in the general fear literature.

Others, however, have found partial or conditional support for the gendered effect of fear and risk in the school environment. For example, Alvarez and Bachman (1997) reported that female students were more fearful of being assaulted while traveling to and from school than male students, but this effect did not extend to fear of victimization while *at* school (see also Bastian & Taylor, 1991). May and Dunaway (2000) found evidence of female students' higher fear only in one model – in the other model, however, their fear was non-significant. They did discover a gender-race interaction, though, with black male students having higher levels of fear of school victimization than white male students. Other scholars have concluded that while female students are more fearful of falling victim to crime while at school, this relationship varied by age. Wayne and Rubel's (1982) work revealed that among older students (i.e., those in high school), females were more afraid of victimization, but that among younger students, there

was comparable reports of fear for female and male students. They attribute this gender difference in high school to fear of sexual victimization.

In contrast, a handful of researchers have failed to find any gender differences among students (American Association of University Women, 2001; Nolin et al., 1996). Other studies examining avoidance behaviors among students have yielded mixed results. Some, such as Hepburn and Monti (1979), find that although there is little gender gap in the fear among students, female students reported avoiding more places at school because of fear than male students. Findings from Welsh (2001), however, contradict this, as female middle school students reported less avoidance as well as more safety at school than male students. Others have suggested this relationship depends on grade level or age. Kann and associates (1995), for example, reported that younger females (i.e., freshman in high school) skip more school due to their fear of crime at school and traveling to and from school than older females (i.e., seniors in high school).

Gender and Sexual Vulnerability to Victimization. Although the shadow of sexual assault hypothesis has been well documented in the adult and college literature, its applicability to secondary students is still not well understood. May's (2001a) groundbreaking work in this area revealed considerable support for the idea that among high school students, fear of rape drives all other fears and is responsible for the gender gap in fear of school-based victimization. His work revealed that female students were more fearful of sexual victimization, as well as non-sexual victimization, than male students. After adding fear of sexual assault as an independent variable to the model, May (2001a) found that it was the strongest predictor for students' fear of nonsexual victimization. Including it in the model more than doubled the amount of variation explained, bringing it to almost 40%. What is more, the previously strong relationship between

gender and fear was rendered insignificant. Besides gender, none of the other predictor variables lost or gained significance. In all, May (2001a) concluded that fear of sexual assault fuels other, non-sexual victimization fears more so for female students than males.

Yet, fear of sexual assault significantly determined fear of other victimizations for female *and* male students. Even though the effect was more pronounced for female students, May (2001a) suggests that perhaps a similar phenomenon, which he called "shadow of powerlessness," is underlying young male students' fear of victimization. Because they are less physically developed and substantially weaker than older male students, they consider themselves less able to resist victimization of any type. Similar to the adult literature, it appears that by serving as a perceptually contemporaneous offense, fear of sexual assault is important in explaining the differential levels of fear among students.

Taken as a whole, the school-based literature suggests that female students tend to be more fearful than males and perceive greater risk. As with adult women, it is likely that this is because of their perceived vulnerability, particularly their greater sexual vulnerability. Although May's (2001a) work brought the shadow of sexual assault to secondary schools, it was tested only on high school students. No known works have examined the fear and perceived risk of sexual and nonsexual victimization among a sample of middle and high school students. Wilcox et al. (2005), however, did examine spillover effects for multiple types of victimizations, including sexual harassment, across a sample of junior high and high school students. Although important spillover effects were found, no single type of victimization overshadowed fear and risk more so than other types. Yet, they did not examine sexual victimization per se.

Age and Fear/Risk

In terms of age, several studies suggest that fear of crime in school is higher among younger students (or those in lower grade levels) compared to older students (or those in higher grade levels) (Bastian & Taylor, 1991; Hepburn & Monti, 1979; Lab & Clark, 1997; Nolin et al., 1996; Pearson & Toby, 1991; Swartz, Reyns, Henson, & Wilcox, 2011; Welsh, 2001). This was true when comparing junior high to high school students (Alvarez & Bachman, 1997; Schreck & Miller, 2003; Wayne & Rubel, 1982), as well as within high school-aged students (May & Dunaway, 2000). Moreover, this relationship applied both to students' fear at school and their fear while journeying to and from school (Alvarez & Bachman, 1997; Lab & Clark, 1997). Younger students also avoided more places at school because of their fear (Bastian & Taylor, 1991; Welsh, 2001) and were more likely to stay home from school because of it (Lab & Clark, 1997). The grade level-fear relationship also held across property and personal offenses (Schreck & Miller, 2003) and, more specifically, across fear of sexual and non-sexual victimization (May, 2001a). Finally, although they did not find any differences among their female students, the American Association of University Women's (AAUW, 2001) work revealed that male students in younger grades were more fearful than male students in upper grades.

McDermott (1980) and others suggest this repeated finding (i.e., that younger students are more fearful) is a reflection of their greater vulnerability in schools (see also Lab & Clark, 1997). More specifically, younger students or those in lower grades typically have less social power and are usually physically smaller and weaker than older students. Simply, students in

lower grades view themselves as more vulnerable for a wide range of victimization (May & Dunaway, 2000).

Ethnicity/Race and Fear/Risk

In terms of ethnicity/race, many scholars find that minority students are more fearful of being victimized at school (Wayne & Rubel, 1982) or that white students are less fearful (Wilcox et al., 2005), which is consistent with the bulk of the general fear of crime work. For instance, Alvarez and Bachman's (1997) results suggest that African American and Latino students were more fearful traveling to and from school than whites (see also Bastian & Taylor, 1991); however, no such relationship was found for fear of victimization while actually at school. Minority students are also more likely to skip school because of their school-related fears, including traveling to and from school (Kann et al., 1995). Others have found that Asians and American Indians to be more fearful of crime at school, as well as to have purposely avoided certain areas at school because of their fear (Bastian & Taylor, 1991). In terms of perceptions of risk, there is some evidence to suggest that white students perceive less risk than non-whites, at least for some types of victimization (Wilcox et al., 2005).

Some have found the relationship between ethnicity/race and fear among students to be fairly conditional. For instance, while Schreck and Miller (2003) found African American students only exhibited higher fear of robbery (they were actually found to be less afraid of assault), their study revealed that Hispanic students were more fearful than white students across multiple types of crimes. Similarly, when looking at students' fear of both sexual and non-sexual victimization, African American respondents were more afraid of both types (May, 2001a). For May and Dunaway (2000), race was only significant as an interaction with gender;

students who were African American and male were more fearful than white male students. Similarly, when controlling for fear of sexual assault and looking at gender differences in fear of non-sexual victimization, May (2001a) found that African American male students were more afraid of in-school, nonsexual victimization than white males.

McDermott (1980) cautions that such findings should be considered in light of the school's racial integration and conflict, as well as its neighborhood location. Others, however, suggest that white students are more fearful than their minority counterparts (Hepburn & Monti, 1979) and perceive greater risk of victimization at school (Wilcox et al., 2006), while some scholars find limited or no support at all for race differences (Nolin et al., 1996; Tillyer et al., 2011; Wilcox et al., 2005).

Socioeconomic Status and Fear/Risk

Again mirroring the adult fear of crime and perceived risk literature, students from higher-income households report less fear at school than those from lower-class homes (Alvarez & Bachman, 1997; Bastian & Taylor, 1991). This also applies to fear while traveling to and from school (Alvarez & Bachman, 1997), as well as deliberately avoiding places at school out of fear (Bastian & Taylor, 1991). Parental education, which can serve as a proxy for family income or socioeconomic status, has also been linked to fear in schools. More specifically, an inverse relationship exists, with students' fear increasing as their parents' level of education decreases (Wayne & Rubel, 1982). However, Swartz et al. (2011) found that for female students only, a positive relationship between parental educational status and fear of being victimized while at school. Similarly, Wilcox et al. (2005) reported a positive effect of parental educational attainment on students' perceived risk of some types of victimization. Occasionally, however, no

relationship was found between socioeconomic status and fear of school victimization (May & Dunaway, 2000).

Likely related to family income, a few studies have also found that the type of school matters (Lab & Clark, 1997). Alvarez and Bachman (1997), for instance, found that students from public schools were more fearful of crime at school than those from private institutions. However, this relationship was non-significant when looking at fear of victimization while going to and from school. Scholars have also found evidence that attending a public school was related to higher fear of assault (Bastian & Taylor, 1991; Schreck & Miller, 2003). Public school students were also more likely to avoid certain areas of school because of their fear of being victimized (Bastian & Taylor, 1991). This fits with Nolin et al.'s (1996) finding that students from public schools reported more direct victimization, as well as indirect victimization (i.e., witnessing crime or threats to others), compared to private school students.

A positive relationship between fear in school and urbanization/industrialization has been reported (Wayne & Rubel, 1982), which is analogous to the general fear of crime and perceived risk literature (i.e., those focused on adult samples). However, Alvarez and Bachman (1997) failed to find a significant relationship between school's location and students' fear of school-based victimization (see also AAUW, 2001); however, they did find support for the location of the school affecting fear of being victimized while traveling to and from school. Specifically, students attending schools in central cities were more fearful of this type of victimization both at school and while traveling to or from school (Alvarez & Bachman, 1997; Bastian & Taylor, 1991). Likewise, students who assess their neighborhoods as being crime-ridden also are more fearful of school victimization than those from lower crime areas (Wayne & Rubel, 1982). McDermott (1980) suggests that fear of victimization from their lives, in general, carries over to

the school setting. Also, contrary to much research, in at least one instance students from metropolitan areas perceived less risk of being attacked while at school (Wilcox et al., 2005).[27]

Prior Victimization and Fear/Risk

In terms of prior victimization, the literature appears to be more consistent than the broader, adult-based fear of crime research. While a couple of the school-based studies find a weak (Hepburn & Monti, 1979) or an insignificant relationship (May, 2001a; Savitz et al., 1977) between previous victimization and fear, the majority find evidence of a positive relationship (Schreck & Miller, 2003; Swartz et al., 2011; Tillyer et al., 2011; Wayne & Rubel, 1982; Wilcox et al., 2006). For instance, in support of the crime-fear link, Wayne and Rubel's (1982) analysis of the Safe School Study data revealed that almost 30% of students classified as highly fearful were robbed or assaulted in the prior month. To further illustrate, Alvarez and Bachman's (1997) work showed that assault victims were over three times more likely to be afraid of school victimization compared to those who were not previously assaulted (see also Bastian & Taylor, 1991). Similarly, students who previously endured an attack or theft were significantly more fearful at school and traveling to and from school than non-victims (Alvarez & Bachman, 1997).

It appears that victimization in general contributes to or reinforces existing feelings of vulnerability (Schreck & Miller, 2003). In fact, several researchers have concluded that direct experience with victimization is the most important determinant of fear (Lab & Whitehead, 1992; Wallace & May, 2005; Wayne & Rubel, 1982). The works of Astor, Benbenishty, Zeira, and Vinokur (2002) and Benbenishty, Astor, Zeira, and Vinokur (2002) in Israel suggest this effect extends to secondary students beyond the United States. It appears that the prior

[27] Possibly connected to parents' socioeconomic status and/or school location, students' mode of transportation affects their fearfulness going to and from school (see e.g., Alvarez & Bachman, 1997; Bastian & Taylor, 1991; Pearson & Toby, 1991; Toby, 1983).

victimization-fear link holds across different types of school-based fears, too. Schreck and Miller (2003) found experience with victimization to be one of the most influential predictors of fear of school crime *regardless* of crime type. Specifically, previous victimization was a strong predictor of fear of in-school theft, robbery, and assault. As with the adult literature, attention has also been given to the type of prior victimization. For instance, Lab and Clark (1997) reported that experiencing a robbery, theft, or assault victimization while at school each influenced fear of in-school attack. Furthermore, Wilcox et al. (2005) reported crime-specific prior victimization and crime-specific fear of victimization were significantly related. More specifically, being a prior victim of assault, theft, and sexual harassment positively predicted fear of in-school assault, theft, and sexual harassment, respectively. What is more, spillover effects were present, which indicate that certain prior victimizations affect other types of fear. For instance, prior theft or sexual harassment victimization predicted fear of physical assault while at school (Wilcox et al., 2005).

More recently, and in line with the adult-based research, attention has been given to the relationship between prior victimization and perceived risk of in-school victimization. For instance, Wilcox et al. (2006) found that personal experience with victimization influenced perceptions of risk of crime at school. More specifically, Tillyer et al. (2011) reported that students who had previously experienced a serious violent victimization perceived a greater risk of future violent offenses at school. Melde and Esbensen's (2009) path models extended this support in that prior victimization not only positively predicted perceived risk of victimization while at school, but also perceptions of risk while journeying to and from school. Additionally, when looking at the type of prior victimization *and* different types of perceived risk, Wilcox et al. (2005) found overwhelming support for prior victimization predicting risk. Students who had

previously been physically attacked at school perceived greater risk of future physical attacks. Similarly, prior theft victims perceived greater risk of theft victimizations while previous sexual harassment victims perceived more risk of future sexual harassment (Wilcox et al., 2005). Spillover effects were also seen with regard to prior victimization and perceived risk. For instance, prior attack or theft victimization positively predicted perceived risk of harassment.

Some, however, have found the prior victimization-fear relationship to be contingent on other factors. For instance, May and Dunaway's (2000) work revealed that female students who had been previously victimized were more fearful than non-victimized female students; however, for males, prior victimization did not matter. They suggest this is a potentially important finding that may indicate the uniqueness of female's fear. Experiencing a prior victimization may cause female students to view themselves as more vulnerable for future victimization (May & Dunaway, 2000). In this way, it may ignite the shadow of sexual assault for these young women, alerting them to a lifetime of possible victimization. Interestingly, and contrary to their expectations, Melde and Esbenen (2009) found a significant inverse relationship between previous victimization and fear of being victimized while at school or on the way to or from school.

Furthermore, most of the research in this limited area focuses on or alludes to the fact that prior victimization occurs at the hands of fellow students. While this is likely the case, Benbenishty et al.'s (2002) work among students in Israel distinguished prior victimization by students from the victimization perpetrated by teachers or school staff (see also Astor et al., 2002). In doing so, a couple interesting findings emerged. For male students, for example, skipping school because of fear of school victimization was strongly and positively correlated with prior staff victimization. For female students, however, this relationship was non-

significant. What mattered more for female students, in terms of fear-driven school absences, was being victimized by other students (Astor et al., 2002; Benbenishty et al., 2002). They add that even though male students are more likely to be victimized at school, females' reactions to their victimization by peers appear stronger or, stated differently, females are more affected by their personal experiences with crime, especially at the hands of fellow students. Regardless, for both male and female students, some form of prior victimization mattered. Experience with prior victimization increases feelings of vulnerability, which impacts both fear and perceived risk of future victimization.

Indirect Victimization and Fear/Risk

Similar to the adult body of literature, a "ripple effect" may also exist in schools wherein students who have not been directly victimized in the past report more fear at schools that have more prior victims (Wayne & Rubel, 1982). Simply witnessing or hearing about the victimization of other students is fear-provoking (Arnette & Walsleben, 1998). This is, as with the general fear of crime literature, a form of indirect or vicarious fear since victims communicate their previous experiences with crime to others, thereby increasing the fear among non-victims. According to Lab and Clark (1997), while the majority of students are not directly victimized while at school, over half of the students reported that assaults and thefts occur a couple times a month at school. Not only do students tend to perceive student-on-student victimization as a very real threat, but it appears to influence their fear of victimization as well. Lab and Clark (1997) also found that vicarious assault, robbery, and theft all significantly predicted fear of attack at school.

However, vicarious victimization is not limited to seeing or hearing about the victimization of just other students. It appears that the victimization of teachers can also influence students' fear. More specifically, witnessing threats to or assaults on teachers can be a very alarming experience for many students (Kenney & Watson, 1996). To illustrate, students reported higher levels of fear at school, but not when journeying to and from school, when they were aware of incidents of teachers being threatened and/or attacked while at school (Alvarez & Bachman, 1997). This makes sense, the authors conclude, as students probably do not associate that type of violence as occurring on the commute to and from school. Yet it affects their fear of being victimized while at school because they know that teachers have previously been attached or threatened there. Just as with adult samples, it appears that students' fear is influenced by vicarious or indirect victimization. Simply knowing about prior victimizations can increase students' perceived vulnerability.

Perceived Risk and Fear

In the adult fear of crime literature, perceived risk has almost universally been a significant predictor of fear of crime. Although the research that examines perceptions of risk at school is scant, there are a couple of noteworthy exceptions, all of which supports the risk-fear link. For example, May and Dunaway (2000) discovered that perceived safety at school was one of the best predictors of fear of crime at school.[28] Students who perceived less school safety were more fearful of being victimized while at school than those who perceived more school safety. Using structural equation modeling, Melde and Esbensen (2009) found that students' perceived risk of being victimized at school or while traveling to and from school was strongly

[28] May and Dunaway (2000) argue that this is perceptual measure and a proxy to perceived risk in the adult literature.

and positively related to their fear of school-related victimization (i.e., being victimized during school or going to and from school).

Similarly, Wilcox et al. (2006) and others (e.g., Tillyer et al., 2011) have also supported the notion that more perceived risk yields more fear among secondary students. This effect holds when considering the type of perceived risk and fear of victimization. Wilcox et al.'s (2005) analysis showed that perceived risk of physical attack at school positively predicted fear of physical attack at school. Similarly, students who perceived greater risk of theft and sexual harassment reported greater fear of theft and sexual harassment, respectively. Swartz et al. (2011) also reported a positive relationship between risk perception and fear of in-school victimization. However, they discovered evidence that this relationship may be conditioned by other individual- and school-level variables. For instance, for both male and female students, the effect of perceived risk on fear of being victimized at school was tempered as students aged (or progressed from 7th to 10th grade). They conclude that risk may exert more of an impact on younger students than older ones. Also, for females, the effect of risk on fear was reduced as school delinquency increased (Swartz et al., 2011). Although they are likely correct in their suggestion that the school context matters, it is important to note that their measure of school delinquency was based on teachers' reports – not on the reports of students. It is unclear whether the effect of perceived risk on fear would diminish as students' perceptions of school delinquency increased.

When treating fear of sexual victimization and other, non-sexual victimization as separate outcome measures, May (2001a) found that students who perceived themselves to be at a greater risk for school victimization were significantly more fearful of such victimization. Also, when controlling for fear of sexual assault and looking at gender differences in fear of non-sexual

victimization, May (2001a) found that for females only, perceived risk was strongly and positively related to fear of nonsexual victimization. In all, he suggests that perceiving a high likelihood of future victimization is a more important indicator of students' fear than direct, prior experience with crime.

Although this dissertation recognizes the value of perceived risk as a determinant of fear of in-school victimization, it follows in the footsteps of many adult-centered studies and a handful of student-based ones and treats perceptions of risk as a conceptually distinct outcome measure. Nevertheless, it recognizes the contribution that perceived risk has provided in the understanding of fear, in general, and of school victimization, in particular.

Lifestyle/Routine Activities and Fear/Risk

As discussed earlier, a common theoretical approach in criminology and victimology deals with identifying the opportunity structure that facilitated victimization. There is both theoretical and empirical evidence to suggest that certain lifestyles and daily routine activities increase the likelihood of victimization (Hindelang et al., 1978). Essentially, this occurs because such lifestyles and activities result in the confluence of attractive targets, motivated offenders, and the absence of capable guardianship (Cohen & Felson, 1979). Even though the opportunity perspective was originally devised to explain victimization, it is also appropriate to consider the opportunity structure that surrounds fear and perceived risk (Wilcox Rountree, 1998). These factors – target attractiveness, exposure to motivated offenders, and capable guardianship – while notoriously important in understanding student victimization, are also essential to the study of fear (Pearson & Toby, 1991). As demonstrated next, many of the school-based fear findings can be interpreted in light of opportunity theory and its primary components.

Target Attractiveness. As just covered, there are multiple examples of how proxies for individual vulnerability (i.e., sociodemographic factors and prior victimization) affect fear of crime and perceptions of risk while at school. While these are important in their own right, from an opportunity perspective, they also designate target attractiveness. Individuals who consider themselves to be particularly vulnerable, either physically or socially, also perceive themselves to be at a greater risk for victimization and, as a result, are more fearful. To reiterate, students who are female, young, minority, lower class, and prior victims typically perceive themselves as more vulnerable or more attractive as potential targets of crime. In addition to these, Wayne and Rubel (1982) found an inverse relationship between feelings of self-worth and fear of school crime. Such students specifically lacked confidence in their ability to plan and/or to control their environment, both of which make them feel more vulnerable. By feeling vulnerable to victimization, they likely perceive themselves as suitable targets. These examples nicely illustrate Dussich and Eichman's (1976) notion of passive vulnerability (i.e., the exploitation of one's status).

Support for Dussich and Eichman's (1976) other type of vulnerability, active vulnerability, can also be seen in student-based samples. This form of vulnerability occurs when the behavior of an individual contributes to or precipitates his/her victimization. For instance, several studies have discovered that impulsivity or low self-control is an important predictor to consider. More specifically, Tillyer et al.'s (2011) work revealed positive relationships between impulsivity and both fear and perceived risk of in-school violence. Consistent with this idea, Swartz et al. (2011) reported that for both male and female students, impulsivity was positively related to fear of in-school crime. Low self-control, which will be covered more in the next section, has been offered as an example of target antagonism (i.e., one of Finkelhor and

Asdigian's (1996) characteristics of target suitability). Tillyer et al. (2011) proposed that adolescents with lower self-control might be viewed as antagonistic to others because of their impulsive nature. As a result, their victimization, fear, and perceived risk may all be enhanced. It is also important to note that low self-control also increases exposure to risky situations or, stated differently, leads to encounters with motivated offenders in the absence of capable guardians.

Exposure to Motivated Offenders. In addition to target attractiveness, some of the previously covered examples also reinforce the notion of exposure. For example, students repeatedly report fear while traveling to or from school because they cross paths with dangerous, or potentially dangerous, individuals. Furthermore, Astor et al.'s (2001) work showed that students typically fear areas at school that they considered overcrowded. Such areas are likely viewed by students as being chock-full of dangerous, or potentially dangerous, offenders. In addition, factors such as self-reported delinquency and delinquent friends, as well as the presence of gangs or gang members, weapons, and drugs or alcohol can all be conceived as indicators of exposure to delinquency or crime. Just as these factors influence the likelihood of actual victimization while at school, they matter for students' fear and perceived risk as well.

Students' involvement in delinquency not only increases victimization (Lalli et al., 1977), but it also has an impact on their perceptions of risk and fear of crime. Although theoretically, this effect could be positive or negative, much of the research suggests that self-reported delinquency produces higher rates of fear. For instance, Savitz et al. (1977) found that male delinquent students viewed the roads on the way to and from school as being more dangerous than their non-delinquent counterparts. They also found that when looking at white males, those

who engaged in delinquent behaviors perceived school hallways as being more dangerous than those who refrained from delinquency.

Melde and Esbensen's (2009) path analysis yielded mixed support for the effect of delinquency on fear. Consistent with the works above, they found that a delinquent lifestyle increased fear, yet their support was indirect. Specifically, delinquent lifestyles led to higher victimization, which then raised perceived risk of victimization and, ultimately, fear of school victimization. In contrast to this, however, Melde and Esbensen (2009) also discovered a direct negative effect between delinquent lifestyle and fear of school-based victimization. Although focusing primarily on weapon carrying, Wilcox et al. (2006), too, observed a significant inverse relationship between delinquent offending and fear of in-school victimization.

Further complicating the matter, not all studies have found a significant relationship between involvement in delinquency and fear of victimization (Swartz et al., 2011; Tillyer et al., 2011). Not only does the delinquency and fear relationship need to be further untangled, but little is known about how self-reported criminal behavior impacts perceptions of risk. The few works that have examined it, however, find a positive relationship between the two (Tillyer et al., 2011).

Students with delinquent friends appear to be more afraid of crime at school than their non-delinquent counterparts (Welsh, 2001) or perceive more danger while traveling to and from school (Lalli et al., 1977). This can be attributed to potentially witnessing or hearing about various victimizations. Schreck and Miller (2003) found that having delinquent friends was consistently related to higher levels of fear of school-based crime. This relationship emerged for fear of both property and personal crimes. Others, on the contrary, have found no effect for delinquent peers on either fear or perceived risk (Swartz et al., 2011; Tillyer et al., 2011).

Studies that have examined self-reported gang membership also reveal support for the effect of delinquency and/or delinquent peers on fear of crime and perceptions of risk in the school setting. For instance, Melde, Taylor, and Esbensen (2009) found that gang members reported greater perceived risk than non-gang members for multiple types of victimization, only some of which occurred in school. Perhaps the quintessential example of a risky lifestyle, belonging to a gang increases exposure to dangerous people and places. The work of Lalli and associates, however, suggests this depends on the "type" of gang (Lalli & Savitz, 1976; Lalli et al., 1977; Savitz et al., 1977). Belonging to or associating with gangs characterized as "structural" (i.e., a gang with a group leader and relatively safe turf area) was related to more fear of crime at school than non-gang members. However, participation in a "functional" gang (i.e., a gang where members were expected to fight for the gang or face punishment) was associated with less fear of crime in the school setting. It is likely, though, that functional gangs serve more of a guardianship role.

Beyond the exposure that comes from being personally involved in delinquency or associating with delinquent peers, knowing or perceiving that other students are, or potentially are, delinquent or dangerous can affect fear and risk perceptions at school. The presence of gangs at or near school, for instance, is expected to contribute to fear of school victimization in several ways. Specifically, students report fearing gang disruptions or violence from gang members in school or in the areas surrounding school, as well as encounters with gangs (including being threatened or harassed) or displays of gang territoriality (e.g., graffiti) while traveling to or from school (Arnette & Walsleben, 1998). Related, students fear the influx of weapons brought to school by known or suspected gang members. Also, being pressured into joining a gang or being mistaken as a rival gang member can engender fear from students

(Arnette & Walsleben, 1998). It is suspected that such exposure to delinquency or crime increases feelings of vulnerability, which affects fear of crime and risk perceptions. In all, the presence of gangs at school increased students' fear of being assaulted while at school (Alvarez & Bachman, 1997; Pearson & Toby, 1991), as well as their fear while commuting to and from school (Alvarez & Bachman, 1997). Schreck and Miller (2003) found that across multiple types of fear of crime categories (theft, robbery, and assault), the presence of fighting gangs at school increased students' fear of victimization. What is more, students' school-related avoidance behaviors have been linked to the presence of gangs at school (Randa & Wilcox, 2010).

Additionally, knowing or perceiving that others, in general, carry weapons to school can cause other students to be afraid of being victimized at school (Arnette & Walsleben, 1998). Whether the carrying of weapons is for offensive or defensive purposes, the mere presence of these at school can be scary for students. Schreck and Miller (2003) found that this indicator of school disorder – other students carrying weapons – increased fear of victimization for several different kinds of crime. Knowing that other students might be armed can increase feelings of vulnerability, perceived risk, and fear of in-school victimization.

Similarly, the presence of drugs or drug dealers at school can stimulate fear by exposing students to offenders. Schreck and Miller (2003) found that the presence of drug dealers at school increased fear of robbery. Also, students who considered drugs or alcohol to be easily obtainable at school were more fearful both at school and when traveling to and from school than those without such a view (Alvarez & Bachman, 1997). As before, such factors increase feelings of vulnerability while also elevating the likelihood or opportunity for victimization, which itself affects fear and risk.

In addition to these specific measures of risky or dangerous people, Benbenishty et al. (2002) found that Israeli students who observed more risky behaviors at school also perceived seriousness of school violence to be a greater issue. Astor et al. (2002) reported the same relationship, but they also found that observing risky behaviors while at school significantly affected the male students' fear of attending school. Male students in their study were likely to miss school because of their fear of school violence; no relationship such relationship was found for female students.

Capable Guardianship. From an opportunity standpoint, the guardianship role is key. Even in the presence of motivated offenders, attractive targets may avoid victimization and, arguably, perceive less risk and fear, if they are surrounded by capable guardians. This was already demonstrated to apply to school-based fear, as students have been shown to be more fearful in less guarded areas and less fearful in better guarded areas. To reiterate, according to Astor et al. (2001), areas that students perceived as being unsafe or dangerous typically was void of adult monitoring or supervision. What is more, because such places were essentially "unowned" (see Astor et al., 1999), students were unsure which adults (i.e., capable guardians) to reach out to if they needed assistance.

Unlike the adult-focused literature on fear of crime and perceived risk, school-based studies have also examined the impact of parents, friends, and schools on these outcome measures. In this vein, bonds to certain people (i.e., parents, peers, and teachers) and places (i.e., school) can be considered forms of guardianship. Generally speaking, these bonds – which can provide guardianship – are capable of reducing feelings of vulnerability while also reducing perceived risk and fear of in-school victimization. The absence of supportive ties, however, serves as an indicator of vulnerability and, ultimately, of fear of crime (McDermott, 1980).

Not many studies have explored parental attachment in the student-based fear literature, but among those that do, it appears that students with less supportive and understanding parents tend to display higher levels of school-related fear. For example, students whose parents were less understanding and concerned about trouble at school or problems with teachers were more fearful than those with more understanding and concerned parents (Wayne & Rubel, 1982). Specifically, students that were very fearful reported that their parents rarely listened to their side of an issue or agreed with them, as well as almost always punished them for trouble. Wallace and May (2005) found that students who reported feeling weakly attached to their parents experienced more fear of being victimized at school than those with stronger parental attachments. However, this effect was gender specific, applying only to male students (both African American and white males). For female students, however, the relationship between parental attachment and fear of in-school victimization was not significant. While there are several possible interpretations for this effect, it is plausible that female fear of in-school victimization, especially of sexual victimization, is so pervasive that their fear or perceived risk is only influenced by direct, on-site guardianship. At least one study, Swartz et al. (2011), did not find a significant relationship between parental attachment and fear of in-school victimization.

In terms of peer relationships, Wayne and Rubel (1982) found that students with fewer close friends were more fearful than those with more close friends. They mention that the temporal ordering of the association between the lack of close friends and fear of school crime is unclear. While fearful students may have trouble making friends, lacking peer support in school may also lead to fear of victimization (Wayne & Rubel, 1982). Although in either example peer

attachment matters, it is more likely that students with fewer friends feel more vulnerable to and less protected from in-school victimization.

Swartz et al. (2011) reported a similar relationship, although it was contingent on gender. Specifically, peer attachment among female students reduced their fear of school-based crime. At least for female students, their sense of vulnerability might be ameliorated when they perceive more friends or feel more attached to those friends at school. Although peer attachment appears to potentially serve a guardian-esque function, it should be noted that Tillyer et al. (2011) did not find any significant relationships between peer attachment and either fear of in-school violent victimization or perceived risk of in-school *serious* violent victimization. In addition to positive or prosocial peer attachment, it is possible that belonging to a gang can also increase feelings of guardianship. Individuals are often drawn to gangs because of the perceived protection they offer (see e.g., Miller, 2001). Essentially, in this capacity, gangs and gang members are guardians – they can reduce feelings of vulnerability and lower fear. In support of this, Melde et al.'s work (2009) revealed that gang members had lower fear of several types of victimization, some of which occurred in the school setting. Also, as mentioned earlier, "functional" gang members (or those that required members to fight on their behalf) expressed lower fear than non-members both at school and while going to and from school (Lalli & Savitz, 1976).

In contrast to the guardianship effect of strong peer bonds, students without strong relationships to peers may feel more isolated or alienated, as well as less powerful (McDermott, 1980). Additionally, students that are new to the school tend to be more fearful of being victimized at school (Schreck & Miller, 2003; Wayne & Rubel, 1982). Wayne and Rubel (1982) also found that students who had been relocated (whether due to expulsion or desegregation) reported more fear of school-based victimization. Students who spent over five years at a junior

high or senior high school also expressed more fear at school (Wayne & Rubel, 1982). These students typically were held back at least once, which likely means their established peer networks were no longer present. In terms of their attachment to teachers or school, studies suggest that students that distrust school or those with hostile attitudes toward school or required classes tend to be more fearful of crime at school (Schreck & Miller, 2003; Wayne & Rubel, 1982). According to Schreck and Miller (2003), students who report negative feelings or who demonstrate weaker attachment are thought to be less likely to trust teachers or school personnel for protection. Essentially, these students view them as unlikely or incapable guardians. A similar relationship has been found between school attachment and risk perception. Tillyer et al. (2011) reported that students that were more attached to school perceived less risk of in-school violence. However, some researchers have failed to find a significant effect of attachment to school on fear (Swartz et al., 2011; Tillyer et al., 2011; Wilcox et al., 2006) or on perceived risk of in-school victimization (Wilcox et al., 2006).

Another dimension of an adolescent's bond to school is his/her belief in the school's rules. In this regard, research has found that students who perceive the school rules as unfair are more fearful (Schreck & Miller, 2003), while students who believe in the school rules felt safer at school (Welsh, 2001). Wayne and Rubel (1982) discovered that regardless of race, students that thought the school was unequal in their treatment toward racial minorities reported being more afraid of school-based crime. In addition to the school's climate, the connectedness between students, can impact perceptions of school safety (Skiba et al., 2004). For instance, resentment toward fellow students has been found to enhance fear of in-school victimization (Wayne & Rubel, 1982). Students that are less attached likely feel more alienated from the school, as an institution, or from the students, teachers, and other school personnel specifically.

Wallace and May (2005) reported that isolation toward school and other students increased fear of victimization. However, this effect was racially-based, applying only to white students.

Furthermore, students with lower grade point averages tend to be more fearful than their counterparts (Wayne & Rubel, 1982). Related to this, students who reported lower reading ability also reported extreme fear of school crime (Wayne & Rubel, 1982). However, the reliance on cross-sectional data not only threatens the temporal ordering of these relationships, but also leaves open the possibility of a spurious relationship (Wayne & Rubel, 1982). McDermott (1980), for instance, suggests that fear likely decreases students' academic performance, but adds that it is also possible that poor parental and peer relationships affect grades or, conversely, that subpar grades might cast a negative label upon students which then fosters their rejection by parents and peers alike.

Before continuing, it is necessary to briefly mention that there are multiple types of guardianship identified in the literature – personal, physical, social, and natural.[29] The examples of peers and school personnel qualify as social guardianship in that they provide surveillance, which should, theoretically, alleviate some of students' fear (and victimization). However, the student-based fear literature also offers some insight into other forms of guardianship as well. To illustrate this point, a couple examples will briefly be covered.

For instance, personal guardianship, such as carrying weapons for protection, has frequently been researched. Although not all scholars agree on the temporal ordering of the fear-weapon carrying relationship, there does appear to be a relationship of some sort between carrying weapons and either being afraid of school victimization or perceiving a greater risk of it occurring. Some suggest that students who are afraid of victimization or perceive a greater risk

[29] Natural guardianship will not be covered here, as it deals more with the protection afforded by physical design, which is not a focal point of this dissertation.

of it occurring bring weapons to school in response to that fear or risk (see e.g., May, 1999). For instance, in Simon, Dent, and Sussman's (1997) study on weapon carrying in high school, self-reported vulnerability, which essentially measured perceived risk of being beaten up, stabbed, or shot either at school or on the way to or from school, was found to strongly predict in-school weapon carrying. On the other hand, there is also support that students who carry weapons to school become more fearful and perceive greater risk of school-based crime (Wilcox, May, & Roberts, 2006). In this way, weapon carrying may have more of a triggering effect rather than a guardianship function as typically thought.

Physical guardianship, which, in this context, includes security provisions put in place by the school, has also been explored. Tillyer et al. (2011) found that banning book bags and backpacks reduced students' perceived risk of violence at school, while metal detectors lowered their fear of violent, in-school victimization. Schreck and Miller (2003) conclude, however, that students that attend schools with forms of school guardianship (e.g., locked doors, restroom limits, hall monitors, drug education) are more likely to fear school crime. Although these target-hardening measures do not predict fear nearly as well as student factors or school disorder, Schreck and Miller (2003) found them to be relatively important. They propose that security measures are likely to be viewed by students as forms of incivilities (see also Ferraro, 1995) and, thus, are fear-inducing. Schreck and Miller (2003) suggest that modes of security in schools reinforce the belief that victimization could happen. Essentially, they give off the vibe that school is unsafe (Lab & Clark, 1997) and elevate students' vulnerability, perceptions of risk, and fear of school-based crime. Thus, physical security measures can serve more to expose students to danger than to protect them from it.

Conclusion: Rationality and Fear/Risk at School

As with adults, though, there appears to be a disconnect between the actual or "real" risk of in-school victimization and the perceived risk or fear of it occurring – on both the part of parents and students. In reality, in-school victimization is a fairly rare occurrence (Hanke, 1996; Schreck & Miller, 2003), especially given the amount of time students spend at school and participating in school-related activities. This is especially true for violent, in-school, as the majority of offenses committed are petty (Bastian & Taylor, 1991; Garofalo, Siegel, & Laub, 1987; Gottfredson, 2001; Hanke, 1996; Kaufman et al., 1999; Nolin et al., 1996). If rationality of fear was based purely on the discrepancy between actual risk and fear of victimization/perceived risk, then students' fear would seem paradoxical or irrational. After all, the research clearly shows that more students are fearful than are actually victimized. Nevertheless, as Warr and others have recognized (see Chapter Three), fear is not based on actual risk of victimization – it is not even based entirely on perceived risk of victimization. Rather, factors such as perceived seriousness, sensitivity to risk, vulnerability, and lifestyle/routine activities matter (Warr & Stafford, 1983; Warr, 1984, 1985, 1987).

Indeed, as indicated in this chapter, indicators of individual vulnerability and lifestyle/routine activities often do accurately predict student fear and risk, hence supporting the idea that fear and risk are quite rational. Thus, for instance, it makes sense that female and younger students would be more fearful of in-school victimization. Not only are they physically more vulnerable than their male or older counterparts, but they are socially weaker (i.e., powerless) compared to older students.[30] Prior victimization represents another indicator of

[30] However, younger students also appear to endure more actual victimization at school than their older counterparts (Chandler, Chapman, Rand, & Taylor, 1998; Kaufman et al., 2000; see also Bastian & Taylor, 1991).

vulnerability and target attractiveness. That is, previously victimized individuals should feel more vulnerable and consider themselves to be more suitable candidates for victimization, thus heightening their fear and risk perceptions. The relative unanimity of the victimization-fear findings among students serves as another example of rationality.

Also consistent with a rationality-based opportunity approach to fear and risk, it appears that students that are exposed to greater risk and motivated offenders – through delinquent lifestyles and exposure at school to delinquency or disorder – are typically more fearful or perceive greater risk. Students, thus, seem to understand the risk fellow students pose. In addition to exposure, the lack of guardianship in certain situations is important. To reiterate, the repeated finding that students fear unguarded areas in and around the school more than well-guarded ones is a highly rational response. Not only do they realize they are more vulnerable in such places, but they recognize that these particular locations increase their perceived (and actual) risk of victimization.

Furthermore, the fact that students often change their routine activities, engage in avoidance behaviors, or arm themselves in response to their fear or perceived risk further cements the importance of analyzing fear through a lens of opportunity and rationality. These acts, although unfortunate, are highly rational reactions to the emotionally-driven fear and cognitively-based perceived risk that they experience. Even the more extreme example, skipping school altogether, is a rational reaction. Any of these avoidance or defensive behaviors lowers their exposure and, ultimately, their likelihood of victimization. In doing so, their fear is, at least temporarily, quelled.

On many levels, then, it appears that students' fear is somewhat rational. It seems that this rationality has remained intact despite the publicized school shootings that have occurred

over the last decade. For example, Addington (2003) reported that students' fear of being victimized while at school only slightly increased in the wake of the Columbine High School massacre.[31] Despite the widespread media attention and relevance of the incident, students likely recognized that the risk of this happening in their school was relatively low. Because they perceived the risk as low, even when considering the seriousness of the crimes, their fear of victimization remained fairly low. Addington (2003) found that students' avoidance behaviors were not altered by the Columbine shooting. Also, their levels of fear only marginally increased after Columbine. What is more, this slight increase was attributed to changes from "never" being afraid at school to "almost never" being afraid (Addington, 2003). There also was no significant change in students' fear while traveling to and from school. Even though people, in general, who are similar to or can relate to crime victims portrayed in the news typically report more fear (Chiricos, Hogan, & Gertz, 1997), this was not the case. Even though it dealt with the most serious offense, students likely realized either the rarity of this event or the spatial distance (or both) and did not become too emotionally affected. What is more, other research has also revealed that students' fear of in-school victimization actually decreased from 1995 to 2007 (Robers et al., 2010; see also Annual Report on School Safety, 2000 or Kaufman et al., 1999). Regardless of the media frenzy and parental fear that ensued, students remained fairly realistic about the likelihood of being killed while at school.

Still, more knowledge is needed about the sources of risk and fear among secondary school students. For instance, although the literature on perceived risk is growing in both the adult- and college-based works, there are very few studies that focus on perceptions of risk

[31] On April 20, 1999 at Columbine High School in Littleton, Colorado, two students shot and killed 13 people (12 students and one teacher) and wounded 21 others before committing suicide (Addington, 2003). See Stretesky and Hogan (2001) for an analysis of female college students' perceptions of safety before and after the Columbine shooting.

among secondary students, let alone treat it as a dependent variable (for exceptions see Wilcox et al., 2005 or Tillyer et al., 2011). This alone is an important void that this dissertation seeks to fill. Another hole in the literature on secondary students deals with fear of sexual victimization and/or the shadow effect. Although May (2001a) was one of the first to apply the shadow effect to students other than collegiate students, his sample focused only on high school students. No known works have explored this among a sample of middle and high school students. Also, May's (2001a) sample was exclusively rural and suburban, which is important as the current study includes schools in urban areas. Further, because subjective risk (i.e., perceived risk and fear) is likely crime-specific (Wilcox et al., 2005), it is important to separate sexual from nonsexual perceived risk and fear of victimization. Through addressing these gaps in the literature, this dissertation will help shed further light on how indicators of vulnerability and lifestyle/routine activities affect different types of student fear and risk – thereby suggesting the rationality of such feelings and assessments about school-based crime. The specific hypotheses tested in this dissertation will be laid out next.

RESEARCH HYPOTHESES

The research presented above highlights the existing state of literature on fear and risk among secondary students. This dissertation seeks to extend this literature by examining several indicators of vulnerability and lifestyle/routine activities on sexual and nonsexual fear of victimization and perceptions of risk. In doing so, this dissertation hopes to uncover whether students' fear and perceptions of risk are rational or, stated differently, whether students

rationally evaluate their fear and risk at school given their vulnerability, attractiveness as targets, exposure to motivated offenders, and guardianship.

Before the specific hypotheses can be outlined, it is necessary to briefly discuss the importance of several of the key independent variables. While the literature reviewed earlier in this dissertation reveals the significance of including gender and prior victimization as predictors (i.e., as measures of vulnerability), a discussion on the importance of including low self-control, types of delinquent lifestyles, and forms of protection or guardianship deserves some additional attention. Even though some of these indicators have been empirically reviewed earlier in this chapter, their theoretical importance and the possible directionality of the hypotheses merit further discussion.

Low Self-Control

The notion of low self-control as a cause of crime was set forth in Gottfredson and Hirschi's (1990) general theory of crime. Gottfredson and Hirschi (1990) argued that while individuals with higher self-control would be less likely to break laws, those with lower self-control would be more inclined to do so. What is more, they argued that crime, deviance, and other analogous behaviors are caused by having low self-control. Individuals with lower self-control typically lack delayed gratification and, instead, have a desire for immediate and easy gratification. Additionally, Gottfredson and Hirschi (1990) proposed that individuals with low self-control take more risks, become easily frustrated, are more insensitive, and are short-sighted (i.e., they lack long-term planning and focus almost exclusively on the "here and now"). Quite simply, individuals with lower self-control are more impulsive in most, if not all, aspects of life.

Even though Gottfredson and Hirschi's low self-control theory has been regarded as a criminological masterpiece, in 1999 Schreck usefully reconceptualized it as a theory of vulnerability.[32] He argued that low self-control can be used to understand victimization. According to Schreck (1999), low self-control also explains why offenders are at a higher risk of victimization than individuals who refrain from criminal activity. Prior works regularly showed substantial overlap between the victims and the victimizers (Jensen & Brownfield, 1986; Lauritsen, Sampson, & Laub, 1991; Schreck, Wright, & Miller, 2002). He proposed that low self-control was responsible for the variation in offending *and* in the risk of victimization.

By incorporating low self-control into the lifestyle/routine activities framework, Schreck (1999) argued, that low self-control increased risk of victimization in several ways. First, individuals with low self-control have a reduced capacity for future orientation. Because they are less concerned with long-term consequences, they find themselves participating in risky behaviors and exposed to dangerous people and places. Second, those with lower self-control tend to lack empathy, which not only makes it harder for them to establish meaningful relationships with others (which can reduce their guardianship), but it also effects their ability to judge other individuals and their intentions (which can increase their vulnerability). Third, individuals with low self-control tend to get angry and frustrated very easily. The result of this is that they often find themselves in situations where they provoke or precipitate their own victimization, especially in terms of assault. Fourth, people with low self-control lack diligence and persistence, which makes them unlikely to consistently use security measures or to employ other precautions or forms of guardianship. Fifth, because they have a preference for physical

[32] This dissertation applies low self-control from a solely victimology perspective. In doing so, the literature that explores low self-control as an explanation for or cause of criminal behavior will not be covered here. For more information on this, see Evans, Cullen, Burton, Dunaway, and Benson (1997), Gottfredson and Hirschi (2003), Grasmick, Tittle, Bursik, and Arneklev (1993), Pratt and Cullen (2000), and Tittle, Ward, and Grasmick (2004).

rather than mental activity, individuals with lower self-control are less likely to cognitively assess the dangerousness of situations or to devise appropriate responses to risk. Finally, individuals with low self-control engage in more thrill-seeking behaviors, which make them less likely to avoid risk (Schreck, 1999). Essentially, these six elements of low self-control foster vulnerability. They do so by increasing individuals' attractiveness as target, exposing them to motivated offenders, and reducing their capacity for guardianship. Collectively, this is a breeding ground for victimization.

In Schreck's (1999) original test of the newly reconceptualized notion of low self-control, he found that self-control was a significant predictor of violent, property, and overall victimization. Being impulsive, or having lower levels of self-control, predicted engaging in criminal behavior *and* becoming a victim of crime. Additionally and consistent with his hypotheses, Schreck (1999) found that females had more self-control and lower levels of offending than males. Yet, for both males and females, victims had lower levels of self-control than their non-victimized counterparts.

Since his reconceptualization of self-control theory, several other works have explored self-control through a victimology lens, consistently finding that low self-control is strongly related to victimization (see e.g., Schreck et al., 2002; Schreck & Fisher, 2004; Schreck, Stewart, & Fisher, 2006). What is more, several works have found this to hold for in-school victimization (Campbell Augustine, Wilcox, Ousey, & Clayton, 2002; Ousey, Wilcox, & Brummel, 2008; Tillyer et al., 2011; Tillyer, Wilcox, & Gialopsos, 2010; Wilcox, Tillyer, & Fisher, 2009). Yet, while low self-control has been well integrated into the victimization literature, its role on fear and perceived risk of crime is still being developed. Very recently, Tillyer et al. (2011) discussed the feasibility of low self-control acting as an indicator of target attractiveness,

specifically Finkelhor and Asdigian's (1996) notion of antagonism, on fear and risk of victimization. In support of this, both Tillyer et al. (2011) and Swartz et al. (2011) found positive relationships between low self-control and fear and/or perceived risk of victimization at school. Beyond its function as an indicator of target attractiveness and sources of vulnerability, however, low self-control likely affects fear by exposing individuals to risky situations and unstructured activities, brining them in close proximity to dangerous or motivated offenders, and doing so, out of the purview of capable guardianship. In this way, this dissertation proposes that low self-control will increase fear and perceived risk for both sexual and nonsexual in-school victimization.

It is important, however, to note that it is entirely possible that low self-control could have the opposite effect on fear and risk. The very nature of low self-control makes it likely that individuals will not be able to recognize their own vulnerability nor be able to detect risk in potentially dangerous places, situations, and people. Low self-control may make it difficult, if not impossible, for individuals to notice cues or to interpret them as indicating risk or danger. Yet, the hypothesized relationship is thought to be positive because of low self-control's effect on vulnerability and lifestyle/routine activities. Plus, the few fear and risk studies that have examined low self-control have discovered such an effect. In this way, it seems likely that individuals with low self-control may be able to rationally assess risk, but still act impulsively. It is also plausible that the effects of low self-control on lifestyle/routine activities overshadows or more strongly impacts individuals than what is theoretical assumed for this characteristic. That is, the frequency or intensity of exposure to risky situations and proximity to dangerous people might simply be too great for individuals with low self-control to ignore.

Delinquency and Delinquent Peers

In studies of victimization, both self-reported delinquency and/or possessing delinquent friends are indicators of a delinquent lifestyle. The literature on how a delinquent lifestyle (i.e., self and peer delinquency) increases the risk of adolescent victimization, in general, and in-school victimization, in particular, is quite vast (Campbell Augustine et al., 2002; George & Thomas, 2000; Lauritsen et al., 1991; Melde, 2009; Melde & Esbensen, 2009; Ousey et al., 2008; Schreck & Fisher, 2004; Schreck et al., 2002, 2006; Schreck, Fisher, & Miller, 2004; Schreck, Miller, & Gibson, 2003; Tillyer et al., 2010, 2011; Wilcox et al., 2006, 2009). Engaging in delinquency, for instance, exposes individuals to dangerous situations and places them in proximity to potentially risky people. Further, finding the opportunity to offend suggests that individuals frequently, or at least occasionally, are in situations without adequate guardianship or handlers, which may have the unintended effect of elevating their own victimization.

Similarly, possessing delinquent friends, in either the presence or absence of self-report delinquency, raises the likelihood of victimization as it, too, increases exposure and proximity to motivated offenders. Also, simply befriending delinquents may mark an individual as a suitable or attractive target for victimization (Schreck & Fisher, 2004). This may occur in a retaliatory fashion (e.g., Baron, Forde, & Kennedy, 2001) or because a delinquent lifestyle reduces the likelihood of reporting victimization to the police. Additionally, delinquent peers may also be more likely to victimize or prey upon their supposed pals (Jensen & Brownfield, 1986; Lauritsen et al., 1991; Schreck et al., 2002). Though adolescents spend quite a bit of time with peers, which could possibly have a protective effect, delinquent individuals make rather poor guardians and ineffective sources of protection (Schreck & Fisher, 2004; Schreck et al., 2004). What is more, because adolescents spend such a large portion of their time with peers and are fairly

influenced by them (Schreck & Fisher, 2004), associating with delinquent friends not only can lead to victimization, but also to criminal participation or delinquency for those who had previously refrained from such behavior (Schreck et al., 2006). Peers also encourage delinquency and violence or expect it to occur out of misplaced loyalty (Lockwood, 1997).

As indicated in the last section, several studies have found a relationship between a delinquent lifestyle and fear or perceived risk of in-school victimization (Schreck & Miller, 2003; Tillyer et al., 2011; Welsh, 2001).[33] These findings reveal that self-reported delinquency, associating with delinquent peers, or both increases fear and/or perceived risk of in-school victimization (see Wilcox et al., 2006 for an exception). Essentially, these factors operate in a similar manner with fear and perceptions of risk as they do with victimization. Self-reported delinquency, for example, increases vulnerability, fear, and risk by increasing exposure and target suitability and reducing guardianship. It is also possible that simply engaging in delinquent acts may open one's eyes to the realization of potential victimization at school, thereby increasing their risk and/or fear.

Additionally, in a very differential association fashion, it appears that students may learn to fear being victimized though their interactions and exposure to delinquent friends (Miller, Gibson, Ventura, & Schreck, 2005). Whether through witnessing the victimization of other students or by hearing accounts of friends' criminal pursuits, these students become increasingly aware of the potential risk for in-school victimization and become afraid. Students who spend time with delinquent friends are exposed directly and indirectly to crime and victimization, find themselves in close proximity to dangerous people, are likely to become attractive targets for victimization, and are often in situations without proper guardianship. Collectively, these factors

[33] Melde (2009) found that a delinquent lifestyle increased perceived risk, but decreased fear over time. However, although his sample was adolescents, his measures did not inquire about in-school fear and perceived risk; rather, they focused on fear and risk of violent and property victimization in general.

not only increase their opportunity for victimization, but enhance their fear and perceived risk as well. In this way, this dissertation proposes that a delinquent lifestyle will increase fear and perceived risk for both sexual and nonsexual in-school victimization.

Attachment

As briefly discussed before, attachments to conventional people and institutions can act as forms of guardianship, shielding individuals from actual victimization while also lowering their perceived risk and fear of victimization. However, in addition to attachment's utility as an indicator of lifestyle/routine activities, attachment has an even deeper theoretical meaning and role in the delinquent behaviors of adolescents. Introduced to criminology in 1969 by Hirschi, attachment was one of four social bonds that became a theoretical and empirical staple in mainstream criminology. In his social control theory, Hirschi (1969) suggested that individuals with strong social bonds were more likely to conform to the norms and rules of society while those with weak social bonds were more likely to commit deviant, delinquent, or criminal acts. While the general theory of crime proposed that *internal* controls kept people from committing crime, social bond theory focused on systems of *external* controls.

The social bond, according to Hirschi, consisted of four components: attachment, commitment, involvement, and belief.[34] Arguably the most important of the bonds, attachment, has empirically taken center stage since the theory's conception (see e.g., Kempf, 1993). Attachment, as Hirschi (1969) envisioned, refers to the emotional bonds or connections that an

[34] Although involvement, commitment, and belief are essential to Hirschi's (1969) social bond theory, because they are not relevant to the focus of this dissertation, they will only briefly be described. Essentially, individuals that are committed to and involved in conventional activities and institutions, as well as those who believe in the conventional value system are more likely to conform to and less likely to deviate from the rules and norms of society. For more information on social bond theory, see Agnew (1991), Krohn and Massey (1980), Rankin and Wells (1990), and Wiatrowski, Griswold, and Roberts (1981).

individual has with conventional others, particularly parents, peers, and teachers. Essentially, this emotional tie to other individuals was thought to instill conformity and keep adolescents out of trouble. If the bond or attachment was strong, for instance, the adolescent would care about the opinions and feelings of that person; thus, they would avoid jeopardizing that relationship and disappointing that person. If attachment was weak, however, the adolescent would be free to deviate.

This dissertation, like many school-based studies, utilizes different forms of attachment as predictor variables. This study explores how attachment to parents, peers, and schools impacts fear of in-school victimization, as well as perceived risk. Just as strong social bonds reduce the risk of victimization among adolescents (see e.g., Ousey et al., 2008; Schreck et al., 2002, 2004; Tillyer et al., 2010, 2011; Welsh, 2001; Wilcox et al., 2006, 2009), it is proposed that they, too, inhibit fear and lower perceived risk of school-based victimization. The bonds that students have to peers, teachers, and school likely shield them, at least partially, from fear. Moreover, while at school or school-related activities, they serve a guardian function – protecting them from possible victimization while lowering perceived risk and/or fear. More specifically, individuals that are more strongly bonded to prosocial others will spend more time in their presence, which increases guardianship while decreasing their involvement in risky activities and overall vulnerability (Schreck et al., 2002; Schreck & Fisher, 2004). This, as already discussed, is consistent with some of the findings from in-school fear and risk studies discussed earlier in this chapter (see e.g., Swartz et al., 2011; Tillyer et al., 2011; Welsh, 2001). To reiterate, students with stronger attachments tend to report less fear and perceived risk of victimization at school then those with weaker attachments.

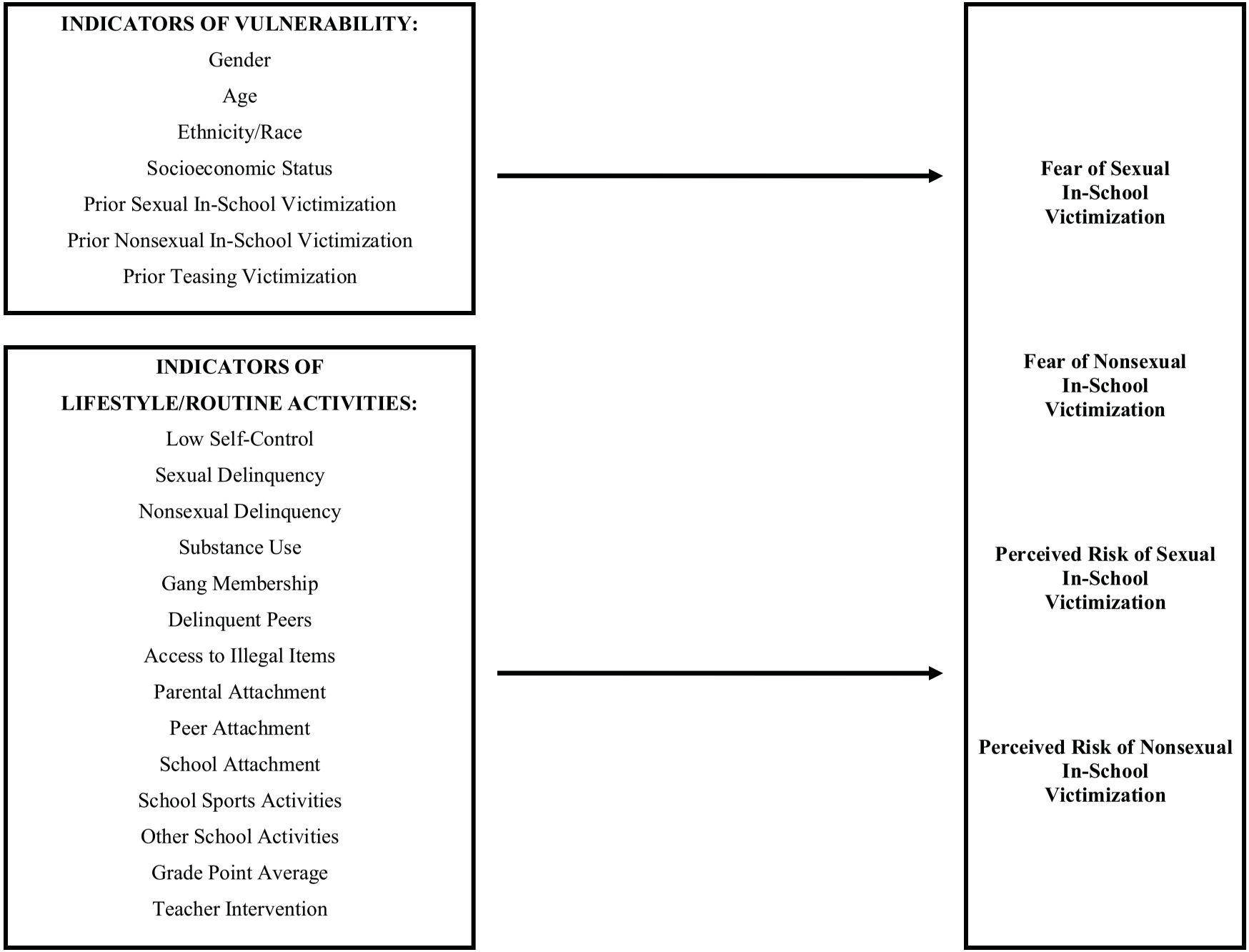
In contrast, alienation, negativity, and/or hostility toward the school, teachers, and/or fellow students (all indicators of weak attachment) have been shown to increase students' fear (Schreck & Miller, 2003; Wayne & Rubel, 1982). Findings such as these also suggest that weak peer and school attachments enhance feelings of vulnerability, which serves to increase fear and risk perceptions. Consistent with the aforementioned works, this dissertation recognizes the emotional and guardianship capability of attachment to peers and the school. In this way, this dissertation proposes that attachment to peers and school will reduce fear and perceived risk for both sexual and nonsexual in-school victimization.

Parental attachment, however, is slightly more difficult to predict. On the one hand, unlike peers and teachers, parents are not typically directly present at school, so their effect as physically-present capable guardians is reduced. However, under Hirschi's social bond theory, part of the power of parental attachment came from its ability to indirectly control adolescents. Thus, it was presumed that when deciding whether or not to engage in conforming (or, conversely, deviant) behavior, the strength of the bond would remain even when adolescents were not under the watchful eye of their parents. In this sense, then, the insulating or protecting role of parental attachment may apply when placed in *fearful*, as well as questionable, situations. Some support for this, as discussed earlier in the chapter, can be seen in the findings of Wayne and Rubel (1982) and Wallace and May (2005).[35]

Related to this, social-psychological approaches to fear suggest that a solid family relationship (which is likely analogous to attachment) can increase one's sense of power (Farrall, Bannister, Ditton, & Gilchrist, 2000). This is important as power, according to Farrall et al., influences self-assurance and feelings of control in threatening situations. In this way, having

[35] Although not discussed here because it used a sample of incarcerated juveniles, May, Vartanian, and Virgo (2002) also found that adolescents with stronger attachment to parents were less fearful of victimization than those with lower levels of attachment.

strong emotional ties to parents could keep students feeling confident and safe even in risky or fearful situations or in the face of potentially dangerous offenders. This attachment or emotional connection appears to reduce feelings of vulnerability for these students. Taken as a whole, this dissertation proposes that parental attachment will reduce fear and perceived risk for both sexual and nonsexual in-school victimization.


INDICATORS OF VULNERABILITY:
Gender
Age
Ethnicity/Race
Socioeconomic Status
Prior Sexual In-School Victimization
Prior Nonsexual In-School Victimization
Prior Teasing Victimization
INDICATORS OF LIFESTYLE/ROUTINE ACTIVITIES:
Low Self-Control
Sexual Delinquency
Nonsexual Delinquency
Substance Use
Gang Membership
Delinquent Peers
Access to Illegal Items
Parental Attachment
Peer Attachment
School Attachment
School Sports Activities
Other School Activities
Grade Point Average
Teacher Intervention
Fear of Sexual In-School Victimization
Fear of Nonsexual In-School Victimization
Perceived Risk of Sexual In-School Victimization
Perceived Risk of Nonsexual In-School Victimization

Multivariate Hypotheses

The empirical findings and theoretical rationales that have been laid in the prior chapters provide support for the following multivariate hypotheses (see also Figure 2). In chapters three and four, the roles of gender and prior victimization on fear and risk perceptions were addressed, providing ample evidence that female students, as well as those who have previously been victimized, are more vulnerable, fearful, and perceive greater risk of future victimization. Consistent with individual vulnerability and lifestyle/routine activities, it is hypothesized that:

- *H1a: Female students are more fearful of sexual in-school victimization than male students.*
- *H1b: Female students are more fearful of nonsexual in-school victimization than male students.*
- *H1c: Female students perceive more risk of sexual in-school victimization than male students.*
- *H1d: Female students perceive more risk of nonsexual in-school victimization than male students.*
- *H2a: Younger students are more fearful of sexual in-school victimization than older students.*
- *H2b: Younger students are more fearful of nonsexual in-school victimization than older students.*
- *H2c: Younger students perceive more risk of sexual in-school victimization than older students.*
- *H2d: Younger students perceive more risk of nonsexual in-school victimization than older students.*

- *H3a: Minority students are more fearful of sexual in-school victimization than white students.*
- *H3b: Minority students are more fearful of nonsexual in-school victimization than white students.*
- *H3c: Minority students perceive more risk of sexual in-school victimization than white students.*
- *H3d: Minority students perceive more risk of nonsexual in-school victimization than white students.*
- *H4a: Students who have lower socioeconomic status are more fearful of sexual in-school victimization than students with higher socioeconomic status.*
- *H4b: Students who have lower socioeconomic status are more fearful of nonsexual in-school victimization than students with higher socioeconomic status.*
- *H4c: Students who have lower socioeconomic status perceive more risk of sexual in-school victimization than students with higher socioeconomic status.*
- *H4d: Students who have lower socioeconomic status perceive more risk of nonsexual in-school victimization than students with higher socioeconomic status.*
- *H5a: Students who have experienced more prior sexual victimization are more fearful of sexual in-school victimization than those who have experienced less sexual victimization.*
- *H5b: Students who have experienced more prior sexual victimization are more fearful of nonsexual in-school victimization than those who have experienced less sexual victimization.*

- *H5c: Students who have experienced more prior sexual victimization perceive more risk of sexual in-school victimization than those who have experienced less sexual victimization.*
- *H5d: Students who have experienced more prior sexual victimization perceive more risk of nonsexual in-school victimization than those who have experienced less sexual victimization.*
- *H6a: Students who have experienced more prior nonsexual victimization are more fearful of sexual in-school victimization than those who have experienced less nonsexual victimization.*
- *H6b: Students who have experienced more prior nonsexual victimization are more fearful of nonsexual in-school victimization than those who have experienced less nonsexual victimization.*
- *H6c: Students who have experienced more prior nonsexual victimization perceive more risk of sexual in-school victimization than those who have experienced less nonsexual victimization.*
- *H6d: Students who have experienced more prior nonsexual victimization perceive more risk of nonsexual in-school victimization than those who have experienced less nonsexual victimization.*
- *H7a: Students who have experienced prior teasing at school are more fearful of sexual in-school victimization than those who have not been teased.*
- *H7b: Students who have experienced prior teasing at school are more fearful of nonsexual in-school victimization than those who have not been teased.*

- *H7c: Students who have experienced prior teasing at school perceive more risk of sexual in-school victimization than those who have not been teased.*
- *H7d: Students who have experienced prior teasing at school perceive more risk of nonsexual in-school victimization than those who have not been teased.*
- *H8a: Students with lower self-control are more fearful of sexual in-school victimization than those with higher self-control.*
- *H8b: Students with lower self-control are more fearful of nonsexual in-school victimization than those with higher self-control.*
- *H8c: Students with lower self-control perceive more risk of sexual in-school victimization than those with higher self-control.*
- *H8d: Students with lower self-control perceive more risk of nonsexual in-school victimization than those with higher self-control.*
- *H9a: Students who have engaged in more sexual delinquency are more fearful of sexual in-school victimization than those who have engaged in less sexual delinquency.*
- *H9b: Students who have engaged in more sexual delinquency are more fearful of nonsexual in-school victimization than those who have engaged in less sexual delinquency.*
- *H9c: Students who have engaged in more sexual delinquency perceive more risk of sexual in-school victimization than those who have engaged in less sexual delinquency.*
- *H9d: Students who have engaged in more sexual delinquency perceive more risk of nonsexual in-school victimization than those who have engaged in less sexual delinquency.*

- *H10a: Students who have engaged in more nonsexual delinquency are more fearful of sexual in-school victimization than those who have engaged in less nonsexual delinquency.*
- *H10b: Students who have engaged in more nonsexual delinquency are more fearful of nonsexual in-school victimization than those who have engaged in less nonsexual delinquency.*
- *H10c: Students who have engaged in more nonsexual delinquency perceive more risk of sexual in-school victimization than those who have engaged in less sexual delinquency.*
- *H10d: Students who have engaged in more nonsexual delinquency perceive more risk of nonsexual in-school victimization than those who have engaged in less sexual delinquency.*
- *H11a: Students who have engaged in more substance use are more fearful of sexual in-school victimization than those who have engaged in less substance use.*
- *H11b: Students who have engaged in more substance use are more fearful of nonsexual in-school victimization than those who have engaged in less substance use.*
- *H11c: Students who have engaged in more substance use perceive more risk of sexual in-school victimization than those who have engaged in less substance use.*
- *H11d: Students who have engaged in more substance use perceive more risk of nonsexual in-school victimization than those who have engaged in less substance use.*
- *H12a: Students who are gang members are more fearful of sexual in-school victimization than non-gang members.*
- *H12b: Students who are gang members are more fearful of nonsexual in-school victimization than non-gang members.*

- *H12c: Students who are gang members perceive more risk of sexual in-school victimization than non-gang members.*
- *H12d: Students who are gang members perceive more risk of nonsexual in-school victimization than non-gang members.*
- *H13a: Students who have delinquent peers are more fearful of sexual in-school victimization than those without delinquent peers.*
- *H13b: Students who have delinquent peers are more fearful of nonsexual in-school victimization than those without delinquent peers.*
- *H13c: Students who have delinquent peers perceive more risk of sexual in-school victimization than those without delinquent peers.*
- *H13d: Students who have delinquent peers perceive more risk of nonsexual in-school victimization than those without delinquent peers.*
- *H14a: Students who perceive easier access to illegal items at school are more fearful of sexual in-school victimization than those who perceive less access to illegal items.*
- *H14b: Students who perceive easier access to illegal items at school are more fearful of nonsexual in-school victimization than those who perceive less access to illegal items.*
- *H14c: Students who perceive easier access to illegal items at school perceive more risk of sexual in-school victimization than those who perceive less access to illegal items.*
- *H14d: Students who perceive easier access to illegal items at school perceive more risk of nonsexual in-school victimization than those who perceive less access to illegal items.*
- *H15a: Students who have weaker parental attachment are more fearful of sexual in-school victimization than those with stronger attachment to parents.*

- *H15b: Students who have weaker parental attachment are more fearful of nonsexual in-school victimization than those with stronger attachment to parents.*
- *H15c: Students who have weaker parental attachment perceive more risk of sexual in-school victimization than those with stronger attachment to parents.*
- *H15d: Students who have weaker parental attachment perceive more risk of nonsexual in-school victimization than those with stronger attachment to parents.*
- *H16a: Students who have weaker peer attachment are more fearful of sexual in-school victimization than those with stronger attachment to peers.*
- *H16b: Students who have weaker peer attachment are more fearful of nonsexual in-school victimization than those with stronger attachment to peers.*
- *H16c: Students who have weaker peer attachment perceive more risk of sexual in-school victimization than those with stronger attachment to peers.*
- *H16d: Students who have weaker peer attachment perceive more risk of nonsexual in-school victimization than those with stronger attachment to peers.*
- *H17a: Students who have weaker school attachment are more fearful of sexual in-school victimization than those with stronger attachment to school.*
- *H17b: Students who have weaker school attachment are more fearful of nonsexual in-school victimization than those with stronger attachment to school.*
- *H17c: Students who have weaker school attachment perceive more risk of sexual in-school victimization than those with stronger attachment to school.*
- *H17d: Students who have weaker school attachment perceive more risk of nonsexual in-school victimization than those with stronger attachment to school.*

- *H18a: Students who are more involved in school sports are more fearful of sexual in-school victimization than those less involved in sports.*
- *H18b: Students who are more involved in school sports are more fearful of nonsexual in-school victimization than those less involved in sports.*
- *H18c: Students who are more involved in school sports perceive more risk of sexual in-school victimization than those less involved in sports.*
- *H18d: Students who are more involved in school sports perceive more risk of nonsexual in-school victimization than those less involved in sports.*
- *H19a: Students who are more involved in other school activities are more fearful of sexual in-school victimization than those less involved in other activities.*
- *H19b: Students who are more involved in other school activities are more fearful of nonsexual in-school victimization than those less involved in other activities.*
- *H19c: Students who are more involved in other school activities perceive more risk of sexual in-school victimization than those less involved in other activities.*
- *H19c: Students who are more involved in other school activities perceive more risk of nonsexual in-school victimization than those less involved in other activities.*
- *H20a: Students with lower grade point averages are more fearful of sexual in-school victimization than those with higher grade point averages.*
- *H20b: Students with lower grade point averages are more fearful of nonsexual in-school victimization than those with higher grade point averages.*
- *H20c: Students with lower grade point averages perceive more risk of sexual in-school victimization than those with higher grade point averages.*

- *H20d: Students with lower grade point averages perceive more risk of nonsexual in-school victimization than those with higher grade point averages.*
- *H21a: Students who report that teachers are less willing to intervene during violent acts are more fearful of sexual in-school victimization than those who report more teacher intervention.*
- *H21b: Students who report that teachers are less willing to intervene during violent acts are more fearful of nonsexual in-school victimization than those who report more teacher intervention.*
- *H21c: Students who report that teachers are less willing to intervene during violent acts perceive more risk of sexual in-school victimization than those who report more teacher intervention.*
- *H21d: Students who report that teachers are less willing to intervene during violent acts perceive more risk of nonsexual in-school victimization than those who report more teacher intervention.*

In addition to these main hypotheses, additional hypotheses are outlined that deal specifically with the shadow of sexual assault (see also Figure 3). Based on the literature reviewed in chapters three and four, it is appropriate to use fear and perceived risk of sexual in-school victimization as predictors for fear and perceived risk of nonsexual in-school victimization. Consistent with prior research in this field, it is hypothesized that:

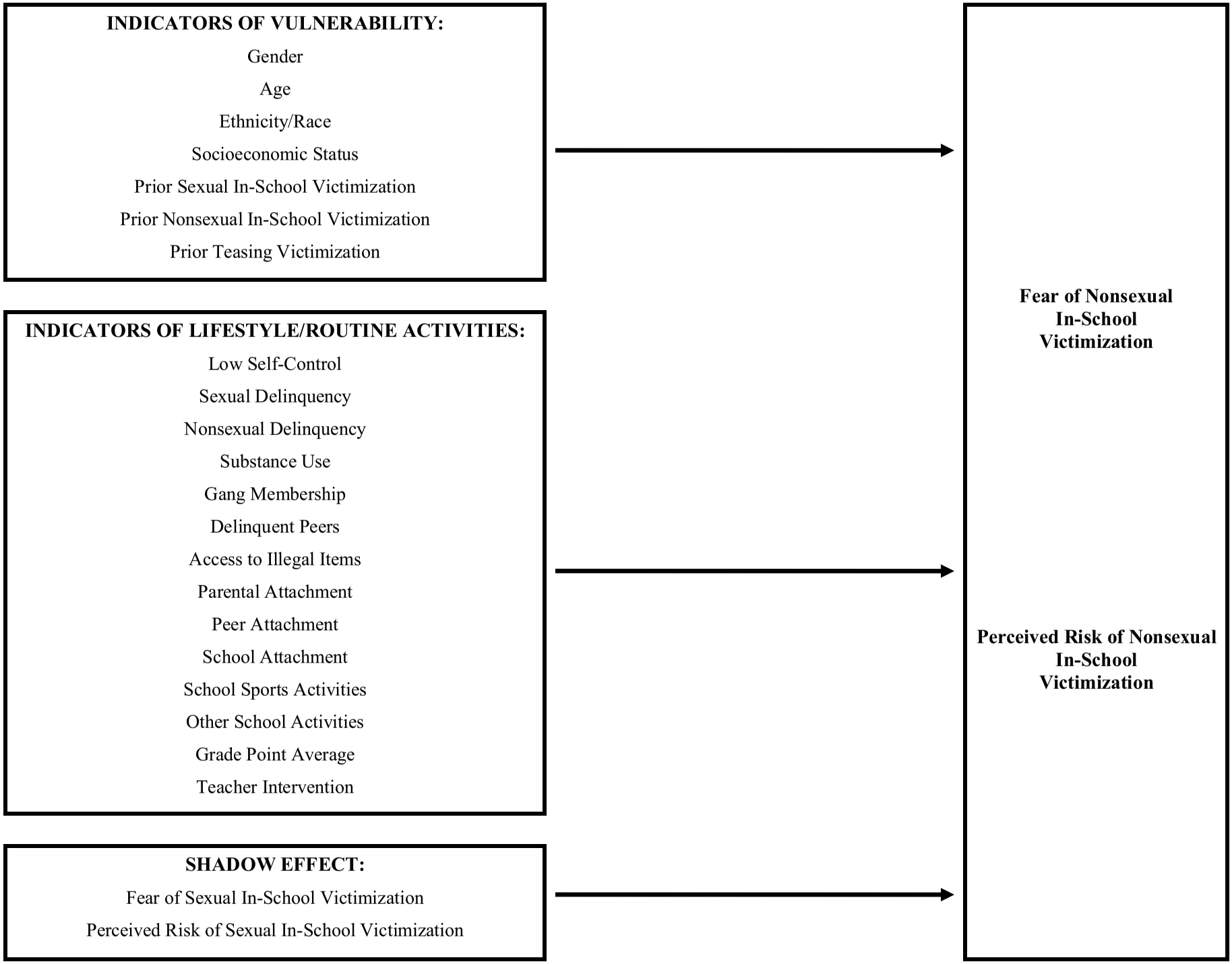
H22a: Students who are more fearful of sexual in-school victimization are more fearful of nonsexual in-school victimization.

H22b: Female students who are more fearful of sexual in-school victimization are more fearful of nonsexual in-school victimization than male students who are afraid of sexual in-school victimization.

H23a: Students who perceive more risk of sexual in-school victimization perceive more risk of nonsexual in-school victimization.

H23b: Female students who perceive more risk of sexual in-school victimization perceive more risk of nonsexual in-school victimization than male students who perceive risk of sexual in-school victimization.

Figure 4.2: Conceptual Diagram of Shadow of Sexual Assault Hypotheses



Chapter Five:

METHODOLOGY

Data

The data used in this dissertation come from the Rural Substance Abuse and Violence Project (RSVP), which was funded by the National Institute of Drug Abuse (DA-11317). Conducted in Kentucky from 2001 to 2004, this was a longitudinal study that initially administered self-report surveys to a group of 7th graders. RSVP used a multi-stage sampling procedure, beginning with the stratified sampling of Kentucky counties. Out of the 120 counties in Kentucky, 30 were selected for participation. It is important to note that these 30 counties represent areas in Kentucky across the entire rural-urban continuum. All public schools that contained 7th graders in these 30 counties were identified. The principals from these schools were contacted and of the 74 schools identified, 65 schools agreed to participate in the study. All 7th graders in these 65 participating schools – 9,488 total students – were eligible to participate in the study.

Active parental consent was granted for 43% or 4,102 of the targeted students. This rate is consistent with other studies that utilize active parental consent (see e.g., Esbensen, Deschenes, Vogel, West, Arboit, & Harris, 1996). These subjects were administered the survey annually from 7th grade through 10th grade. Completed surveys were gathered from 3,692 students in 7th grade (wave one), 3,638 students in 8th grade (wave two), 3,050 students in 9th grade (wave three), and 3,040 students in 10th grade (wave four). In all, 3,976 students (out of 4,102) participated in one or more of the annual surveys. The data used in this dissertation are pooled from all four waves of the survey. In all, the sample contained 13,420 cases (student-

years) within 111 school contexts. However, after listwise deletion of missing cases, the final sample consisted of 12,900 cases nested within 111 schools (see e.g., Wilcox et al., 2009; Swartz et al., 2011; Tillyer et al., 2010, 2011).

Sample Characteristics

In all, the pooled RSVP data yielded 12,900 observations or person-years to be analyzed within 111 various Kentucky secondary schools. As a whole, the sample of students was 47.3% male and 52.7% female. Compared to the Kentucky Department of Education enrollment data for the surveyed years, the sample slightly under-represents male students (Wilcox et al., 2009). The age of the sampled students ranged from 12 to 19 years old, although 99% of the sample was between 13 and 17 years of age ($\bar{x}$ = 14.85). Slightly over 90% of the sample was white with less than 10% of respondents categorized as nonwhite. This, however, appears consistent with Kentucky Department of Education enrollment for the selected schools during the corresponding period of time (Wilcox et al., 2009). When looking at parental educational attainment (i.e., socioeconomic status), 15% of students reported that their parents did not complete high school, while 44% had parents whose average attainment included completing high school (or attaining a GED), finishing vocational or trade school, or taking some college courses. The remaining 41% of students had parents who completed college or attended a graduate or professional school. In terms of students' grade point average, approximately 33% of students reported having an "A" average, 38% a "B" average, 23% a "C" average, and 5% had either a "D" or "F" overall average.

Table 5.1: Descriptive Statistics for Study Variables

Variable	Min	Max	Mean	SD	Cronbach's Alpha
Dependent Variables					
Fear of Sexual In-School Victimization	2	10	3.82	2.25	.839
Fear of Nonsexual In-School Victimization	5	25	8.43	3.69	.800
Perceived Risk of Sexual In-School Victimization	2	10	4.17	2.39	.890
Perceived Risk of Nonsexual In-School Victimization	5	25	8.71	3.71	.803
Independent Variables					
Gender	0	1	0.53	0.50	--
Age	12	19	14.85	1.23	--
Ethnicity/Race	0	1	0.10	0.30	--
Socioeconomic Status	1	7	4.31	1.54	--
Prior Sexual In-School Victimization	0	10	1.80	2.91	.855
Prior Nonsexual In-School Victimization	0	10	0.75	1.31	.733
Prior Teasing Victimization	0	1	0.31	0.46	--
Low Self-Control	1	4	1.81	0.68	.909
Sexual Delinquency	1	5	1.19	0.57	.866
Nonsexual Delinquency	1	5	1.13	0.35	.897
Substance Use	1	5	1.27	0.52	.857
Gang Membership	0	1	0.60	0.24	--
Delinquent Peers	0	1	0.26	0.27	.911
Access to Illegal Items	1	4	2.19	0.83	.875
Parental Attachment	1	5	3.72	0.77	.929
Peer Attachment	1	4	3.56	0.62	.914
School Attachment	1	4	3.17	0.56	.697
School Sports Activities	1	5	2.65	1.59	--
Other School Activities	1	5	2.31	1.52	--
Grade Point Average	1	5	3.99	0.91	--
Teacher Intervention	1	5	4.40	1.00	--

Dependent Variables

In line with the previously discussed studies, this dissertation views perceived risk and fear of crime as conceptually distinct phenomena. While fear of victimization is a more emotional and affective type of perception, perceived risk of victimization is a judgment that is more cognitively-rooted (DuBow et al., 1979; Ferraro & LaGrange, 1987). Also, although these concepts are related (perceived risk often predicts fear of crime), the literature in chapters two through four reinforces the importance of separating these concepts. In all, four separate dependent variables are used in this dissertation: fear of sexual in-school victimization, fear of nonsexual in-school victimization, perceived risk of sexual in-school victimization, and perceived risk of nonsexual in-school victimization. Descriptive statistics for all of the variables used in this dissertation are found in Table 3.

Fear of victimization was measured through a series of questions that asked respondents how afraid or worried they were about certain crimes occurring on school grounds or during school-related activities in the current school year (see Appendix A). In all, students were asked about their fear of seven different crimes, which included both property and violent offenses. A five-point Likert response scale was used, with answers ranging from 1 = "Never worried" to 5 = "Always worried." These seven fear questions were broken down into fear of sexual victimization and fear of all other victimization. The *fear of sexual in-school victimization* index consisted of two items – one that dealt with unwelcomed sexual remarks/harassment and the other with sexual assault (i.e., being touched in a sexual manner without consent or against one's will) (Cronbach's $\alpha = 0.84$). The *fear of nonsexual in-school victimization* index was comprised of five items – fear of physical assault, robbery, larceny-theft, having a gun pulled, and having a

weapon other than a gun pulled (Cronbach's α = 0.80). Higher scores on these were indicative of more fear of victimization.

Based on the recommendations of scholars such as Ferraro, LaGrange, Warr, and Wilcox Rountree, parallel measures of fear of crime and perceptions of risk are utilized in this dissertation. The perceived risk questions are, thus, nearly identical to the fear measures and cover the same exact offenses. However, rather than asking about fear, students were asked about their chances of being victimized on school grounds or during school-related functions. The perceived risk items also utilized a five-point Likert response scale, but to be consistent with the question wording, responses ranged from 1 = "Very low" to 5 = "Very high." As with fear of victimization, one index was created for perceived risk of sexual victimization and the other for perceived risk of all other victimization. The *perceived risk of sexual in-school victimization* index consisted of two items – one over unwelcomed sexual remarks/harassment and the other on sexual assault (i.e., being touched in a sexual manner without consent or against one's will) (Cronbach's α = 0.89). The *perceived risk of nonsexual in-school victimization* index contained five items that cover perceived risk of physical assault, robbery, larceny-theft, having a gun pulled, and having a weapon other than a gun pulled (Cronbach's α = 0.80).

Independent Variables

Several measures of individual vulnerability and lifestyle/routine activities were used in this dissertation. See Appendix A for the precise wording of the survey questions used here. In order to address whether indicators of vulnerability increased students' fear and perceptions of risk, questions regarding students' gender and prior victimization were employed. Students were asked to identify their *gender*, which was dichotomized as simply male (coded as 0) or female

(coded as 1). To assess *age*, students were asked to provide their date of birth, which was then converted into age in years. For *ethnicity/race*, students were asked how they describe themselves out of seven possible ethnic or racial options. Responses were then dichotomized into white (coded as 0) and non-white (coded as 1). To measure *socioeconomic status*, students were asked two questions regarding the educational attainment of their mother and father. Consistent with other works (e.g., Swartz et al., 2011; Tillyer et al., 2010, 2011; Wilcox et al., 2009), the average of these two responses was used as a proxy for socioeconomic status. Specifically, students were asked to indicate how far each of their parents went in school. Responses for this measure ranged from 1 = "Completed grade school or less" to 7 = "Graduate or professional school."

To measure students' prior experience with in-school victimization during the current school year, several questions were asked that covered crimes identical to the ones used for fear of crime and perceptions of risk (see Appendix A). Paralleling the bifurcation of sexual and nonsexual fear and risk perceptions, prior in-school victimization was broken down into two separate scales. Response categories for both of these ranged from 0 = "None" to 10 = "10 or more." *Prior sexual in-school victimization* contained the mean of two items that dealt with experiencing either unwelcomed sexual remarks/harassment or sexual assault (i.e., being touched in a sexual manner without consent or against one's will) on school property or during school-related activities during the current school year (Cronbach's $\alpha = 0.86$). The other index, *prior nonsexual in-school victimization*, asked students how many times in the current school year they were attacked, robbed, had money or property stolen, had a gun pulled on them, or had a weapon other than a gun pulled on them either on school grounds or during school-related functions (Cronbach's $\alpha = 0.73$). The average of these five responses was computed and used to indicate

the other, nonsexual victimization that students experienced at school. An additional variable, *prior teasing victimization*, was used to gauge whether respondents had been teased or picked on in a negative way. This single variable was dichotomized as 0 = "No" and 1 = "Yes."

Beyond these indicators of vulnerability, multiple indicators of lifestyle/routine activities were employed to measure target attractiveness, exposure to motivated offenders, and capable guardianship. *Low self-control*, for instance, was measured by the average score of 11 items that tapped into several of the dimensions of impulsivity. More specifically, questions covered temper control, restlessness, frustration, and attention span. A four-point Likert response scale was used that ranged from 1 = "Never true" to 4 = "Always true," with higher values representing more low self-control (Cronbach's $\alpha = 0.91$). Several measures of self-reported delinquency were also used, specifically, sexual and nonsexual delinquency, as well as substance use. A five-point Likert scale was employed for each index with responses ranging from 1 = "Never" to 5 = "Daily or almost daily." To measure *sexual delinquency*, the mean of four items was computed for questions that asked students whether they had said unwelcomed sexual remarks (i.e., sexual harassment) or touched someone in a sexual manner without their consent or against their will either at school or away from school (Cronbach's $\alpha = 0.87$). *Nonsexual delinquency* was measured by a 14-item scale that asked respondents about their self-reported criminal behavior during the current school year. Questions included both property and violent offenses (with the exception of sexual offenses) that occurred both at school and outside of school. The average of these 14 offenses was calculated and used to represent student's self-reported delinquent and criminal behaviors (Cronbach's $\alpha = 0.90$). *Substance use* asked students how frequently they used tobacco, alcohol, and a variety of illegal drugs. Their responses to 10-

items were averaged to create this index that serves as another type or form of students' delinquent behaviors (Cronbach's $\alpha = 0.86$).

In addition to self-reported delinquency, students were asked questions regarding their membership in gangs, as well as the delinquency of their peers. *Gang membership* was a single item that asked students whether they consider themselves to be part of a gang. Responses for this variable included 0 = "No" and 1 = "Yes." *Delinquent peers* consisted of 17-items that measured a wide variety of delinquent and criminal behaviors committed by the respondent's good friends in the current school year. The question specifically asked how many of the respondent's closest friends engaged in the various behaviors, which included truancy, drug and alcohol use, theft, and physical assault. The responses for each of these items were dichotomized with 0 = "No" and 1 = "Yes" and then summed to create a dichotomized assessment of the total number of types of delinquent acts committed by peers (Cronbach's $\alpha = 0.91$). Respondents were also asked how easy it was to acquire certain items at school during a typically school day. This index, *access to illegal items*, was the average score of their responses for six items that included cigarettes, alcohol, several types of illegal drugs, and a gun. A four-point Likert scale was used with responses ranging from 1 = "Strongly disagree" to 4 = "Strongly agree" (Cronbach's $\alpha = 0.88$).

Parental attachment contained 24 total items that covered the strength of the relationship to parents, as well as the frequency of interactions with them. There were 12 parental attachment questions in all and each question was asked separately for the mother and father. The scores were then averaged to produce a measure of parental attachment. The five-point Likert response scale ranged from 1 = "Never" to 5 = "Always," with higher scores indicated more attachment to parents (Cronbach's $\alpha = 0.93$). *Peer attachment* was a six-item index that was designed to

measure the nature of the respondent's relationship with and friendship to close friends. Using a four-point Likert scale, the responses ranged from 1 = "Strongly disagree" to 4 = "Strongly agree." Scores were averaged to produce a measure of attachment to peers where higher scores were indicative of stronger attachment to close friends (Cronbach's $\alpha = 0.91$). The *school attachment* index contained six items that were averaged. These questions measured the student's attitudes toward and relationship with teachers, as well as the importance of education. The responses to these questions utilized a four-point Likert response scale where answers varied from 1 = "Strongly disagree" to "4 = "Strongly agree" (Cronbach's $\alpha = 0.70$). A description of the relevant items used from the RSVP survey can be found in Appendix A.

To measure students' involvement in various school activities, two separate questions were used. *School sports activities* asked students how frequently they participated in school sports other than P.E. during the school year. The item *other school activities* was utilized to determine how often students participated in other, non-sports related activities, such as band, student government, yearbook. Responses for both of these student involvement variables were out of a five-point Likert scale, with options ranging from 1 = "Never" to 5 = "Everyday." *Grade point average* was a single item that asked students to select an answer that best described their overall grade average. The reverse coded responses ranged from 1 = "F" to 5 = "A." In addition to these measures of involvement or commitment to school, a single variable, *teacher intervention*, was employed to measure what teachers do when acts of violence occur at school. Specifically, students were asked how often teachers nearby try to stop the violent acts. A five-point Likert response scale was used, which ranged from 1 = "Never" to 5 = "Always." For a list of all survey items used in this dissertation, see Appendix A.

Analytic Strategy

In order to test the various hypotheses presented in chapter four, several types of analyses will be performed. First, summary statistics will be computed in order to describe the distribution of the outcome measures (i.e., fear *and* perceived risk of sexual *and* nonsexual victimization). Second, correlations between all of the predictor and outcome variables used in the analysis will be calculated. This will provide some initial insight into the direction and strength of the associations between variables. Third, given the clustered nature of the data, multivariate linear regression will be performed in HLM. Using HLM to estimate the models is preferable since it recognizes that the distribution of students within schools is not random. In other words, HLM accounts for the non-independence and adjusts standard errors appropriately. Failure to use HLM or to account for the non-independence in other ways could yield biased standard errors (Raudenbush & Bryk, 2002).

In addition to the main models, the shadow of sexual assault will be examined by including fear and perceived risk of sexual victimization as predictors and estimating their effects on fear and perceived risk of *nonsexual* victimization. This analytic strategy has been used by other scholars, including May (2001a), to assess whether fear of sexual assault contributes to the fear of other, nonsexual types of victimization. Unlike May's work, however, this same approach will be utilized to assess the effect of *perceived risk* of sexual victimization on perceived risk of nonsexual victimization. Similar to May's work, though, this analysis will be conducted separately for male and female students. Gender differences will also be assessed with the test for the equality of regression coefficients (Clogg, Petkova, & Haritou, 1995; Paternoster, Brame, Mazerolle, & Piquero, 1998).

Finally, to gauge the extent to which indicators of vulnerability and lifestyle/routine activities are consistent across sexual and non-sexual fear and risk – thus, by extension, examining the generalizability of the "rationality" of student fear and risk – a comparison of coefficients across the different models will be provided. Though no additional statistical analyses will be conducted, by comparing the extent to which these measures are tied to vulnerability and opportunity, an assessment can be made regarding whether fear and perceived risk of sexual victimization are more or less rational than fear and risk of nonsexual victimization.

Chapter Six:

RESULTS

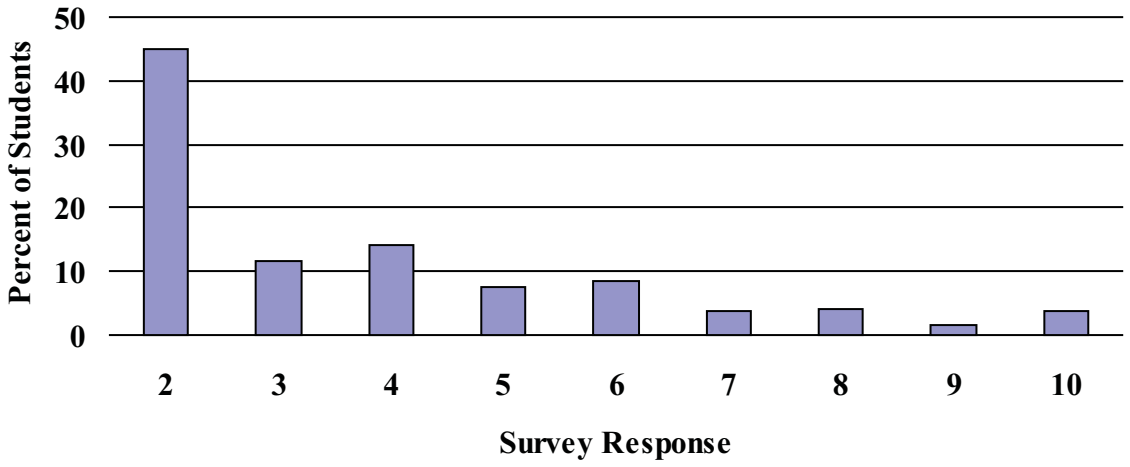
The purpose of this dissertation is to examine the effects of various individual-level indicators of vulnerability and lifestyle/routine activities on students' fear and perceived risk of school-based victimization. In this pursuit, several types of analyses are conducted. First, a brief univariate analysis of the data is provided in order to get a feel for the distribution of the demographic characteristics of the sample, as well as how many students reported some amount of fear or perceived some risk of in-school victimization. Second, results from the bivariate analysis are discussed, focusing specifically on the correlations between the various independent and control variables, as well as between the independent/control variables and dependent variables. Both the univariate and bivariate analyses are conducted in SPSS. After describing the associations between the numerous study variables, attention will be given to the main analysis – multivariate linear regression conducted in HLM –and the important results therein. A thorough discussion of the multivariate results will be provided at the end of this chapter.

UNIVARIATE ANALYSES

Fear of In-School Victimization

As demonstrated by the descriptive statistics presented in Chapter Five (e.g., see Table 5.1), the minimum and maximum values for the fear of sexual victimization index ranged from 2 to 10 ($\bar{x}$ = 3.82, SD = 2.25). A bit more detail about this distribution is presented here. A visual distribution of fear of sexual in-school victimization across the sample can be seen in Figure 6.1.

Figure 6.1: Distribution of Fear of Sexual In-School Victimization

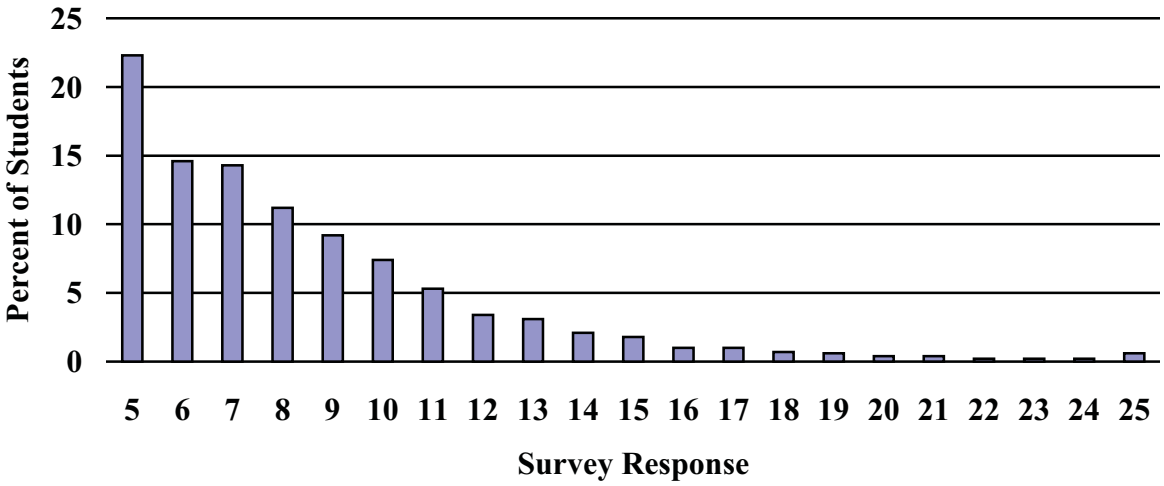


Across all students, 45% reported that they were never afraid of sexual victimization occurring at school. When examining just those 45% of students who indicated never fearing sexual victimization (i.e., those with a score of "2"), nearly 62% of these non-fearful students were male and 38% were female. Over 66% of students who reported never being afraid of sexual victimization were 15 years old or younger while almost 34% were 16 years old or older. In terms of race, over 90% of those who reported never being afraid of in-school sexual victimization were white. When looking at the fear of sexual victimization and socioeconomic status, almost 15% of the non-fearful students had parents who did not finish high school, 60% had parents who received a high school degree or GED, finished vocational/trade, or took some college classes, and over 25% of students had parents whose average attainment was either a college or advanced degree.

The remaining 55% of all surveyed students (i.e., students who scored "3" or higher), however, admitted to experiencing some degree of fear of sexual victimization, with the majority following on the lower end of the spectrum. However, almost 4% of students fell on the top end

of the distribution, reporting that they always are afraid of being sexually victimized while at school. Focusing just on these most fearful students (i.e., those who scored a "10"), 63% were female and 37% were male. Most of these very fearful students (66.5%) were aged 15 or younger and nearly 85% were white. Slightly more than 17% of students who were the most afraid of sexual in-school victimization had parents whose average educational attainment was less than a high school degree, while 63% had parents who had completed high school (or received a GED), vocational or trade school, or had taken some college-level courses. Over 19% of these very afraid students had parents who had college or advanced degrees.

Figure 6.2: Distribution of Fear of Nonsexual In-School Victimization



As indicated in Chapter Five (see Table 5.1), scores for fear of nonsexual in-school victimization ranged from 5 to 25 ($\bar{x}$ = 8.43, SD = 3.69). Figure 6.2 (above) reveals the distribution of students' fear of nonsexual victimization. Compared to fear of sexual victimization, far more students reported fear of being nonsexually victimized at school. While approximately 22% of sampled students (i.e., those who scored a "5") claimed to never experience fear of nonsexual victimization, almost 78% reported some sort of fear at school (i.e.,

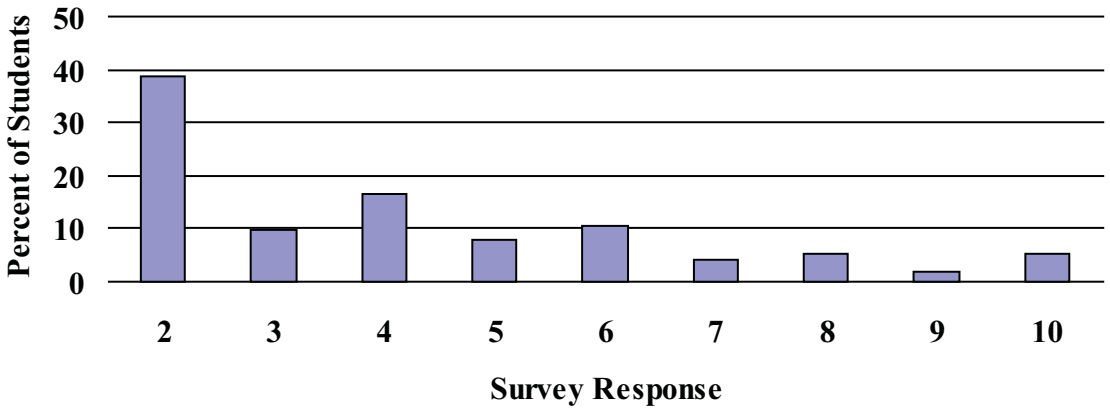
students with a score of "6" or higher). Examining just those students on the lowest end of the distribution, roughly equal percentages and male and female students indicated they were never afraid of being nonsexually victimized at school (53% were male and 47% were female). Almost 62% of students who were not afraid of nonsexual victimization were 15 years old or younger, while more than 38% were age 16 or older. The majority of those who reported never being afraid were white (88%). In terms of socioeconomic status, not quite 16% of the students not afraid of nonsexual victimization had parents whose average educational attainment was less than a high school degree. Roughly 60% had parents who completed high school, received a vocational/trade degree, or had some college credit while almost 25% had parents whose average attainment was a college or advanced degree.

Although over 78% of students indicated some sort of fear of nonsexual victimization, most of these students fell on the low to mid range of the distribution. It appears that a rather small portion of students are very afraid of being nonsexually victimized while at school. For instance, approximately half of one percent of students reported the highest degree of fear for all of the nonsexual victimizations included in this index. Not only are there few students at the top end of this distribution (i.e., those with a score of "25"), but there are less in this category compared to those at the very top end of the fear of sexual victimization distribution. Stated differently, a larger percentage of students reported extreme fear of *sexual* rather than nonsexual victimization. Among this rather tiny percentage of very fearful students, most were male (75%), aged 15 or under (61.5%), white (91%), and had parents whose average education was a degree from either high school or vocational/trade school or some college credit (64%).

Perceived Risk of In-School Victimization

Chapter Five (Table 5.1) reveals that the values of the perceived risk of sexual in-school victimization index ranged from 2 to 10 ($\bar{x}$ = 4.17, SD = 2.39). Figure 6.3 (below)

Figure 6.3: Distribution of Perceived Risk of Sexual In-School Victimization

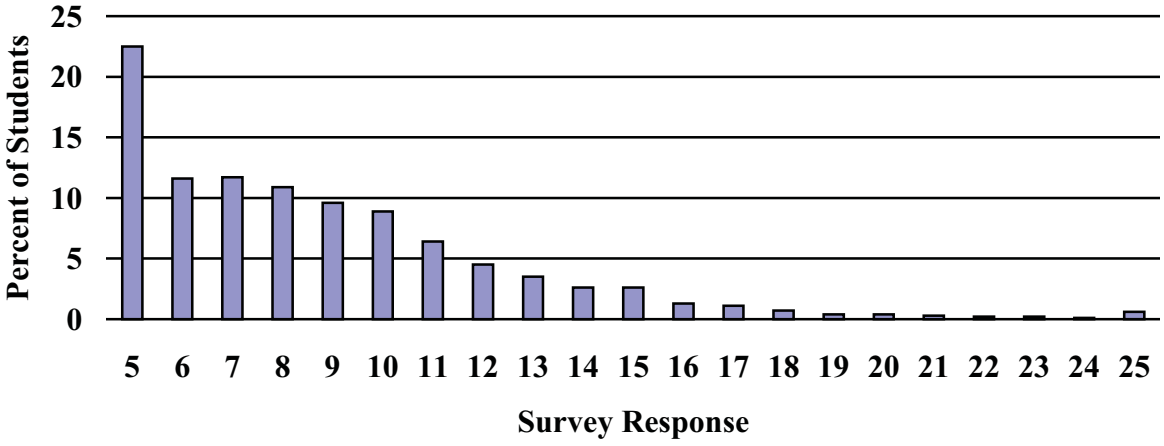


provides a visual display of this distribution. As indicated in this chart, around 39% of students reported that their chance of being sexually victimized at school was very low (i.e., those who scored "2"). Among those who perceived the lowest risk of sexual victimization, nearly 63% were male and 37% were female. Approximately 68% of these extremely low-risk students were age 15 or under and over 90% were white. In terms of the students' socioeconomic status or parental educational attainment, more than 15% of the students who perceived their risk of sexual victimization as being very low had parents without a high school degree. Nearly 60% had parents who had completed high school, obtained a degree from vocational/trade school, or had taken some college classes. The remaining 25% of those with lower risk perceptions had parents whose educational attainment included finishing college or attending graduate school.

As displayed in Figure 6.3, the remaining 61% of students were fairly spread out across the perceived risk continuum. Many of these students reported that their chance of sexual victimization was low to medium. However, over 5% of students perceived their risk as very high (i.e., they scored a "10"). Among these students with an increased perceived risk of sexual victimization, the majority was female (72%). Nearly 63% of these students were aged 15 or under while 37% were aged 16 or older. In terms of ethnicity/race, 84% of those with the highest perceived risk of sexual in-school victimization were white. Additionally, 65% of these students had parents with mid-levels of educational attainment (i.e., had a high school degree, completed trade/vocational school, or attended some college courses).

Students perceived their risk of nonsexual victimization somewhat differently than their likelihood of sexual in-school victimization. As shown in Chapter Five, this scale, as with fear of nonsexual victimization one, ranged from 5 to 25 ($\bar{x}$ = 8.71, SD = 3.71). Figure 6.4 (below) shows the distribution of perceived risk of nonsexual in-school victimization.

Figure 6.4: Distribution of Perceived Risk of Nonsexual In-School Victimization



Over 22% of students expressed a very low chance of being nonsexually victimized at school (i.e., those with a score of "5"). This, however, was fairly evenly distributed across male and female students (51.5% and 48.5%, respectively). More students aged 15 and under perceived a very low risk of nonsexual victimization compared to those aged 16 and older (65% versus 35%). As with the other distributions, more whites (88%) perceived their risk of being victimized as falling on the low end of the distribution compared to nonwhites (12%). While more than 16% of these students had parents whose average attainment was less than a high school degree, 59% had high school degrees, completed vocational/trade school, or took some college courses. The remaining 25% of students who indicated a very low perceived risk of victimization had parents who finished college or attended graduate or professional school.

Again, more students perceived their risk of victimization as low or medium, yet similar to fear of nonsexual victimization, roughly half of one percent reported their risk of nonsexual victimization as being very high (i.e., those who scored "25"). Focusing on just those with the greatest perceived risk three-quarters was male. Most of these students (i.e., over 65%) were aged 15 or younger and approximately 84% were white. Finally, in terms of average parental education (i.e., socioeconomic status), slightly more than 74% of students had parents with a high school degree, diploma from a vocational or trade school, or who had attended some college. Roughly 17% had less than a high school degree and over 9% had a college degree or attended graduate school.

Victimization and Delinquency

Before turning to the bivariate correlations, it seems noteworthy to briefly mention the prevalence of victimization and offending among the surveyed students. Across the entire

sample, 46% of students reported some sort of prior sexual victimization during the current school year with 54% reporting zero incidents. Among those students who did endure a sexual victimization, more were sexually harassed than touched in an inappropriate manner. Specifically, nearly 44% of students experienced at least one unwelcomed sexual remark while at school compared to 31% of students who reported that they were touched at least once in a sexual manner without consent or against their will. For nonsexual victimization (i.e., assault, robbery, larceny-theft, having a gun pulled, or having another weapon pulled), approximately 61% of students said they had endured at least one victimization either on the school grounds or during school-related activities. Only 39% of students reported zero incidents of nonsexual victimization during the current year. Most of the victimizations that occurred, however, involved larceny-theft or assault. Approximately 48% of students, for instance, reported having money or property stolen while 38% indicated they had been physically attacked (e.g., punched, slapped, kicked, etc) while at school or school-related activities. In terms of prior teasing, 31% of students believed they had been teased at school while 69% did not feel they had experienced any incidents of teasing. Taken as a whole, it appears that a decent amount of students experienced some sort of in-school victimization. However, no known studies, not even May's (2001a) test of the shadow of sexual assault on high school students, divided prior victimization into sexual and nonsexual. This makes it difficult to compare the school-based victimization of this sample to other, unrelated samples in the existing literature. Regardless, because such prior victimization was reported, those students should, theoretically, be more afraid and perceive greater risk of future in-school victimization.

In terms of the various types of delinquent and/or criminal behaviors, 17% of students reported participating in some sort of sexual delinquency while the vast majority of students (i.e.,

83% of those sampled) claimed not to be perpetrators of such acts. Among those who did perpetrate sexual offenses, more students reportedly said unwelcomed sexual remarks (i.e., sexual harassment) than inappropriately touched someone without their consent or against their will (12% made remarks at school and 13 % away from school compared to 6% who touched at school and 7% away from school). However, 36% of students admitted to perpetrating other, nonsexual delinquent acts in the present school year with 64% reportedly never engaging in such behaviors. Physical assault (both at school and away from school) was the crime that more students admitted to committing at least once (16% and 20%, respectively). Vandalism, however, followed assault, with 15% of students admitting to damaging or destroying public or private property during the present school year. In addition, roughly 44% of students admitted to engaging in some degree of substance use in the present school year. The most frequently used substance was alcohol (35%) and cigarettes (23%). Thus, as was the case with in-school victimization, a decent amount of students admitted to engaging in delinquent and/or criminal behavior. As was discussed in Chapter Four, having such a delinquent lifestyle should, in theory, increase those students' fear and perceptions of risk.

BIVARIATE ANALYSES

To examine the significance, direction, and magnitude of associations between the predictor (i.e., independent and control) variables, as well as between the predictors and outcome variables, several types of correlation coefficients were computed. Traditional Pearson's correlation coefficients (aka: Pearson's product-moment correlation) were calculated when scales and/or metric level variables were correlated. However, because the levels of

measurement varied across the independent and control variables, other types of correlations were necessary as well. In instances where two ordinal level measures were correlated or where an ordinal variable was correlated with a metric one, Spearman's rho (r_s) coefficients are reported. Also, when calculating correlations between two nominal or dichotomous variables, Phi (φ) was used.

However, these correlations are all interpreted in roughly the same manner (especially in terms of the strength of the correlation), thus they will appear together in the tables presented in this chapter. Correlation coefficients range from −1.00 to +1.00, with absolute values closer to ± 1.00 indicating stronger correlations. Although various cutoff points are used to determine the strength of the correlation (i.e., weak, moderate, strong), Fox, Levin, and Forde (2009) provide the following criteria: ±1.00 equals a perfect correlation, ±0.60 is strong, ±0.30 is moderate, ±0.10 is weak, and 0.00 is indicative of no correlation between two variables. While not all would agree with this correlational yardstick, these criteria are well-suited for social science research. Therefore, these standards will be utilized when interpreting the bivariate correlations discussed below.

Correlations between Predictor Variables

Examining the correlation coefficients between predictor variables is used to reveal how related or similar the variables are to one another. Very strong correlations between predictor variables can create multicollinearity, which can adversely affect the results produced. Thus, exploring the bivariate correlations between independent and control variables is one method of checking for multicollinearity. Correlations that are above ±0.90 can be indicative of this statistical problem (Tabachnick & Fidell, 2007).

Table 6.1: Bivariate Relationships between Independent Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Gender	1.00										
2. Age	-.045**	1.00									
3. Ethnicity/Race	-.012	-.004	1.00								
4. Socioeconomic Status	-.032**	-.027**	.011	1.00							
5. Prior Sexual Victimization	.197**	.001	.045**	-.032**	1.00						
6. Prior Nonsexual Victimization	-.172**	-.078**	.043**	-.048**	.383**	1.00					
7. Prior Teasing Victimization	.039**	-.103**	.041**	.026**	.162**	.214**	1.00				
8. Low Self-Control	-.050**	-.062**	.047**	-.143**	.233**	.287**	.225**	1.00			
9. Sexual Delinquency	-.192**	.010	.061**	-.018	.243**	.309**	.103**	.261**	1.00		
10. Nonsexual Delinquency	-.174**	.004	.069**	-.060**	.203**	.471**	.128**	.326**	.637**	1.00	
11. Substance Use	-.111**	.173**	-.001	-.118**	.210**	.299**	.049**	.325**	.436**	.617**	1.00
12. Gang Membership	-.094**	-.045**	.062**	-.062**	.110**	.181**	.136**	.234**	.253**	.364**	.299**
13. Delinquent Peers	-.027**	.250**	.026**	-.101**	.242**	.208**	.104**	.307**	.290**	.349**	.452**
14. Access to Illegal Items	.024**	.244**	.023**	.021*	.243**	.190**	.086**	.185**	.170**	.199**	.276**
15. Parental Attachment	-.019**	-.122**	-.114**	.144**	-.175**	-.136**	-.097**	-.278**	-.147**	-.185**	-.276**
16. Peer Attachment	.268**	-.055**	-.053**	.044**	-.116**	-.175**	-.019*	-.065**	-.119**	-.159**	-.110**
17. School Attachment	.199*	-.120**	-.048**	.086**	.018*	-.235**	-.069**	-.338**	-.229**	-.294**	-.355**
18. Sports Activities	-.036**	-.040**	-.007	.151**	.038**	.008	-.056**	-.071**	.020*	-.044**	-.015
19. Other Activities	.144**	-.105**	-.014	.208**	.064**	.018*	.121**	-.089**	-.050**	-.069**	-.126**
20. Grade Point Average	.157**	-.076**	-.107**	.301**	-.009	-.135**	-.015	-.278**	-.123**	-.216**	-.268**
21. Teacher Intervention	.117**	-.056**	-.068**	.033**	-.110**	-.142**	-.026**	-.102**	-.118**	-.142**	-.141**

* Correlation is significant at the 0.05 level (two-tailed)
** Correlation is significant at the 0.01 level (two-tailed)

Table 6.1: Bivariate Relationships between Independent Variables (Continued)

	12	13	14	15	16	17	18	19	20	21
1. Gender										
2. Age										
3. Ethnicity/Race										
4. Socioeconomic Status										
5. Prior Sexual Victimization										
6. Prior Nonsexual Victimization										
7. Prior Teasing Victimization										
8. Low Self-Control										
9. Sexual Delinquency										
10. Nonsexual Delinquency										
11. Substance Use										
12. Gang Membership	1.00									
13. Delinquent Peers	.214**	1.00								
14. Access to Illegal Items	.127**	.344**	1.00							
15. Parental Attachment	-.149**	-.275**	-.190**	1.00						
16. Peer Attachment	-.084**	-.096**	-.001	.188**	1.00					
17. School Attachment	-.193**	-.293**	-.232**	.382**	.260**	1.00				
18. Sports Activities	-.023*	-.027**	.028**	.157**	.069**	.122**	1.00			
19. Other Activities	-.036**	-.100**	-.006	.095**	.102**	.175**	.106**	1.00		
20. Grade Point Average	-.155**	-.200**	-.056**	.213**	.146**	.318**	.201**	.273**	1.00	
21. Teacher Intervention	-.129**	-.099**	-.143**	.160**	.155**	.268**	.028**	.042**	.126**	1.00

* Correlation is significant at the 0.05 level (two-tailed)
** Correlation is significant at the 0.01 level (two-tailed)

Looking at the correlation matrix (Table 6.1), it is clear that many significant associations exist between the predictor variables. These correlations are mostly significant at the .01 level, with a handful reaching significance at the .05 level. While the bulk of these correlations are considered weak by the Fox et al. (2009) standards, a few of these reveal moderate or strong associations. Thus, those deemed to be at least moderate in strength (i.e., ±0.30 or higher) are discussed. Regardless of strength, however, most of the correlations were at least in the theoretically correct or expected direction.

When examining the demographic characteristics, only the correlation between socioeconomic status and grade point average reached the "moderate" threshold ($r_s = .301$, $p < .01$). A handful of other correlations did fall between the weak and moderate range (see Table 6.2). Unsurprisingly, there was a positive and moderate correlation between sexual and nonsexual prior victimization ($r = .383$, $p < .01$). Prior nonsexual victimization, on the other hand, was positively correlated with both self-reported sexual ($r = .309$, $p < .01$) and nonsexual delinquency ($r = .471$, $p < .01$). In addition, the correlation between prior nonsexual victimization and substance use tinkered on the moderate border ($r = .299$, $p < .01$).

Many moderate or strong associations were found between the various forms of delinquent lifestyles. For instance, low self-control was moderately associated with several scales – nonsexual delinquency ($r = .326$, $p < .01$), substance use ($r = .325$, $p < .01$), delinquent peers ($r = .307$, $p < .01$), and school attachment ($r = -.338$, $p < .01$). Self-reported sexual delinquency was strongly correlated with self-reported nonsexual delinquency ($r = .637$, $p < .01$) and moderately associated with substance use ($r = .436$, $p < .01$). The correlation between nonsexual delinquency and substance use was strong ($r = .617$, $p < .01$) and the one between nonsexual delinquency and delinquent peers was moderate ($r = .349$, $p < .01$). Nonsexual

delinquency was also moderately correlated with gang membership ($r = .364$, $p < .01$). Students' substance use was positively correlated with delinquent peers ($r = .452$, $p < .01$), but negatively correlated with attachment to schools ($r = -.355$, $p < .01$). The correlation between substance use and gang membership was barely moderate ($r = .299$, $p < .01$). Additionally, having delinquent peers and believing that illegal items were easily accessible at school were positively correlated ($r = .344$, $p < .01$).

In general, most of the correlations involving the forms of attachment were fairly weak. A couple, however, were moderate in strength. For instance, attachment to parents and to the school were positively correlated ($r = .382$, $p < .01$). Attachment to school, however, was also positively associated with students' grade point average ($r = .318$, $p < .01$). And as previously mentioned, school attachment was negatively related to low self-control and substance use. Taken together, the low to moderate correlations between the predictor variables suggests that multicollinearity is not a threat to the data or analyses. Nevertheless, multicollinearity diagnostics will be explored further in the multivariate analysis.

Correlations between Predictor and Outcome Variables

Compared to the correlations between predictor variables, the correlations between predictor and outcome variables are substantively more relevant and important in terms of understanding the fear and perceived risk of the sampled students. Examining these correlation coefficients can provide some initial insight into the direction and strength of the association between two variables. As demonstrated in Table 6.2, the vast majority of independent variables were significantly associated with the four dependent variables. In fact, among the 84 correlations provided in Table 6.2, 73 of them reached statistical significance, all of which

Table 6.2: Bivariate Relationships between Independent and Dependent Variables

Independent Variables	FEAR		PERCEIVED RISK	
	Sexual In-School Victimization	Nonsexual In-School Victimization	Sexual In-School Victimization	Nonsexual In-School Victimization
Gender	.250**	.002	.259**	.004
Age	.002	-.068**	.035**	-.011
Ethnicity/Race	.035**	.005	.031**	-.006
Socioeconomic Status	-.033**	-.027**	-.016	-.027**
Prior Sexual Victimization	.702**	.254**	.720**	.291**
Prior Nonsexual Victimization	.267**	.507**	.246**	.517**
Prior Teasing Victimization	.174**	.234**	.155**	.210**
Low Self-Control	.221**	.251**	.216**	.264**
Sexual Delinquency	.191**	.162**	.188**	.174**
Nonsexual Delinquency	.151**	.249**	.135**	.257**
Substance Use	.165**	.161**	.168**	.190**
Gang Member	.104**	.159**	.093**	.151**
Delinquent Peers	.206**	.153**	.223**	.207**
Access to Illegal Items	.251**	.232**	.304**	.306**
Parental Attachment	-.154**	-.095**	-.168**	-.142**
Peer Attachment	.016	-.098**	.034**	-.089**
School Attachment	-.099**	-.152**	-.099**	-.181**
Sports Activities	.040**	-.007	.027**	-.014
Other Activities	.064**	.061**	.075**	.048**
Grade Point Average	.007	-.052**	.024**	-.040**
Teacher Intervention	-.110**	-.126**	-.097**	-.136**

* Correlation is significant at the 0.05 level (two-tailed)
** Correlation is significant at the 0.01 level (two-tailed)

occurred at the .01 level. Yet, as with the correlations between predictor variables, most of these correlations are weak by conventional standards.

When looking at the fear of sexual victimization column, it is clear that most relationships are significant. In fact, only age, peer attachment, and grade point average are not significantly correlated with fear of sexual victimization. Most of the associations are in the predicted direction, too. For instance, indicators such as prior victimization and types of delinquent lifestyle are positively associated with fear of sexual victimization while two of the forms of attachment are inversely related. Among the independent variables present in Table 6.2, the strongest correlation reported for fear of sexual in-school victimization was prior sexual victimization ($r = .702$, $p < .01$). This was the only strongly correlated variable with sexual victimization, most of the others fell between Fox et al.'s (2009) weak and moderate cutoff points.

In terms of fear of nonsexual victimization, similar associations were found. Again, only three correlations were not significant – gender, ethnicity/race, and participation in school sports. Also, as with fear of sexual victimization, many of these correlations are in the theoretically correct direction. For example, significant positive associations were found between fear of nonsexual victimization and all types of prior victimization and delinquent lifestyles. Significant inverse associations were seen between fear of nonsexual victimization and all three forms of attachment. The strongest correlation with this outcome measure was with nonsexual prior victimization ($r = .507$, $p < .01$). While this particular correlation falls close to strong on the continuum, most of the other correlations reported with fear of nonsexual victimization are weak to moderate in magnitude.

In all, the correlation coefficients for sexual and nonsexual perceptions of risk mirror those for sexual and nonsexual fear of victimization (see Table 6.2). Specifically, most of the coefficients are statistically significant at the .01 level, but the majority of these are rather weak in magnitude. The only non-significant correlation for perceived risk of sexual victimization was found with socioeconomic status. For nonsexual perceived risk, however, insignificant correlations were found with the following predictor variables – gender, age, ethnicity/race, and involvement in sports at school.

Also, the correlation coefficients for risk perceptions and indicators of lifestyle/routine activities operate similar to the ones discussed above with fear of in-school victimization. For instance, past experience with victimization and measures of delinquent lifestyle (e.g., self-reported delinquency, substance use, peer delinquency, and gang membership) are directly or positively associated with both perceived risk of sexual and nonsexual in-school victimization. Perceived risk of sexual victimization was strongly correlated with prior sexual victimization ($r = .720$, $p < .01$) whereas perceived risk of nonsexual victimization was moderate to strongly correlated with prior nonsexual victimization ($r = .517$, $p < .01$). Additionally both types of perceived risk (sexual and nonsexual) were moderately and positively correlated with students' belief that illegal items were easy to obtain at school ($r = .304$, $p < .01$ and $r = 3.06$, $p < .01$, respectively). As displayed in Table 6.2, most other correlations were either weak or moderate in strength. Though studying correlations can shed some light on the underlying nature of associations between variables, a simple correlation ignores the possible effects that other predictor variables have on that correlation. Thus, their utility, particularly compared to multivariate analyses, is rather limited. The remainder of this chapter will focus on the primary analysis – multivariate linear regression.

MULTIVARIATE ANALYSES

Before discussing the multivariate analyses conducted in this dissertation, it is necessary to mention that multicollinearity, or extreme correlation between independent variables, was not an issue. Not only did none of the bivariate correlation coefficients reach the .90 threshold used by many scholars to indicate multicollinearity (Tabachnick & Fidell, 2007), but diagnostic statistics also verified that multicollinearity was not a problem with these data. Specifically, both tolerance and variance inflation factor (VIF) statistics were computed in SPSS and their values are provided in Table 6.3. Although cutoff points vary across the literature, typically, when tolerance values are below .20 or .10 and VIF values exceed five or ten, then multicollinearity is likely. However, as indicated in Table 6.3, the lowest tolerance value reported was .405 and the highest VIF value presented was 2.469, both of which fall safely within the multicollinearity-free range. Thus, across all four dependent variables, none of the tolerance or VIF statistics suggest that multicollinearity exists between predictors.

To test the specific hypotheses proposed in this dissertation, multivariate regression was conducted using HLM-6 software. Although more frequently used for analyzing the simultaneous effects of individual- and contextual-level factors, HLM is employed here because of the clustered nature of the data. More specifically, because students are non-randomly nested within the various schools, it is necessary to utilize software that can account for the correlated errors. Unlike programs such as SPSS, HLM-6 can recognize the non-random clustering of individuals within schools and adjust the standard errors appropriately. If SPSS was used to run the linear regression models presented here, it could produce biased standard errors and

Table 6.3: Tolerance and Variance Inflation Factor (VIF) Statistics

Independent Variables	FEAR				PERCEIVED RISK			
	Sexual In-School Victimization		Nonsexual In-School Victimization		Sexual In-School Victimization		Nonsexual In-School Victimization	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
Gender	.764	1.309	.764	1.309	.763	1.310	.764	1.309
Age	.808	1.238	.807	1.239	.808	1.238	.808	1.238
Ethnicity/Race	.962	1.039	.962	1.039	.962	1.039	.962	1.039
Socioeconomic Status	.858	1.166	.858	1.165	.858	1.166	.858	1.166
Prior Sexual Victimization	.718	1.392	.720	1.389	.719	1.392	.720	1.388
Prior Nonsexual Victimization	.641	1.560	.644	1.554	.642	1.557	.647	1.546
Prior Teasing Victimization	.882	1.134	.882	1.134	.882	1.133	.883	1.133
Low Self-Control	.699	1.431	.700	1.429	.699	1.430	.698	1.433
Sexual Delinquency	.597	1.675	.601	1.665	.596	1.679	.602	1.662
Nonsexual Delinquency	.406	2.466	.407	2.458	.405	2.469	.410	2.439
Substance Use	.505	1.981	.507	1.974	.506	1.977	.510	1.962
Gang Member	.830	1.206	.830	1.205	.829	1.206	.827	1.209
Delinquent Peers	.642	1.559	.642	1.559	.642	1.558	.641	1.560
Access to Illegal Items	.772	1.296	.772	1.296	.772	1.295	.773	1.294
Parental Attachment	.735	1.360	.736	1.360	.736	1.359	.734	1.362
Peer Attachment	.835	1.197	.836	1.196	.835	1.198	.835	1.197
School Attachment	.653	1.532	.653	1.532	.653	1.531	.653	1.531
Sports Activities	.914	1.094	.914	1.094	.914	1.094	.914	1.094
Other Activities	.876	1.141	.877	1.140	.876	1.142	.875	1.142
Grade Point Average	.708	1.412	.709	1.410	.710	1.409	.710	1.409
Teacher Intervention	.876	1.142	.877	1.140	.876	1.141	.877	1.141

erroneous results (Raudenbush & Bryk, 2002). However, by utilizing HLM, the dual level error structure can be specified, which allows for more accurate results.

The main models presented next estimate the effects of various indicators of vulnerability and lifestyle/routine activities on two types of fear (i.e., sexual and nonsexual in-school victimization) and two types of perceptions of risk (i.e., sexual and nonsexual in-school victimization). Only individual-level predictors were included when estimating the models. Before any models were run, however, variables were grand mean centered and robust standard errors estimated. The HLM results for the four main models can been seen in Tables 6.4 through 6.5 while Tables 6.6 and 6.8 will be used to discuss the shadow of sexual assault hypothesis.

It is important to note that although the sample size of the pooled data was 12,900 person-units, because of missing data the number of records was reduced to roughly 10,000. Missing information on socioeconomic status, for example, was responsible for over 1,000 of these lost cases. This will be discussed further in the next chapter on the limitations of the dissertation, at which point a brief description of the cases lost due to socioeconomic status will be provided. Also, during that discussion, a few findings will be presented from additional models run without socioeconomic status as a predictor variable. By in large, though, the deletion of socioeconomic status from the models did not change the key findings presented in this dissertation.

Fear of Sexual In-School Victimization

The variance component for this first model was significant ($u_0 = 0.011$, $SD = 0.105$, $\chi^2 = 164.167$, $p < .01$), which indicates that after controlling for the various individual-level independent variables, fear of sexual victimization still varies across the schools.

Table 6.4: Hierarchical Linear Models of Fear of Sexual and Nonsexual In-School Victimization

	Fear of Sexual In-School Victimization			Fear of Nonsexual In-School Victimization		
	Coefficient	SE		Coefficient	SE	
Individual-Level Fixed Effects						
Intercept	3.804**	0.019		8.445**	0.046	
Gender	0.631**	0.043		0.627**	0.069	
Age	-0.012	0.014		-0.116**	0.038	
Ethnicity/Race	0.020	0.065		-0.335**	0.123	
Socioeconomic Status	-0.008	0.011		-0.003	0.021	
Prior Sexual Victimization	0.491**	0.008		0.006	0.013	
Prior Nonsexual Victimization	0.003	0.024		1.308**	0.060	
Prior Teasing Victimization	0.217**	0.039		0.781**	0.082	
Low Self-Control	0.145**	0.032		0.433**	0.067	
Sexual Delinquency	0.154**	0.041		0.002	0.086	
Nonsexual Delinquency	-0.253*	0.132		-0.367	0.264	
Substance Use	0.044	0.053		-0.128	0.119	
Gang Membership	-0.007	0.090		0.148	0.173	
Delinquent Peers	-0.027	0.085		0.017	0.165	
Access to Illegal Items	0.229**	0.029		0.654**	0.057	
Parental Attachment	-0.008	0.028		0.088	0.058	
Peer Attachment	-0.075*	0.034		-0.222**	0.067	
School Attachment	0.017	0.037		-0.018	0.075	
School Sports Activities	0.032**	0.010		-0.017	0.021	
Other School Activities	0.002	0.013		0.013	0.023	
Grade Point Average	0.020	0.022		0.024	0.045	
Teacher Intervention	-0.088**	0.023		-0.175**	0.045	
Random Effects	Variance Component	SD	Chi-Square	Variance Component	SD	Chi-Square
Intercept	0.011**	0.105	164.167	0.107**	0.326	233.361
Level-One Error	2.252	1.501		8.496	2.915	

* Correlation is significant at the 0.05 level (two-tailed)
** Correlation is significant at the 0.01 level (two-tailed)

The results presented in Table 6.4 reveal that several of the indicators of vulnerability and lifestyle/routine activities significantly predict fear of sexual in-school victimization. Consistent with a great deal of the school-based literature, female students reported more fear of sexual victimization than their male counterparts. However, unlike the findings from many prior studies, other demographic characteristics did not significantly influence this type of fear. Specifically, age, ethnicity/race, and socioeconomic status did not significantly predict fear of sexual victimization at school. The literature presented in Chapter Four showed that prior victimization almost always increases fear of future victimization; however, the results presented here suggest that this finding may vary depending upon the *type* of previous victimization. For instance, both prior sexual victimization and prior teasing increased fear of sexual victimization, yet the relationship between prior nonsexual victimization and fear of sexual victimization at school was non-significant.

Many of the indicators of lifestyle/routine activities significantly predicted fear of sexual victimization. Students with lower self-control, for example, were more afraid of being sexually victimized than students with higher self-control. As with prior victimization, however, the type of self-reported delinquent behavior mattered when trying to predict fear of sexual victimization at school. While students who more frequently sexually harassed or inappropriately touched others were more afraid of being sexually victimized, students who had engaged in more nonsexual delinquent acts were less afraid of such in-school victimization. Several of the other indicators of delinquent lifestyle, however, did not significantly predict fear of sexual in-school victimization. Specifically, substance use, gang membership, and peer delinquency had non-significant effects on fear of sexual in-school victimization. However, the more students agreed

that illegal items (e.g., drugs, alcohol, and/or a gun) were easily accessible at school, they more they feared sexual victimization.

Out of the three different measures of attachment (parental, peer, and school), only peer attachment was significantly related to fear of sexual victimization. Consistent with the literature, students who were more attached to their peers expressed lower fear than those with less attachment. In terms of involvement in school activities, students who participated more in school sports were more fearful of sexual in-school victimization than those who participated less or not at all. Other forms of attachment, however, did not have a significant effect on students' fear. When examining teachers' guardianship, students who viewed them as intervening more frequently during violent situations reported less fear than those who thought teachers were less likely to intervene.

Fear of Nonsexual In-School Victimization

As with fear of sexual victimization, the results for students' fear of nonsexual in-school victimization are listed in Table 6.4. The variance component for this model was significant (u_0 = 0.107, *SD* = 0.326, χ^2 = 233.361, p < .01), indicating the presence of cross-school variation in fear of nonsexual victimization after controlling for the indicators of vulnerability and lifestyle/routine activities. Gender was once again significant, with female students reporting more fear of nonsexual victimization than male students. However, unlike the results for fear of sexual victimization, several of the other demographic variables significantly predicted fear of nonsexual in-school victimization. Younger students, for instance, were more afraid of this type of victimization than their older counterparts. Similarly, non-white students reported more fear of nonsexual victimization than white students. Socioeconomic status, however, remained

insignificant in this model, too. Unlike with fear of sexual victimization at school, prior sexual victimization did not have a significant effect on fear of *nonsexual* victimization. However, prior nonsexual victimization and prior teasing both increased students' fear of being nonsexually victimized while at school.

In addition to these indicators of vulnerability, a handful of indicators of lifestyle/routine activities predicted fear of nonsexual in-school victimization. Students with lower self-control were more afraid of nonsexual victimization. In terms of exposure to motivated offenders, students who increasingly perceived easy access to illegal items at school expressed more fear of nonsexual victimization than those who perceived less access. The measures of self-reported delinquency, substance use, gang membership, and associating with delinquent peers did not significantly affect fear in this model.

Attachment to peers lowered fear of nonsexual in-school victimization among students while parental and school attachment did not have an effect. The measures of school involvement (i.e., participation in school sports or other school-related activities) and school commitment (i.e., grade point average) did not significantly predict fear of nonsexual victimization. Students' perception about the likelihood that teachers would intervene in violent or dangerous situations, however, was negatively related to fear of in-school, nonsexual victimization.

Perceived Risk of Sexual In-School Victimization

Turning to students' perceived risk (see Table 6.5), the model once again showed that there is significant variation in students' perceived risk of sexual victimization across the schools ($u_0 = 0.021$, $SD = 0.146$, $\chi^2 = 215.929$, $p < .01$) even after the predictor variables were entered

Table 6.5: Hierarchical Linear Models of Perceived Risk of Sexual and Nonsexual In-School Victimization

	Perceived Risk of Sexual In-School Victimization			Perceived Risk of Nonsexual In-School Victimization		
	Coefficient	SE		Coefficient	SE	
Individual-Level Fixed Effects						
Intercept	4.163**	0.022		8.749**	0.047	
Gender	0.644**	0.040		0.574**	0.075	
Age	-0.001	0.017		-0.066*	0.034	
Ethnicity/Race	0.020	0.077		-0.374**	0.135	
Socioeconomic Status	0.014	0.013		0.013	0.021	
Prior Sexual Victimization	0.533**	0.008		0.039**	0.015	
Prior Nonsexual Victimization	-0.051*	0.024		1.288**	0.048	
Prior Teasing Victimization	0.153**	0.045		0.601**	0.075	
Low Self-Control	0.175**	0.034		0.425**	0.061	
Sexual Delinquency	0.203**	0.043		-0.074	0.083	
Nonsexual Delinquency	-0.406**	0.122		-0.318	0.259	
Substance Use	0.016	0.059		-0.138	0.099	
Gang Membership	-0.121	0.098		-0.294	0.167	
Delinquent Peers	0.137	0.084		0.472**	0.166	
Access to Illegal Items	0.392**	0.026		0.914**	0.060	
Parental Attachment	-0.407	0.027		-0.020	0.055	
Peer Attachment	-0.061*	0.030		-0.226**	0.064	
School Attachment	0.019	0.037		-0.082	0.070	
School Sports Activities	0.007	0.013		-0.016	0.022	
Other School Activities	0.012	0.013		0.020	0.025	
Grade Point Average	0.073**	0.027		0.091*	0.046	
Teacher Intervention	-0.021	0.022		-0.092**	0.039	
Random Effects	Variance Component	SD	Chi-Square	Variance Component	SD	Chi-Square
Intercept	0.021**	0.146	215.929	0.124**	0.353	271.491
Level-One Error	2.415	1.554		8.454	2.908	

* Correlation is significant at the 0.05 level (two-tailed)
** Correlation is significant at the 0.01 level (two-tailed)

into the model. When looking at the effects of indicators of vulnerability, female students perceived more risk of sexual in-school victimization than male students. However, as was the case with fear of sexual victimization, none of the other measures of demographic characteristics significantly affected students' perceptions of risk of sexual victimization. While prior sexual victimization and prior teasing each increased students' perceived risk, students who had experienced more nonsexual victimization were *less* likely to perceive risk of sexual in-school victimization.

Additionally, several of the indicators of lifestyle/routine activities significantly predicted students' perceptions of risk of sexual victimization. As with the fear models presented above, low self-control increased students' risk perceptions. Both types of self-reported delinquency also mattered when predicting perceived risk of sexual victimization. While engaging in more delinquent sexual acts (i.e., sexually harassing or inappropriately touching others) increased students' perceived risk, students who participated in more nonsexual delinquent behaviors (e.g., robbery, larceny-theft, assault, etc) perceived less risk of sexual in-school victimization. Mimicking the fear of sexual victimization results, students' perceived risk of being sexually victimized at school was not significantly affected by substance use, gang membership, or delinquent peers. Also consistent with the previously mentioned findings, students who believed illegal items were fairly easy to obtain at school perceived their risk of being sexually victimized as higher than those who thought access to illegal items was more limited.

As before, students with stronger attachment to friends reported lower perceived risk of sexual victimization at school than those with weaker peer attachments. Although school attachment was insignificantly related to students' perceived risk of sexual in-school victimization, attachment to parents approached significance for the first time ($p = .07$) and the

coefficient was in the predicted negative direction. Also, although neither of the school involvement measures significantly predicted risk of sexual victimization, grade point average, which is a measure of school commitment, had a positive effect on perceived risk. Students with higher grade averages perceived *greater* risk of sexual victimization at school than students with lower grade point averages. Finally and different from the fear of victimization models, perception of teacher willingness to intervene during violent situations did not have a significant impact on students' risk perceptions for sexual in-school victimization.

Perceived Risk of Nonsexual In-School Victimization

As seen in Table 6.5, the variance component for perceived risk of nonsexual victimization model was significant ($u_0 = 0.124$, $SD = 0.353$, $\chi^2 = 271.491$, $p < .01$), which once again indicates that cross-school variation in the outcome measure exists after controlling for the independent variables. As with all of the models presented thus far, female students perceived more risk of being nonsexually victimized at school than their male counterparts. Paralleling the findings for fear of nonsexual in-school victimization, younger students and ethnic minorities perceived a greater risk of nonsexual victimization at school than older and white students. Socioeconomic status, however, was non-significant in this model as well. All three forms of prior victimization significantly predicted perceived risk of nonsexual victimization. Students experiencing higher levels of prior sexual, nonsexual, and teasing victimization during the current school year perceived a greater risk of nonsexual in-school victimization. This effect, though, was particularly strong for prior nonsexual victimization.

Consistent with the other hierarchical linear models, students with lower self-control perceived more risk of being nonsexually victimized at school than those with higher self-

control. Self-reported delinquency (both sexual and nonsexual) and substance use were not significantly related to perceived risk of nonsexual in-school victimization. Gang membership, although technically non-significant, approached significance for the first time ($p = .078$), but operated in the opposite direction than what was hypothesized (i.e., the coefficient was negative rather than positive). Also unique to this model, delinquent peers exhibited a significant effect on perceived risk of nonsexual victimization. The reported number of delinquent friends was associated with greater perceived risk of nonsexual victimization. Also, as perceptions of access to illegal items increased perceived risk of being nonsexually victimized increased.

Of the three measures of attachment to conventional others, only peer attachment was a significant predictor of perceived risk of nonsexual in-school victimization. Once again, this relationship was negative, indicating that students with stronger peer attachments perceived less risk of nonsexual victimization at school than those with weaker attachments to peers. Both measures of school involvement were not significantly related to perceived risk in this model. However, as with perceived risk of sexual victimization, students with higher grade point averages perceived the likelihood of being nonsexually victimized at school as higher than students with lower GPAs. Perception that teachers intervene during dangerous situations was negatively associated with perceived risk of nonsexual in-school victimization.

Shadow of Sexual Assault Hypothesis

To examine the shadow effect, fear and perceived risk of sexual victimization were each entered separately as predictor variables in additional models of non-sexual victimization. In doing so, it became possible to identify whether fear of sexual victimization predicts fear of nonsexual victimization and, similarly, whether perceived risk of sexual victimization is capable

Table 6.6: Hierarchical Linear Models of Fear and Perceived Risk of Nonsexual Victimization (Shadow Model)

	Fear of Nonsexual In-School Victimization			Perceived Risk of Nonsexual In-School Victimization		
	Coefficient	SE		Coefficient	SE	
Individual-Level Fixed Effects						
Intercept	8.459**	0.039		8.75**	0.041	
Fear of Sexual Victimization	0.969**	0.027		--	--	
Perceived Risk of Sexual Victimization	--	--		0.946**	0.022	
Gender	0.013	0.063		-0.037	0.072	
Age	-0.105**	0.033		-0.061*	0.029	
Ethnicity/Race	-0.354**	0.103		-0.401**	0.103	
Socioeconomic Status	0.003	0.019		-0.002	0.018	
Prior Sexual Victimization	-0.470**	0.018		-0.466**	0.019	
Prior Nonsexual Victimization	1.302**	0.051		1.331**	0.042	
Prior Teasing Victimization	0.571**	0.071		0.455**	0.067	
Low Self-Control	0.289**	0.054		0.263**	0.053	
Sexual Delinquency	-0.140	0.088		-0.259**	0.076	
Nonsexual Delinquency	-0.119	0.201		0.046	0.205	
Substance Use	-0.172	0.101		-0.159	0.087	
Gang Membership	0.150	0.167		-0.169	0.163	
Delinquent Peers	0.035	0.133		0.357**	0.142	
Access to Illegal Items	0.438**	0.041		0.539**	0.046	
Parental Attachment	0.101*	0.050		0.024	0.046	
Peer Attachment	-0.150**	0.055		-0.170**	0.056	
School Attachment	-0.034	0.062		-0.102	0.061	
School Sports Activities	-0.050**	0.020		-0.024	0.018	
Other School Activities	0.012	0.019		0.008	0.019	
Grade Point Average	-0.001	0.035		0.021	0.036	
Teacher Intervention	-0.089**	0.037		-0.075*	0.035	
Random Effects	Variance Component	SD	Chi-Square	Variance Component	SD	Chi-Square
Intercept	0.069**	0.264	220.725	0.088**	0.297	254.996
Level-One Error	6.387	2.527		6.304	2.511	

* Correlation is significant at the 0.05 level (two-tailed)
** Correlation is significant at the 0.01 level (two-tailed)

of predicting perceived risk of nonsexual victimization. As presented in Table 6.6, when fear of sexual victimization was treated as an independent variable, a significant positive relationship emerged with fear of nonsexual victimization. Students with greater fear of sexual victimization had greater fear of nonsexual victimization. This relationship was one of the strongest in the model, only the relationship between prior nonsexual victimization and fear of nonsexual victimization was stronger. More importantly, however, with fear of sexual victimization as a predictor, gender had a non-significant effect on fear of nonsexual in-school victimization. In addition to this change, three other predictors operated differently once fear of sexual victimization was entered as a predictor variable. These can be seen when comparing the coefficients in this fear of nonsexual model from Table 6.6 to the ones presented earlier in Table 6.4. For instance, prior sexual victimization, parental attachment, and participation in school sports all became significant once fear of sexual victimization was included as an independent variable. All other effects retained their original significance though some of the effects of level of significance changed slightly.

A similar model was run for the perceived risk items and results are presented in Table 6.6. Perceived risk of sexual victimization was treated as an independent measure and entered into the model. In doing so, a significant positive effect emerged between the new predictor and outcome measure (i.e., perceived risk of nonsexual victimization). Students who perceived their risk of sexual victimization as high also perceived their risk of nonsexual victimization as great. Moreover, this effect was the second strongest in the model, trailing only the one between prior nonsexual victimization and perceived risk of nonsexual victimization. As with the fear model, the inclusion of perceived risk of sexual victimization rendered gender not significant. Comparing these results in Table 6.6 to the ones in Table 6.5, the treatment of perceived risk of

sexual victimization as a predictor also altered the significance of two variables – sexual delinquency and grade point average. It transformed the effect of sexual delinquency on perceived risk of nonsexual victimization from non-significant to significant and negative. In this model, students who engaged in more acts of sexual delinquency (i.e., verbal sexual harassment or physical inappropriate and unwanted touching) perceived *less* risk of being nonsexually victimized while at school. Also, although the initial relationship between grade point average was significant and positive, in the model discussed here, the effect was not statistically significant. The other effects not specifically mentioned here retained their original significance.

In addition to these two models, gender-specific models were also estimated to help further unravel the effect of shadow of sexual assault on fear and risk perceptions among students. Table 6.7 shows the hierarchical linear regression models for fear of nonsexual victimization separated by gender. For both male and female students, once fear of sexual assault was entered into the model as a predictor it had a strong significant effect on fear of nonsexual victimization. Students who were more afraid of sexual victimization were also more fearful of nonsexual victimization. For both genders, age had a significant effect on fear of nonsexual victimization, though this effect was more significant for female students. Ethnicity/race had significant negative effect for female but not male students. For both male and female students, prior sexual victimization had a negative effect on fear while prior nonsexual victimization and teasing victimization positively predicted fear of nonsexual victimization.

Although low self-control had a positive effect for all students, for males only a significant negative relationship was found between sexual delinquency and fear of nonsexual

Table 6.7: Hierarchical Linear Models of Fear of Nonsexual Victimization by Gender (Shadow Model)

	Model A: Male Students		Model B: Female Students		Test of Equality of Regression Coefficients
	Coefficient	SE	Coefficient	SE	Z Score
Individual-Level Fixed Effects					
Intercept	8.455**	0.052	8.453**	0.046	0.029
Fear of Sexual Victimization	1.011**	0.049	0.946**	0.034	1.090
Age	-0.083*	0.042	-0.121**	0.040	0.655
Ethnicity/Race	-0.290	0.175	-0.410**	0.140	0.535
Socioeconomic Status	0.047	0.026	-0.028	0.027	2.001*
Prior Sexual Victimization	-0.455**	0.037	-0.470**	0.021	0.353
Prior Nonsexual Victimization	1.267**	0.072	1.336**	0.060	-0.736
Prior Teasing Victimization	0.755**	0.100	0.422**	0.088	2.500**
Low Self-Control	0.283**	0.090	0.297**	0.070	-0.123
Sexual Delinquency	-0.234*	0.098	-0.027	0.148	-1.166
Nonsexual Delinquency	-0.154	0.245	-0.065	0.318	-0.222
Substance Use	-0.042	0.140	-0.388*	0.135	1.779*
Gang Membership	-0.089	0.220	0.516*	0.247	-1.829*
Delinquent Peers	0.063	0.218	0.052	0.188	0.038
Access to Illegal Items	0.425**	0.066	0.454**	0.049	-0.353
Parental Attachment	0.109	0.070	0.098	0.062	0.118
Peer Attachment	-0.222**	0.076	-0.025	0.076	-1.833*
School Attachment	-0.021	0.096	-0.058	0.085	0.289
School Sports Activities	-0.032	0.028	-0.062*	0.028	0.758
Other School Activities	0.052	0.030	-0.021	0.025	1.869*
Grade Point Average	0.003	0.047	-0.019	0.061	0.286
Teacher Intervention	-0.075	0.045	-0.105*	0.053	0.431

	Model A: Male Students			Model B: Female Students		
Random Effects	Variance Component	SD	Chi-Square	Variance Component	SD	Chi-Square
Intercept	0.082**	0.287	176.736	0.082**	0.286	181.235
Level-One Error	6.707	2.590		6.075	2.465	

* Correlation is significant at the 0.05 level (two-tailed)
** Correlation is significant at the 0.01 level (two-tailed)

victimization. However, for just female students, substance use had a negative effect on fear of nonsexual victimization and gang membership a positive one. Access to illegal items at school increased fear of nonsexual victimization for all students. Attachment to peers reduced fear of nonsexual victimization for males, while involvement in school sports and the belief that teachers would intervene during violent situations decreased fear of nonsexual victimization for female students only.

Beyond these relationships, z scores were computed in order to test the equality of regression coefficients across male and female students (Clogg et al., 1995; Paternoster et al., 1998). These results, found in the last column in Table 6.7, show that the regression coefficients for socioeconomic status (i.e., average parental attainment), prior teasing victimization, substance use, gang membership, peer attachment, and participation in other school activities were significantly different for male and female students. While most of these were significant at the 0.05 level, prior teasing victimization was significant at the 0.01 level.

The gender-specific results for perceived risk of nonsexual in-school victimization can be found in Table 6.8. For both male and female students, once perceived risk of sexual victimization was entered into the model as a predictor variable, it exhibited strong positive effects on students' perceived risk of nonsexual victimization. Students who perceived more risk of sexual in-school victimization also perceived more risk of nonsexual in-school victimization. Perceived risk of sexual victimization was also the second strongest predictor for both genders, following only the effect of nonsexual victimization on perceived risk of nonsexual victimization.

What is more, most of the other predictors operated similarly for male and female

Table 6.8: Hierarchical Linear Models of Perceived Risk of Nonsexual Victimization by Gender (Shadow Model)

	Model A: Male Students		Model B: Female Students		Test of Equality of Regression Coefficients
	Coefficient	SE	Coefficient	SE	Z Score
Individual-Level Fixed Effects					
Intercept	8.736**	0.050	8.769**	0.052	-0.457
Perceived Risk of Sexual Victimization	0.935**	0.039	0.958**	0.029	-0.473
Age	-0.046	0.038	-0.072	0.040	0.471
Ethnicity/Race	-0.358*	0.171	-0.442**	0.134	0.387
Socioeconomic Status	0.016	0.029	-0.015	0.025	0.810
Prior Sexual Victimization	-0.438**	0.031	-0.480**	0.024	1.071
Prior Nonsexual Victimization	1.297**	0.058	1.375**	0.057	-0.959
Prior Teasing Victimization	0.713**	0.101	0.246**	0.091	3.435**
Low Self-Control	0.212**	0.084	0.307**	0.076	-0.839
Sexual Delinquency	-0.285**	0.097	-0.243	0.157	-0.228
Nonsexual Delinquency	0.062	0.244	0.039	0.393	0.050
Substance Use	-0.141	0.111	-0.185	0.126	0.262
Gang Membership	-0.268	0.202	-0.044	0.295	-0.627
Delinquent Peers	0.392*	0.204	0.311	0.198	0.285
Access to Illegal Items	0.541**	0.063	0.541**	0.058	0.000
Parental Attachment	0.048	0.076	0.026	0.063	0.223
Peer Attachment	-0.167**	0.066	-0.184*	0.092	0.150
School Attachment	-0.103	0.098	-0.119	0.088	0.121
School Sports Activities	-0.001	0.025	-0.037	0.024	1.039
Other School Activities	0.026	0.027	-0.003	0.025	0.788
Grade Point Average	0.035	0.050	-0.001	0.062	0.452
Teacher Intervention	-0.081	0.051	-0.070	0.048	-0.157

Random Effects	Model A: Male Students			Model B: Female Students		
	Variance Component	SD	Chi-Square	Variance Component	SD	Chi-Square
Intercept	0.088**	0.296	189.435	0.138**	0.372	227.189
Level-One Error	6.156	2.481		6.368	2.523	

* Correlation is significant at the 0.05 level (two-tailed)
** Correlation is significant at the 0.01 level (two-tailed)

students. Non-white students, for instance, perceived their risk of being nonsexually victimized at school as higher than white students. For both genders, prior sexual victimization decreased risk perceptions, while prior nonsexual victimization and prior teasing both increased perceptions of risk of nonsexual in-school victimization. Low self-control also increased perceived risk for both male and female students. However, for male students only, committing sexually delinquent acts (i.e., verbal harassment or physical touching) lowered their perceived risk of nonsexual victimization while having delinquent peers increased their risk perceptions of nonsexual in-school victimization. The positive effect of thinking that illegal items at school were easy to access on students' risk perceptions and the negative effect of peer attachment on perceived risk were significant for both male and female students.

Once again, z scores were computed to test the whether the coefficients were significantly different for male and female students (Clogg et al., 1995; Paternoster et al., 1998). The last column in Table 6.8 reveals the results for the test of equality of regression coefficients. Compared to fear of nonsexual victimization, fewer significant correlations were found. Only the regression coefficient for prior teasing victimization was significantly different for male and female students. This was, however, highly significant ($p = .003$).

Model Fit

HLM does not produce traditional measures of "variance explained" (i.e., R-squared statistics). However, inspection of the variance components for level-one and level-two errors in the HLM models is helpful in understanding issues of model fit. First, since all variance components are significant (in all models), there appears to be some variation in fear and perceived risk of sexual and nonsexual victimization that was not explained by the predictors.

However, level-one variation did decline upon entering independent variables, suggesting they were important in accounting for some of the original variation. For instance, the inclusion of fear of sexual victimization as a predictor of fear of nonsexual victimization reduced the level-one variance component from 0.107 to 0.069, which indicates that more variance was explained with the addition of this predictor. Similarly, entering perceived risk of sexual victimization into the model as a predictor of perceived risk of nonsexual victimization decreased the level-one variance component from 0.124 to 0.088. This, too, reveals an increase in the explained variance.

R-squared statistics, generated by running OLS models of the data in SPSS, were examined as a supplement to the analysis of model fit described above. This supplemental analysis revealed that the vulnerability and lifestyle/routine activities predictors explained much more of the variation in the sexual models than nonsexual ones. For fear of sexual in-school victimization, the independent variables explained 55% of the variation and for perceived risk of sexual in-school victimization, 57% of the variation was explained. For fear of nonsexual in-school victimization, 30% of the variation was explained by the indicators of vulnerability and lifestyle/routine activities, while 32% was explained in the perceived risk of nonsexual in-school victimization model. Adding fear of sexual victimization as a predictor raised the R-squared value from 30% to 47% while including perceived risk of sexual victimization increased that model's R-squared from 32% to almost 50%.

Additional Analyses

Although some missing values are expected when conducting survey research, one of the variables used here – socioeconomic status (i.e., parents' average educational attainment) – had a

very large percentage of missing values. Almost 1,350 students did now know or report at least one of their parents' educational attainments. These students were fairly evenly split between males and females (53% versus 47%, respectively). In terms of other demographics, the students with missing values on socioeconomic status were white (88%) and aged 15 or younger (75%). To get a feel for how these students varied from the rest of the sample, their distributions of fear and perceived risk were examined. For the most part, these distributions were very similar. However, a larger percentage of students who were missing values on socioeconomic status perceived a very low risk of being sexually victimized at school.

In response to the significant missing values on the measure of socioeconomic status, the models were re-run in HLM without socioeconomic status included as a predictor variable. This technique revealed a few different findings, but overall the picture it paints is similar to the one that emerges with the inclusion of socioeconomic status. For fear of sexual and nonsexual in-school victimization, no changes in the significance levels occurred. Although the strength of some coefficients and/or significance levels changed slightly, the direction of the coefficients remained, as did the determination of significance. For perceived risk of sexual in-school victimization, however, a couple of changes emerged once parental educational attainment was dropped from the model. Prior nonsexual victimization had a significant inverse effect on perceived risk of sexual victimization in the original model ($p = 0.033$), but this became non-significant in the model without socioeconomic status. Also, parental attachment was not technically significant in the model with parental educational attainment ($p = 0.078$), but was significant and negative in the revised model ($p = 0.045$). No changes occurred once socioeconomic status was dropped from the perceived risk of nonsexual in-school victimization model.

When re-examining the models for the shadow of sexual assault, however, a few additional changes occurred. For example, in the full sample once adding fear of sexual victimization into the model as a predictor, substance use was not significantly related to fear of nonsexual victimization ($p = 0.086$). Yet once parental educational attainment was dropped from the model, substance use became statistically significant ($p = 0.048$). This also occurred with the full sample when adding perceived risk of sexual victimization as a predictor variable. While it was originally close, substance use did not have a significant effect at the 0.05 level on perceived risk of nonsexual victimization ($p = 0.068$). After socioeconomic status was removed, it crossed the significance threshold ($p = 0.029$). Once the models were divided by gender, participation in other school activities had a significant on fear of nonsexual victimization for males (from $p = 0.093$ to $p = 0.025$). For female students, only parental attachment changed from not significant ($p = 0.112$) to significant ($p = 0.044$) without the inclusion of socioeconomic status. For male students' perceived risk of nonsexual victimization, peer delinquency and peer attachment both missed the significance cutoff point once parental education was omitted from the model (for peer delinquency: $p = 0.054$ became $p = 0.072$; for peer attachment: $p = 0.012$ became $p = 0.099$). Among the female students, peer delinquency predicted perceived risk of nonsexual victimization once socioeconomic status was dropped from the model ($p = 0.028$ versus $p = 0.116$).

SUMMARY AND DISCUSSION OF FINDINGS

The results presented above provide support for many of the multivariate hypotheses outlined in Chapter Four. In addition to the hierarchical linear models presented in Tables 6.4

Table 6.9: Comparison of the Coefficients from the Hierarchical Linear Models

	FEAR		PERCEIVED RISK	
	Sexual Victimization	Nonsexual Victimization	Sexual Victimization	Nonsexual Victimization
Female	+	+	+	+
Age	NS	−	NS	−
White	NS	−	NS	−
Socioeconomic Status	NS	NS	NS	NS
Prior Sexual Victimization	+	NS	+	+
Prior Nonsexual Victimization	NS	+	−	+
Prior Teasing Victimization	+	+	+	+
Low Self-Control	+	+	+	+
Sexual Delinquency	+	NS	+	NS
Nonsexual Delinquency	−	NS	−	NS
Substance Use	NS	NS	NS	NS
Gang Membership	NS	NS	NS	NS
Delinquent Peers	NS	NS	NS	+
Access to Illegal Items	+	+	+	+
Parental Attachment	NS	NS	NS	NS
Peer Attachment	−	−	−	−
School Attachment	NS	NS	NS	NS
School Sports Activities	+	NS	NS	NS
Other School Activities	NS	NS	NS	NS
Grade Point Average	NS	NS	+	+
Teacher Intervention	−	−	NS	−

and 6.5, Table 6.9 provides a comparison of the coefficients, which is useful for discussing the generalizability or "rationality" of these indicators of vulnerability and lifestyle/routine activities. The remaining part of this chapter provides a more thorough discussion of the dissertation's findings, the support or rejection of the proposed hypotheses, and the consistency of various indicators across the models.

Indicators of Vulnerability

Gender, as discussed in the Chapters Three and Four, has been a focal point in the study of fear and perceptions of risk. Consistent with the bulk of the existing literature, this dissertation finds that female students express more fear and perceive greater risk for both types of in-school victimization than male students. Thus, hypotheses 1a through 1d are fully supported. These findings imply then that female students likely perceive themselves as vulnerable – either physically and/or sexually vulnerable – which is responsible for their higher levels of fear and greater perceptions of risk. The upcoming discussion on the shadow of sexual assault might help to illuminate the nature of female students' vulnerability.

Although the adult literature is fairly spilt with regards to the effect of age on fear and perceived risk, findings from school-based studies consistently reveal that younger students are more afraid and perceive more risk than older students. This effect is usually explained in light of the physical immaturity and vulnerability of younger students. The results presented here, however, only support this for fear and perceived risk of *nonsexual* in-school victimization. Thus, only two of the four age hypotheses were supported (i.e., hypotheses 2b and 2d). It appears that although students in grades 7-10 may feel physically vulnerable to crimes such as theft, assault, and robbery, many are not yet feeling *sexually* vulnerable at school. Just as

students develop and mature at different rates, their awareness of sexual victimization may, too, vary.

There are several notable exceptions, but much of the prior school-based literature has found that non-whites are more afraid and/or perceive greater risk of in-school victimization than whites. The results of this dissertation are partially consistent with this. Non-whites report more fear and perceive greater risk of *nonsexual* victimization. For sexual victimization, however, ethnicity/race has no significant effect. Thus, only hypotheses 3b and 3d are supported. The notion of vulnerability discussed in Chapters Three and Four suggest that non-whites often feel socially vulnerable, which is responsible for their elevated fear and perceptions of risk. The hierarchical linear models presented here suggest this is the case for only the more common, nonsexual types of offenses. It is possible that nonsexual victimization and, by extension, its fear and risk have more of a cultural basis than sexual victimization. Students might be more familiar with and subject to nonsexual victimizations outside of the school, which may carry over into their fear and perceived risk of school-based victimization. Additionally, while not possible with these data, it would be interesting to see if members of different ethnic groups mature differently, thereby also affecting their awareness, fear, and perceived risk of sexual victimization.

Despite the fact that many prior works have reported an inverse relationship between socioeconomic status and fear and/or perceived risk, the current research failed to find any significant effects between socioeconomic status and any of the four dependent variables. Thus, hypotheses 4a through 4d are rejected. However, it is important to note that part of this may stem from the way socioeconomic status was measured in the RSVP data. As discussed in Chapter Five, the average parental educational attainment served as a proxy for socioeconomic status. Students were asked separately to indicate the level of education attained by each parent.

These two items were then averaged to create the socioeconomic status scale. As already mentioned, there was a fairly large amount of missing data for this variable, which may have impacted the results presented here that involve socioeconomic status.

As discussed in Chapter Four, the literature that utilizes secondary students in studies of fear and/or perceived risk consistently find that prior victimization impacts fear and risk perceptions of future victimization. Consistent with the vulnerability hypothesis, students who have previously been victimized perceive themselves as being more vulnerable, which heightens their fear and perceived risk of future in-school victimization. Overall, the models presented in this dissertation support this notion. However, unlike many of the prior works, this study separated prior victimization into sexual, nonsexual, and teasing. This division proved to be quite important. No known works in the student-based literature has used such a specific breakdown of prior victimization.

In three of the four models, prior sexual victimization had a positive effect on the outcome measure. Students who reported that they had been sexually harassed or touched in an inappropriate manner (either against their will or without their consent) reported more fear of sexual in-school victimization and perceived a greater risk of both sexual and nonsexual in-school victimization than other students. Yet, prior sexual victimization did not significantly predict fear of nonsexual victimization. Support was found for hypotheses 5a, 5c, and 5d, but not for 5b. It appears that both the type of victimization endured and the type of fear measured are important in understanding the victimization-fear link. It is theoretically correct and highly rational for prior sexual victimization to significantly impact fear and perceived risk of sexual victimization. Students who previously endured this type of victimization are keenly aware of its existence and likely consider themselves to be more vulnerable to future incidents that involve

sexual victimization. It also, on some level, makes sense that prior sexual victimization would not affect fear of nonsexual victimization. In line with prior works, this reinforces the crime-specificity of measures and their superiority over general indicators. What is more difficult to explain, however, is the fact that prior sexual victimization significantly impacted perceived risk of nonsexual victimization but not *fear* of nonsexual victimization. Thus, students who have been sexually harassed or inappropriately touched believe their risk of nonsexual victimization is high, but yet do not fear this nonsexual victimization. Regardless, this does reinforce the conceptual distinctiveness of fear and risk perceptions as outlined in Chapter Two.

The hypotheses that involve prior nonsexual victimization are partially supported as well. Of the four models, three of them revealed significant relationships with previous nonsexual victimization and two of these effects were in the hypothesized direction. More specifically, hypotheses 6b and 6d were supported, as students who had endured more prior nonsexual victimization were more afraid and perceived a greater risk of future nonsexual victimization than those with less or no prior nonsexual victimization. These findings are theoretically consistent with the increased vulnerability that stems from prior direct experience with victimization.

However, the effects of prior nonsexual victimization on fear and perceived risk of *sexual* in-school victimization paint a somewhat different picture. Prior nonsexual victimization was non-significantly related to fear of sexual victimization and had a *negative* effect on perceived risk of sexual victimization. Once again, the divergent fear and risk findings can be interpreted as support for the conceptual separation of fear and risk perceptions. Furthermore, because sexual victimization (i.e., verbal harassment and inappropriate touching) is inherently different from nonsexual victimization (e.g., having property or money taken), it might be that the more

frequent, nonsexual victimizations endured by students simply cannot elicit fear of a different (i.e., sexual) nature. Similarly, if these victims of nonsexual offenses have only experienced nonsexual victimization and not sexual ones, then it makes more sense that they would not view their risk of sexual victimization as high. Having been victimized, but not in a sexual manner, may lead them to erroneously assume that they are not at risk for sexual-based offenses. Essentially, without having directly experienced these crimes, they may feel less vulnerable to them, as demonstrated by their lower perceived risk for sexual in-school victimization.

Unlike the other prior victimization measures, students who had been teased or picked on at school were more afraid and perceived more risk of both sexual and nonsexual victimization. The consistency of these findings fully supports hypotheses 7a through 7d. Although not previously covered in the literature, it appears that prior teasing is a particularly noteworthy predictor of students' fear and perceived risk of in-school victimization. Operating similarly to other types of previous victimization, students who have been teased likely feel vulnerable (physically, socially, or sexually), which elevates their fear and perceived risk of both sexual and nonsexual in-school victimization.

Indicators of Lifestyle/Routine Activities

Although many of the indicators of lifestyle/routine activities are fairly new to the study of students' fear and perceived risk, several proved to be quite important. The results presented here, for instance, demonstrate that low self-control is a particularly significant predictor of both students' fear and risk perceptions. Across fear and perceived risk of sexual and nonsexual victimization, students with lower self-control were more afraid and perceived greater risk than those with higher self-control (supporting hypotheses 8a through 8d). Even though these

findings indicate that low self-control is clearly predictive of fear and risk, what is less clear is why this is the case. As discussed in Chapter Four, low self-control can act as an indicator of target attractiveness, exposure, or guardianship. Consistent with the empirical works of Tillyer et al. (2011) and the theoretical rationale provided by Finkelhor and Asdigian (1996), low self-control can be viewed as a form of target attractiveness in that it an impulsive personality can antagonize others. Yet, individuals with low self-control also find themselves in more situations where they are exposed to dangerous people or places. What is more, these situations often involve reduced or absent guardianship. For now, given the infancy of low self-control as a predictor of fear and perceived risk, all that can be inferred is that low self-control matters – the precise theoretical explanation for this cannot yet be induced. It is also possible that low self-control is so important to the study of fear and risk perception *because* it affects attractiveness, exposure, and guardianship rather than just impacting one of these dimensions of lifestyle/routine activities.

Even though prior literature has explored the effect of self-reported delinquency on students' fear and risk perceptions, none of the studies reviewed in Chapter Four utilized bifurcated measures of delinquency. In this dissertation, however, students' delinquent behaviors were separated into acts of sexual (i.e., verbal sexual harassment and inappropriate sexual touching) and nonsexual (e.g., robbery, theft, assault, weapon carrying, vandalism, etc…) delinquency. As with the division of prior victimization, this partitioning of self-reported delinquency proved to be valuable in understanding students' fear and perceived risk of in-school victimization. For instance, students who engaged in more sexual delinquent acts (i.e., verbal harassment or unwanted touching) reported *more* fear and perceived *greater* risk of in-school sexual victimization than those who participated in fewer acts. This provides support for

hypotheses 9a and 9c. It appears that students whose perpetrate such acts are exposing themselves to a delinquent lifestyle that increases fear and risk perceptions. By committing these acts, they are aware of the existence of these offenses at school and likely assess their risk of experiencing such victimizations within this framework. Their fear of sexual in-school victimization may be increased because of their perceived risk of being sexually victimized at school is high.

However, the other two hypotheses involving sexual delinquency, 9b and 9d, were not supported. Students who participated in sexually harassing behaviors or inappropriate and unwanted touching did not express greater fear or risk of *nonsexual* in-school victimization. Thus, the *type* of self-reported delinquency, fear, and risk seem to make a difference. If these students perpetrated only sexual delinquency and not other, nonsexual types of crimes, then this makes more sense. They might simply be unaware of such offenses at school, which could impact their fear and/or perceived risk. Yet, if such students are perpetrating both sexual and nonsexual victimization and their behavior only increases their fear and risk of *sexual* victimization, then this may speak to the severity or consequences of sexual victimization. Regardless, these divergent findings support the importance of separating key criminological concepts (i.e., fear, perceived risk, victimization, and offending) by type of crime.

When looking at the effects of nonsexual delinquency, students who participated in more delinquent behaviors reported being *less* afraid and expressed a *lower* risk of *sexual* in-school victimization than those who engaged in fewer nonsexual delinquent acts. These effects were in the opposite direction than what was proposed, which rejects hypotheses 10a and 10c. If delinquent students commit only nonsexual offenses, then it is plausible that they are simply unaware of the existence or frequency with which sexual victimizations occur at school. In this

sense, their exposure to nonsexual delinquency may not have introduced them to the world of sexual victimization and its related fear and risk. This may be responsible for the inverse effect of nonsexual delinquency on sexual fear and risk perceptions. Yet, because nonsexual and sexual delinquency have opposite effects on sexual fear and perceived risk of in-school victimization, this finding can also be interpreted as support for the bifurcation of delinquency, fear, and perceived risk along the lines of sexual versus nonsexual crimes.

The remaining relevant hypotheses, 10b and 10d, were also rejected, as the effects of nonsexual self-reported delinquency did not significantly impact students' fear and perceived risk of nonsexual in-school victimization. Operating from an exposure vantage point, it is theoretically inconsistent for students who perpetrate nonsexual delinquent acts to not be afraid of or to not perceive an increased risk of these same types of acts. Yet, it may be that, because of their experience with these offenses, these students may simply view them as less serious offenses. Essentially, the severity of such acts or the related consequences may not be strong enough to elicit fear and raise their perceptions of risk to a level of statistical significance among those who perpetrate such acts. This suggests that these offenders may become desensitized to these offenses, affecting their fear and risk perceptions. Relatedly, they may incorrectly think that their perpetration of nonsexual acts has provided them with insight and knowledge into these types of offenses, which could serve to protect them from experiencing these types of victimizations. In this way, their participation in nonsexual delinquency may cancel out any increase in fear and/or risk that may result from their exposure to these offenses. Perhaps they really are afraid and do perceive themselves as at risk for nonsexual victimization, but their familiarity with these offenses helps them to adapt or adjust their behaviors appropriately.

Also, because the nonsexual victimization measure tapped into such a wide variety of offenses, it might be important to further breakdown this measure into nonsexual property and nonsexual personal delinquency. Perhaps the generality of this measure is masking important findings. Similarly, separating delinquent acts committed at school from those committed outside of school may prove to further disentangle the seemingly irrational nature of nonsexual delinquency.

Students' self-reported substance use was found to be not significant in all models, which completely rejects hypotheses 11a through 11d. Though not typically used in student-based studies, this indicator of exposure, at least as measured here, does not appear to predict students' fear and/or perceived risk of in-school victimization. Yet, if students' are operating under alcohol and/or drugs while determining their level of fear or assessing their risk, then this could be used to help explain these non-significant findings. Not only might their use of illegal substances be masking their true fear and perceived risk, but it may be affecting their recall ability on the survey instrument as well.

It also appears that self-reported gang membership is not predictive of students' fear and risk of either type of victimization. Students who claimed to be members of a gang were not significantly more or less afraid nor did they perceive more or less risk than students who were not gang members. This completely rejects hypotheses 12a through 12d. Gang membership could, theoretically, increase exposure or, alternatively, increase guardianship, causing opposite effects on students' fear and perceived risk. Explaining this relationship, however, is a moot point here as it was not significantly related to any of the outcome measures. In this way, though, it is possible that gang membership may actually increase exposure while also increasing guardianship, thus cancelling out any potentially important findings.

Interestingly, students whose friends engaged in delinquent acts only had a significant effect on their perceived risk of nonsexual in-school victimization. Fear of sexual and nonsexual victimization, as well as perceived risk of sexual victimization were not significant affected by peer delinquency, which rejects hypotheses 13a-13c. Perhaps students are not physically present to observe much of their friends' delinquent acts, especially the ones of a sexual nature, which muddies their fear and perceived risk. Maybe their knowledge of such acts is offset by another variable (e.g., some sort of guardianship). For instance, these students could, in reality, be more afraid and perceive greater risk of victimization because of the vicarious offending of their friends, but their friendship to these dangerous or delinquent peers may have a protective function as well. This could lower or cancel out any effect that exposure to a delinquent lifestyle may have on fear and risk perceptions. It is also possible that their friendship with delinquent peers desensitizes them to crime.

Support was only seen for hypothesis 13d, as students with delinquent friends reported a greater risk of nonsexual victimization than those with fewer delinquent peers. Students whose friends engage in delinquency are likely more exposed to nonsexual victimization, which raises their perceptions of risk. Yet this elevated risk did not increase their fear of nonsexual in-school victimization. Thus, students whose friends commit delinquent acts perceive more risk of being nonsexually victimized at school, but are not more afraid of this risk. It is plausible that students accurately assess this risk, thereby raising their fear of nonsexual victimization, but that the protective power (or perceived protective power) of "tough" friends nullifies this fear. It would be interesting to see whether these students' perceived a greater risk of nonsexual victimization because they thought their "friends" would victimize them or whether their risk of victimization was based on being victimized by other students who are not close friends. Also, given the

bifurcation of other measures, it seems important for future works to try to categorize peer delinquency into sexual and nonsexual delinquency.

One measure of exposure, however, consistently increased students' fear and perceived risk of both sexual and nonsexual in-school victimization. Believing that illegal items (i.e., drugs, alcohol, cigarettes, and guns) were easy to obtain at school positively predicted all of the outcome measures. This provides support for hypotheses 14a through 14d. Students who reported easy access to these items likely view some of the student population as dangerous or delinquent, which impacts their fear and perceived risk of victimization at school. Simply, believing that others are carrying weapons or are acting under the influence of drugs and/or alcohol can increase their fear and perceived risk.

When looking at the various forms of attachment, neither parental nor school attachment significantly predicted students' fear or risk of sexual or nonsexual victimization. Thus, hypotheses 15a through 15d and 17a though 17d are not at all supported. Unlike previous studies, these measures of attachment do not reduce students' fear and risk perceptions. Theoretically, being attached to parents or school *should* reduce fear and perceived risk for a number of reasons. These attachments could provide a source of guardianship, represent the attachment of the social bond, serve as a source of social integration and adjustment, or even represent vulnerability. Yet, all of these theoretical justifications should have produced negative effects rather than non-significant ones. It seems likely that these findings may stem from the measurement of these concepts.

Attachment to peers, however, is significantly and negatively related to all of the outcome measures. Students who are more attached to their friends are less afraid and perceive less risk of sexual and nonsexual victimization. These findings support the hypotheses predicted

for peer attachment (hypotheses 16a through 16d). It is unclear, however, whether peer attachment serves as a form of guardianship or whether it makes students feel more socially integrated and less vulnerable. Regardless, it appears to be a particularly noteworthy predictor when studying students' fear and perceived risk of in-school victimization.

Involvement in school activities does not have a consistent effect on students' fear and risk perceptions. Students who participate more in school sports are more afraid of sexual victimization at school than those who are less involved in sports activities at school. Yet, this finding does not apply to perceived risk of sexual or nonsexual victimization nor does it emerge for fear of nonsexual victimization. Thus, only hypothesis 18a is supported. Participation in other, non-sports activities was non-significantly related with all of the dependent variables, which rejects hypotheses 19a through 19d. Overall, then, only one of the eight involvement measures reached statistical significance. Although it is unclear why this effect was only detected for fear of sexual in-school victimization, it is consistent with the notion of exposure. Students who are more active in sports at school appear to be more exposed to potentially dangerous people and situations than those who are less active in school sports. Participation in school sports increases the amount of travel to unfamiliar places and encounters with unknown students (i.e., via games and tournaments) and brings unfamiliar and potentially dangerous people into these students' familiar school environments. This exposure, though, only affects their fear of *sexual* victimization. It is possible that this effect is driven by the heightened fear of sexual victimization of female students.

Yet, it is difficult to understand why students' fear of sexual in-school victimization is influenced by the participation in school sports, but their perceived risk of sexual victimization occurring is not significant. It is possible that the exposure associated with participating in

school sports increases their fear *and* risk perceptions, but that the guardianship of teammates and coaches nullifies their perceived likelihood of victimization. This inconsistent finding does, however, reinforce the conceptual distinctiveness of measures of fear and risk perceptions.

Although some of the prior works discussed in Chapter Four revealed that students' grade point average had a negative effect on their fear and risk behaviors, this does not appear to be the case here. Grade average was not significantly related to either measure of fear, but was positively associated with both perceptions of risk of sexual and nonsexual victimization. Support was, therefore, seen for only hypotheses 20c and 20d. Again the conceptual distinctiveness of fear and risk is evident here. Although related, these measures are tapping into very unique concepts. What is more, the positive findings between GPA and risk perceptions may, actually, make perfect sense. An interesting alternative to consider is that students with higher grade point averages may possess more intelligence or may simply be better equipped to detect indicators of risk. Given the frequency of in-school victimization, it appears that these students are more in tune with the actual risk that exists in their schools. In this way, their elevated perceived risk is a highly rational response.

Finally, students' belief that teachers are willing to intervene during dangerous or violent situations, served a guardian-esque function for these students. Students who perceived teachers at their school as being willing to intervene when confronted with danger or violence were less afraid of sexual and nonsexual victimization and perceived less risk of nonsexual victimization than those without such beliefs. This provides support for hypotheses 21a, 21b, and 21d. Even though these students were less afraid of sexual victimization at school, their perceptions of risk of sexual in-school victimization was not significantly affected by their belief that teachers would intervene. It is plausible that even though this belief in teacher intervention made them

feel safer, given the intimacy of sexual victimization they were able to reasonably assess that teachers would be unable to effectively intervene and stop sexual victimization from occurring. This could wash out any protective effect that teacher intervention may have had on perceived risk of sexual victimization.

Shadow of Sexual Assault

The support of hypotheses 1a through 1d (i.e., the findings that females are more afraid and perceive a greater risk of both types of in-school victimization) provides some initial insight into the unique underlying vulnerability of female students. What is unclear, however, is whether their vulnerability is physical, sexual, or a mixture of both. The additional analyses conducted here are deigned to test the shadow of sexual assault with the hopes of shedding some light onto the etiology of females' heightened fear and perceived risk.

As mentioned above and presented in Table 6.6, once fear of sexual victimization was entered as an independent variable in models estimating fear of non-sexual victimization, it became a highly significant predictor. This supports hypothesis 22a. Although Ferraro (1995, 1996) and May (2001a) each found fear of sexual assault to be the most significant predictor in the model, the results here found it to be the second strongest predicting variable. Prior nonsexual victimization, however, was slightly more predictive than fear of sexual victimization in this current study. Although May's (2001a) test of the shadow effect utilized a measure of violent prior victimization and one of property prior victimization, neither one was significant once fear of sexual assault was entered into the model. This is an important discrepancy in empirical findings, but likely stems from the different bifurcations of prior victimization. Also, the present finding that prior nonsexual victimization was so strongly related to fear of nonsexual

victimization suggests that fear of non-sexual victimization is a rational response, and this relationship is consistent with much existing empirical evidence. Simply, individuals who have previously endured a nonsexual victimization are more fearful of nonsexual victimization even after controlling for fear of sexual in-school victimization.

However, fully consistent with prior works (i.e., Ferraro, 1995; May, 2001a), once fear of sexual victimization was used to predict fear of nonsexual victimization, gender became insignificant. This provides quite a bit of support for the application of the shadow of sexual assault to secondary students. Once controlling for fear of sexual victimization, female students were no longer more afraid of nonsexual in-school victimization than male students. This suggests, then, that much of female's fear is wrapped up in their sexual vulnerability. Stated differently, much of the fear reported by females is caused by their fear of being sexually victimized.

One of the primary ways in which this dissertation extends the existing state of knowledge is that it also tested the applicability of the shadow effect for students' perceptions of risk. Mimicking the analyses above, once perceived risk of sexual victimization was treated as an independent variable and entered into the model, it became one of the most significant predictors. This provides support for hypothesis 23a. Just as fear of sexual victimization was highly predictive of fear of nonsexual victimization, students' perceived risk of sexual victimization strongly predicted their perceived risk of nonsexual victimization. Yet, as before, it was the second strongest predictor in the model. Once again, students' experience with nonsexual prior victimization had a stronger effect on the outcome measure (i.e., perceived risk of nonsexual in-school victimization) than perceived risk of sexual victimization. This, too, makes sense in that students who had directly experienced a nonsexual victimization at school

should perceive a greater risk of future nonsexual victimizations even after controlling for perceived risk of sexual victimization.

Paralleling the shadow effect for fear, once perceived risk of sexual victimization was included as a predictor variable, gender was rendered not significant. Thus, after controlling for perceived risk of sexual victimization, females did not perceive more risk of nonsexual victimization at school than their male counterparts. In this way, not only does it appear that the shadow effect operates similarly for fear *and* perceived risk among secondary students, but these effects provide support for an even more broader shadow of sexual assault.

However, to more fully understand the shadow of sexual assault, the sample was split into males and females and the coefficients from these models were compared. As mentioned already, fear of sexual victimization was significant in models of fear of nonsexual victimization for both male and female students. Students who feared sexual victimization also feared nonsexual victimization. Interestingly, in rejection of hypothesis 22b, this effect was actually slightly stronger for male than female students (1.011 versus 0.946, respectively). However, according to the test of equality of regression coefficients, this difference is not statistically significant. Nonetheless, these findings suggest that male students may also consider themselves sexually vulnerable although the reasoning for this is unclear. It may be attributed to the later physical and sexual development and maturation of boys or might just be an artifact of the data. Although May (2001a) found the effect of fear of sexual victimization on fear of nonsexual victimization to be stronger for female students, this empirical discrepancy likely involves the difference between measures of sexual victimization. While he asked students outright whether they were afraid of being sexually assaulted, the items here involved sexual harassment and inappropriate, unwanted touching. As indicated in Chapter Three, these harassing behaviors are

more commonly found in the daily lives of adult women. It may be possible that younger females are already somewhat accustomed to these more minor forms of sexual victimization than younger males.

For perceived risk of nonsexual victimization, the results presented in Table 6.8 show that the addition of perceived risk of sexual victimization as an independent variable was significant for both genders. Students who perceived more risk of sexual victimization also perceived more risk of nonsexual victimization. When comparing the magnitude of these coefficients, the effect of this relationship was just barely stronger for female students than males (0.958 versus 0.935, respectively), which technically provides support for hypothesis 23b. However, in reality, it appears that female and male students who perceive their risk of sexual victimization as great are similar in their increased perceptions of risk of nonsexual victimization. This can also be seen in the non-significant z-score produced by the test of equality of regression coefficients.

Even though females' fear and perceived risk of sexual victimization were not significantly higher than male's fear and risk, this finding does not take away from the shadow effect experienced by females. The findings presented here suggest that females' fear and perceived risk of sexual victimization still underlie their fear of nonsexual victimization. Rather, the slightly weaker effect of female's fear of sexual victimization speaks more to the fear and perceived risk of *males*. Although some researchers have begun to explore adult males' fear and risk perceptions, it seems like this may be particularly important in the study of adolescent males. It is entirely possible that is effect exists only because of they are physically and sexually undeveloped and inexperienced. Further, examining interactions, such as between gender and age or gender and race, may help to flesh out this finding. These potential findings could support

May's (2001a) idea that young males, in general, and young, white males, in particular, may suffer from a shadow of *powerlessness*.

What may be especially important, however, is determining whether the fear and perceived risk of sexual victimization expressed by males is caused by sexual remarks and inappropriate touching at the hands of female *or* male students. Part of this fear and risk may be attributed to actual sexual advances made by female and male students. However, some of this fear and perceived risk may be linked to sexual bullying where more vulnerable male students are sexually teased, harassed, and touched by heterosexual male students. Derogatory homosexual name calling, for instance, may be the source of males' fear and perceived risk. Determining *who* they fear and *why* they fear them appears essential in understanding this phenomenon.

Although briefly mentioned already, several of the effects of other predictors changed slightly once fear and perceived risk of sexual victimization were entered into the models as independent variables. While these changes are interesting and likely suggest important gender differences among the indicators of vulnerability and lifestyle/routine activities, they will not be covered in further detail in this dissertation. They are, however, an attractive avenue for future research.

Conclusion: Rationality of Students' Fear and Perceptions of Risk

This chapter will conclude with a brief discussion regarding the rationality of students' fears and perceptions of risk. The indicators of lifestyle/routine activities that were used to assess students' fear and perceived risk of in-school victimization are part of a broader opportunity perspective. Theories of opportunity, however, are rooted in rational choice theory;

thus, applying an opportunity framework to fear and risk perception implies some degree of rationality on the part of students (Wilcox Rountree, 1998). By visually examining Table 6.9, some initial insight can be offered regarding students' overall rationality. Given the generalizability of many of these predictors there appears to be modest support that fear and perceived risk of in-school victimization are rational in that they are predicted by criminal opportunity.

Individuals are expected to use cues from the individual and social environment to determine their subjective risk and fear. A great example of this is with students' perceptions regarding access to illegal items. Students who more strongly agreed that drugs, alcohol, cigarettes, and guns were easy to obtain at school were consistently more afraid and perceived greater risk of being victimized at school. Knowing these items were in the hands of other students increased their fear and perceived risk, likely because they felt exposed or potentially exposed to dangerous people and/or situations.

On the other hand, students felt safer the more they thought that teachers frequently try to stop violent situations at school from occurring. This perception had a protective effect in that students likely believed that teachers would or could intervene if they were being victimized at school. This perceived guardianship had a very rational effect on students' fear of sexual and nonsexual victimization. It also lowered their perceived risk of nonsexual victimization.

Attachment to peers reduced students' fear and lowered their perceptions of risk across all outcome measures. Assuming those peers that students are strongly attached to are at school with them, it is quite rational that they would feel safer and perceive less risk of being victimized while at school. If their friends were not physically present at school or otherwise unable to serve a guardianship role, their attachment to peers still may have reduced their perceived

attractiveness as targets. Stronger attachment to friends often raises feelings of self-worth, self-esteem, connectedness, and social integration. In this way, students' reduction to fear and perceived risk appears rational, too.

Though the precise causal mechanism of low self-control remains unknown as of now, it consistently increased students fear and perceived risk of in-school victimization. Regardless of whether it strengthens their perceived attractiveness as targets, increases their exposure to motivated offenders and dangerous situations, or weakens the presence of guardianship, its effect on fear and risk is appropriate. Students with lower self-control have lifestyles or routine activities that are fear-inducing and risk-enhancing, but, perhaps more importantly, they appear to recognize this fear and risk. This, in and of itself, is quite rational.

Although measures of vulnerability were not treated as indicators of lifestyle/routine activities, they probably overlap substantially with the notion of target attractiveness. In this way, it is rational that students who have endured prior victimizations or teasing at school would, in general, be more afraid and perceive greater risk of in-school victimization. Their perceived vulnerability and attractiveness as targets is enhanced, which increases their fear and perceived risk of being victimized at school. Female students' heightened fear and perceived risk also appear rational given that it is largely driven by the fear and perceived risk of sexual victimization Overall, though far from offering concrete proof of students' rationality, these findings do suggest that various indicators of lifestyle/routine activities are factored into students' fear and risk assessments. Despite the consistency of these predictors, there is still a lot of variation in students' fear and perceived risk that remains unexplained. This leaves open the possibility that factors other than those related to opportunity – which might be more suggestive of "irrational" risk perception and fear – are at play.

Chapter Seven:

CONCLUSION

As demonstrated in Chapter One, fear of criminal victimization is a major social issue that demands attention. Although it has been regularly studied since the late 1960s, there is still much to learn about this phenomenon. Continued exploration is not only justified, but essential since "…fear is among the most overt social reactions to crime and because its consequences are so prevalent, potentially severe, and easily demonstrable" (Warr, 1987, p. 29). Because fear of victimization is clearly entrenched in our lives, any relevant, meaningful research is welcomed.

Unlike the early works, this dissertation provided much more than a broad descriptive overview of who is fearful of crime. Rather, it followed the advice of Lab (2003) and others and focused on a criminological phenomenon in a *particular context, setting, or domain* (see also Lynch, 1987). Generally speaking, the purpose of this dissertation was to cast light onto fear of crime and perceptions of risk in secondary schools. The research in this area, while growing, is substantially less evolved than the literature geared toward adults' fear and risk. The neglect of adolescent-based fear is so severe that some, such as Hale (1996), have deemed it a future research priority. Additionally and even more specifically, this dissertation used vulnerability and lifestyle/routine activities to theoretically examine students' fear and risk of in-school victimization, in general, and sexual victimization, in particular. In this way, it provided a new lens within which to examine fear and risk of criminal victimization in junior and high schools. Yet, despite the contributions of this current study, there are a few key limitations that are important to consider. These will be discussed next. Following the section on the limitations of

this dissertation, attention will be given to policy implications and suggestions will be proposed for future research.

LIMITATIONS

Like any study, there are several limitations of the current work. As usual, many of these deal with the operationalization of key concepts, the methodological process, or the sample selected for analysis. These will be discussed next.

Limitations Involving Measurement of Variables

One important limitation of this dissertation deals with the nature of the sexual measures of fear, perceived risk, victimization, and delinquency. Asking about verbal sexual harassment and inappropriate touching without one's consent or against one's will is not the same as asking directly about rape or sexual assault. These are related but different concepts. The argument could be made that the types of sexual victimization measured here are not severe enough or that they differ from the ones hypothesized in the shadow of sexual assault. However, these measures are appropriate given the particular context of this study – secondary schools. Many works have shown, for instance, that the prevalence of school-based sexual harassment is great (AAUW, 1993, 2001; Lee, Croninger, Linn, & Chen, 1996; Tillyer et al., 2010). Thus, compared to rape, the sexual measures used here are covering more realistic sexual threats to students. Both verbal harassment and inappropriate touching refer to a wide spectrum of behaviors with varying degrees of severity. Collectively, these types of sexual victimization are

much more of a reality for students and, as demonstrated in this dissertation, represent a significant source of students' fear and perceived risk.

Another potential limitation involves the bifurcation of the outcome measures (fear and perceived risk of in-school victimization) into sexual and nonsexual categories. As examined in Chapter Two, many scholars have advocated the use of crime specific measures when studying fear and perceptions of risk (see e.g., Ferraro & LaGrange, 1992; Hale, 1996; LaGrange & Ferraro, 1989; Warr & Stafford, 1983; Wilcox Rountree, 1998; Wilcox et al., 2005). Though few have used the sexual and nonsexual distinction (for an exception see May, 2001a), the findings presented in the last chapter suggest such a distinction is useful. Several of the predictor variables (e.g., age, race, prior sexual and nonsexual victimization, and sexual and nonsexual delinquency) operated differently for sexual and nonsexual fear and/or perceptions of risk. What is more, such a distinction is necessary in order to test the shadow of sexual assault hypothesis. Yet, it is possible that fear and perceived risk are more global or general and, thus, are mis-specified here. Similarly, the literature reviewed throughout this dissertation highlighted the theoretical and empirical distinctiveness of fear and perceived risk. This separation is also supported by the results in Chapter Six. Indicators of vulnerability and lifestyle/routine activities (e.g., prior nonsexual victimization, delinquent peers, school sports activities, and grade point average) had different effects on fear and perceived risk. Nevertheless, these constructs could be mis-conceptualized, affecting the findings presented here.

Also, as demonstrated in Chapter Four, many prior works have revealed that students often fear the journey to and from school. Yet, the phrasing of the fear, perceived risk, and victimization questions utilized here focus specifically on the fear, risk, and victimization experienced while on school grounds or during school-related activities. In this way, the

measures used may have missed a significant source of students' fear and risk. Related to this, students' interpretations of the questions or parts of questions may also have affected the study's outcomes. For instance, the definition of "school grounds" may vary somewhat across students.

Much research recognizes the importance of prior victimization in the development of students' fear and risk perceptions, though it is uncertain how long previous encounters with victimization actually affect fear and risk. If there is a specific window or period of time within which students feel particularly vulnerable, then the measures used in this study and many other works may be somewhat limited. The indices for prior sexual and nonsexual victimization asked students about the events that occurred within the *current* school year. Though framing questions within a specific timeframe is a solid methodological technique, it could have an impact on students' responses. For instance, it is possible that their responses would have differed if asked about lifetime victimization.

On the other hand, it is also plausible that the fear and perceptions of risk expressed by students do not reflect their victimization within the past year. Rather, they may have based their responses on the victimization endured across their entire lifespan. Stated differently, though they were asked to identify only the victimization experienced in the current school year, they may have intentionally or unintentionally telescoped other encounters with victimization (and possibly self-reported delinquency, too) into their responses. In this way, some students may have answered questions based on different periods of time than other students.

By not asking students about their prior victimization *outside* of school, the results presented here may be somewhat incomplete. Even though students spend a great portion of their lives in school and participating in school-related activities, perhaps the events that occur outside the school walls are more fear-inducing than those that transpire in or on school grounds.

Support for this can be seen in studies that find different types of victimizations occurring in and out of school (see e.g., DeVoe et al., 2002). Also, given the prospect that risk can be displaced (Hope, 1995), the possibility exists that students' fear and perceived risk in-school may seep into and influence their fear and risk perceptions of victimization that occur in other non-school settings. The opposite is also likely in that the effects of out of school victimization may impact students' fear and risk perceptions of in-school victimization.

Failure to specify the type of perpetrator in the survey questions might also have affected the results presented in this dissertation. Although it is probably a safe assumption that the victimization experiences of students occurred at the hands of fellow students, research presented in Chapter Four revealed that some students are victimized by school staff or faculty. Similarly, since the questions used here asked students to assess their victimization, as well as fear and perceived risk, "on school grounds or during school-related activities," it is possible that students' victimization was committed by other adolescents – not fellow students – at specific school functions (e.g., school dance or sporting event). This might be important in that victimization perpetrated by fellow students might have a different impact on fear and perceptions of risk than acts committed by unknown adolescents from other schools or by adults.

Similarly, when looking at the delinquency measures, the question wording implies that the victims were other students, but this might not be the case. Perhaps, for instance, students stole from teachers or threatened staff members. Not only does the somewhat vague wording of these questions present interpretational issues for students, but there might be a fundamental difference in fear and risk perceptions among students who victimize their peers versus those who commit offenses against school personnel.

Further, this dissertation employed frequency measures for self-reported delinquency, but the use of variety measures may have yielded different outcomes. In supplemental analysis run in SPSS (not shown here), a measure of delinquency variety was substituted for the measure of delinquency frequency. The effects of sexual and nonsexual delinquency on fear and perceived risk of sexual and nonsexual victimization did not change and nearly all other effects remained unchanged as well.[36] The frequency measure of delinquency used here appears appropriate and might better capture exposure, which is desirable given the focus of this dissertation (i.e., lifestyle/routine activities).

Finally, while low self-control proved to be a very significant factor influencing students' fear and risk perceptions, the measure used in this dissertation does not appear to capture the entire dimensionality of low self-control. As discussed in the end of Chapter Four, there are several parts to low self-control, yet this measure focuses heavily on impulsivity. Although the low self-control results were supportive of the proposed multivariate hypotheses, they might be tapping into a narrowed-version of low self-control.

Limitations Involving the Data or Sample

Beyond these operationalization issues, there are a few possible limitations that stem from the RSVP data or selected sample. For example, because of the pooled nature of the RSVP data, serial autocorrelation is a possible issue in this dissertation. While it is likely minimal given the fact that only four waves of data were pooled, it still is a threat to the validity of these finding (Stimson, 1985). Thus, the Durbin-Watson statistical test was conducted for each of the

[36] Parental attachment became significant and negative in the perceived risk of sexual victimization model while substance use became significant and negative in the perceived risk of nonsexual victimization model.

four main models. The *d*-statistic values for these models ranged from 1.936 to 2.013, which suggest the absence of autocorrelation.

Because the RSVP survey relied on self-reports for several sensitive issues (delinquency, prior victimization, fear, perceived risk), there is no guarantee that students were completely honest in their responses. According to many scholars, such as Clemente and Kleiman (1977), anytime researchers inquire about sensitive topics, such as fear, victimization, and crime, results are prone to respondent bias. Such misinformation may be intentional or unintentional, but, regardless, it can heavily impact the results. Students might not feel comfortable revealing information regarding *in-school* fear, perceived risk, victimization, and self-reported delinquency while answering questions in a school classroom. Similarly, many students, especially males, may be embarrassed to recognize and/or admit their fear. Researchers, such as Watkins and Melde (2007), have also found that offending behaviors and victimization experiences impact students' willingness to complete surveys. Such factors may also affect the truthfulness of their responses.

Though reverse record checks are a technique to minimize this threat (Skogan & Klecka, 1977), this was not done in order to protect the students' confidentiality and to increase parental consent. Plus, a great deal of victimization and offending that occur in daily school life are not detected by school personnel or reported in any official capacity. Much of it is dealt with informally and without being documented. Although such responses cannot be verified, other measures were employed to increase the validity of data. For instance, rather than using members of the school's staff to administer the surveys to students, trained project administrators were used (Wilcox, May, & Roberts, 2006). Confidentiality was also explained and emphasized to all student respondents.

In addition, a couple of threats to internal validity exist, which could have had an impact on the results found in this dissertation. For instance, since the study was a four-year panel design, it is possible that changes to the survey instrument may have occurred that could affect the study's results. Also, changes might have occurred in the outside world over the course of those four years that altered the meaning of fear, risk, and victimization. Given the timeframe within which the data were collected (i.e., 2001 through 2004), it is likely that students' fear and perceived risk of other, non-traditional types of in-school victimization (e.g., terrorist attacks and massacre-style school shootings) could have factored into their responses. Even though the data were pooled and "person-years" were the cases analyzed, these threats could have produced an inherently different response to the same question at different points in time. Though responses in year one are not compared to responses in year four in this dissertation, students' interpretation of the questions or their responses may have changed over the years. For instance, while the response in a particular year may accurately be tapping into fear of nonsexual in-school victimization (i.e., fear of having a weapon pulled or of being physically assaulted in a poorly guarded location at school), the response to that same question in a different wave may be measuring something else (i.e., fear of mass murder at the hands of hostile students or terrorists).

Another sample limitation to the study is the fact that data collection stops in the sophomore year. The latter years of high school (i.e., junior and senior years) are particularly noteworthy with regards to physical and sexual development, as well as sexual exploration. Because of this, it is possible that data collected throughout students' entire high school career would have found different findings. It is reasonable, for example, that data from upperclassman would have revealed different scores on the outcome (i.e., fear and perceived risk) and predictor variables (e.g., victimization and delinquency).

In addition to these concerns, there are several limitations with regards to external validity of the sample drawn. For instance, because the sample contained students enrolled in Kentucky schools, findings might not be generalizable to students from other states or geographic regions. This is particularly important as Kentucky is fairly unrepresentative of many other states. Not only might the students be diverse compared to other places, but the culture of Kentucky and its schools might be fundamentally different than in other states.

Similarly, although the RSVP data included schools with varying degrees of urbanization, it relied only on data from public schools. This dissertation, like most of the student-fear works, neglects the fear and perceived risk in private schools. Although the few works that have inquired into this matter reveal that public school students are more fearful, these studies are few and outdated.

Another limitation is that ineligible students, particularly because of parental non-consent, may differ substantially from participating students. As indicated in Chapter Five, active parental consent was granted for 43% of the potential subjects. Although this rate is comparable to other studies where the sample is gathered from active consent, students who were not allowed to participate may differ, at least on some measures (e.g., parental attachment), from RSVP participants.

Relatedly, students who actively skip school, regardless of the reason, may differ in terms of their fear or perceived risk of school-based victimization. This may be particularly important if fear, perceived risk, or victimization were responsible for the school absence and missed opportunity to participate in the various surveys. As indicated in Chapter Four, the broader fear of in-school victimization literature does show that a portion of students regularly skip school because of their fear and/or perceived risk. Research conducted by the National School Safety

Center (2010), for instance, reveals that one out of 12 students who avoid school do so because of their fear. As Lalli and Savitz (1976) suggest, truancy or dropping out of school may be caused be extreme fear of school or traveling to and from schools. In this way, being truant or dropping out may actually be a rational choice – one that may even be supported or initiated by parents (Lalli & Savitz, 1976). Again, relying on in-school surveys to measure fear and perceived risk of the school setting may not be sufficient. It is possible that those who are the most fearful have chosen to avoid school at all costs. Thus, students who experience extreme fear and perceive tremendous risk of in-school victimization might not have been present to participate in the survey. The same argument can be applied to delinquent students as well, as students who participate in more delinquent acts may attend school less regularly or often, which would affect their participation in the study.

In this vein, the theoretical nature of low self-control presents a unique problem for survey data. Because students were administered surveys in-class, it is entirely possible that those with extremely low levels of self-control were not present to complete the survey. Those students with low self-control who were present to complete the survey were likely responsible for some of the missing values. According to Watkins and Melde's (2007) work, students who exhibit lower self-control were significantly more likely to have incomplete surveys than students with higher levels of self-control.

As mentioned in Chapter Six, approximately 3,000 records were omitted from the hierarchical linear regression because of missing data. The largest source of this missing data comes from the socioeconomic status measure, which is an average of the educational attainment of the mother and father. Nearly 1,350 students did not know or report the educational attainment of either their mother or father. As demonstrated in the last chapter, though, the

results of the models run without socioeconomic status were not that different from the original models that included that measure. Despite the limitations just discussed, the findings produced in this dissertation offer some insight into potential policies that could reduce students' fear and perceived risk of in-school victimization.

POLICY IMPLICATIONS

Although this dissertation merely scratched the surface of school-based fear, it nevertheless provided an integral step toward understanding the fear and risk that exists in secondary institutions. As with the crime problem, reducing school-based fear of victimization may require fixing broader societal and economic problems (McDermott, 1980). Yet, there is much that can be done by schools and parents to reduce fear and risk among students. The empirical results presented in Chapter Six are suggestive of several potential policy options. These will be discussed in terms of their relationship to indicators of vulnerability and lifestyle/routine activities.

Policies Involving Vulnerability

Because of the higher levels of fear and perceived risk expressed by female students, attempting to make them feel safer in school is a priority. In order to reduce women's fear of crime, according to Stanko (1995), women's autonomy will need to be greatly advanced. In this sense, addressing women's needs in a much broader social context will be necessary. Although the structural and cultural causes of sexual victimization need to be improved, schools can still be integral in reducing the fear and perceived risk experienced by female students. Female

students need to know they are not alone. They should be told that all women, at some point or another, have experienced fear of sexual victimization – to the point where it is an obvious and "added burden" of being female (Gordon & Riger, 1989). Females, of any age, need to be empowered and educated. Discussing the actual risks, consequences, causes, and situational and lifestyle factors associated with sexual victimization both in and out of school is essential in this endeavor. Teaching them how to handle or cope with their heightened sexual vulnerability could help lower their fear and risk perceptions.

Yet this by no means suggests that males' fear and risk perceptions should be ignored. On the contrary, the findings of this dissertation and the ones produced in May (2001a) suggest that there is much to learn about the fear and risk expressed by males. There seems to be some sort of similar perceptually contemporaneous offense effect for them as well. Similar to female students, a portion of male's fear and risk of nonsexual victimization was explained by their fear and risk of sexual victimization. As suggested by May, it appears that they may feel not in control and/or believe that their masculine identity is in question (see also Fisher & May, 2009). These feelings of powerlessness, May (2001a) argues, may be responsible for this effect. It is unclear whether these feelings are unique to school or the school environment. These may also stem from males' heightened risk for victimization. Once researchers get a better grip on why male students' fear and perceived risk for sexually-based victimization underlies their fear and risk of nonsexual victimization, policies tailored to male students and their needs can be created.

Gottfredson's (1997) review of crime-reduction programs reveals that those that focus on improving decision-making and problem-solving tend to be more effective at reducing fear of crime in schools. In this vein, it might make sense to educate all students and provide them with techniques to strengthen their ability to make decisions, solve problems, and evaluate risk.

Moore and Trojanowicz (1988) suggest improving communication within and across social networks. Doing so, they argue, could help relay accurate information regarding risk while also providing advice about how to appropriately respond to such risk. Yet, this is by no means a blanket solution to the fear and risk problem. As discussed shortly, individual variations in genetics and personality characteristics likely impacts students' ability to make decisions, interpret risk, and express emotions like fear.

Although not examined here, school is not only fear-provoking for students, but also for parents. Several studies, even those before well-publicized school shootings, found that parents worried or were fearful for their children at school (Lalli & Savitz, 1976, Savitz et al., 1977; see also Arnette & Walsleben, 1998). Parents' altruistic fear for their children is important, as it can have a powerful effect on their children's sense of vulnerability. Students' fears and perceived risk of school-based victimization might not only be guided by their perceived vulnerability and lifestyle/routine activities, but by their parents' perceptions of fear and risk. Educating parents on in-school victimization, therefore, seems like a necessary step as well.

Because of the important effect that prior victimization had on fear and risk perceptions, an obvious policy implication is to try to reduce in-school victimization. While this seems like a daunting task, perhaps approaching fear of crime in schools from a problem-oriented policing mentality might be fruitful (King, 2009; see Center for Problem-Oriented Policing, 2011). Students, teachers, administrators, parents, members of the community, and police officers could unite to identify specific fear- and crime-related issues in the schools. The SARA model (Scanning, Analysis, Response, and Assessment) should be utilized in this process (Eck & Spelman, 1987). Evaluations of school-based prevention programs that employed similar

techniques have been successful in reducing personal and property crime at school (see Fuchs & Fuchs, 1989 and Gottfredson, 2001).

Once problems and problem areas have been identified, techniques of situational crime prevention (see Cornish & Clarke, 2003) and Crime Prevention Through Environmental Design (see Newman, 1972, 1996) can be incorporated into the responses. Some responses will also need to be multilevel, involving interventions at the school-, classroom-, and individual-levels. Through these efforts, it may be possible to lower victimization, fear, and perceptions of risk. Giving students a voice to address their fear may be both therapeutic, but may also unite them in a Durkheimian fashion.

It is important for students to be made aware of the guardianship measures implemented at school to improve their safety. Studies show that a large portion of college students are oblivious to efforts that are implemented on campus (Barberet & Fisher, 2009). In fact, Barberet and Fisher (2009) propose that education regarding safety measures and their effectiveness could aid in reducing fear among students. This approach should be explored for secondary students as well.

However, it is important to note that just increasing target hardening measures alone may prove to be counterproductive. As with Schreck and Miller's (2003) work, the presence of security measures, especially in excess, may serve as indicators of disorder. In this way, they may arouse students' fear and lead them to believe they are at risk for victimization at school. Students who previously were not fearful, or whose fear was relatively low, might simply start to believe that there is something to fear. Before schools hastily declare war on fear and create a prison-like environment for students, it is important for them to determine why their students are afraid, what crimes they fear, and what they perceive their risk as being.

Beyond just reducing victimization, school should focus on teasing. According to Arnette and Walsleben (1998), because of the widespread nature of bullying and since much of it occurs out of the purview of teachers or school personnel, bullying is quite fear inducing for students. In addition to the bullying and teasing that occurs on school property, it is important to also address bullying that occurs through various technological mediums (e.g., social networking websites, email, text messages). Although the transmission and reception of negative or inappropriate messages may not occur at school, the fear and perceived risk of in-school victimization will likely increase if exposed to online bullying or to messages sent or posted electronically. Implementing bullying reduction techniques and programs, such as those identified by Olweus (1993, 1997), would help in this regard. Schools should also reach out to parents, as they can assist in handling perpetrators and/or guarding the victims of bullying.

Schools should also try to provide students with more advanced social tools that they could utilize in lieu of bullying. By encouraging teachers to use assignments that are discussion-based or that involve cooperation, students can improve their communications skills and strengthen their peer relationships. Integrating conflict-resolution into the curriculum may also help in this endeavor. Hopefully, with these social tools, students can grow out of bullying or at least do so at an earlier age.

Policies Involving Lifestyle/Routine Activities

Though low self-control is a consistent predictor for students' fear and risk perceptions, it proves to be rather challenging in terms of creating policy. Part of this difficulty lies in the fact that the precise mechanism (i.e., target attractiveness, exposure, guardianship) has yet to be uncovered. Attempts at educating these students on how to reduce their attractiveness and

exposure and/or increase their guardianship may fall on deaf ears. While it is uncertain whether students with low self-control will be able to fully and successfully reduce their attractiveness and exposure or increase their guardianship, schools can increase the presence of teachers or staff at certain locations (i.e., the fear and hot spots) and during specific times (e.g., during class transitions, before or after school, during lunch).

Schools should also focus on controlling the importation and distribution of contraband in the schools. Students who thought that illegal items were easy to obtain at school exhibited more fear and reported higher perceptions of risk for both sexual and nonsexual in-school victimization than those without such beliefs. Efforts to reduce the presence of drugs, alcohol, and weapons on school grounds should involve the techniques of situational crime prevention. For instance, schools could get rid of lockers and require clear backpacks. This would remove some of the places where students could conceal illegal items. Schools could use lockers as a privilege that has to be earned through good grades and behavior. Yet this alone may not be successful. Schools should encourage parental involvement in reducing the influx of drugs, alcohol, and weapons, especially if they are intentionally or unintentionally the sources of this contraband.

Attachment to peers was another important predictor of students' fear and risk. Across all of the main models, students who had stronger bonds to friends were less afraid and perceived less risk than students with weaker peer attachment. Because of this, school personnel could make an effort to enhance the social aspect of schools (i.e., improving social skills and peer bonds). Students need to be encouraged to socialize and develop bonds with other students. Unfortunately, due to budget cuts, many schools have to forgo some of the opportunities for students to interact socially (e.g., art, music, physical education classes and many after-school

programs). Thus, teachers may have to find ways to incorporate social skills and interaction into academic lessons. Assigning group or team assignments rather than solo assignments both in and out of class could help strengthen bonds and improve social skills. Programs that have utilized similar techniques in order to improve social skills and the social competency of students tend to be very successful in reducing school-based delinquency (Gottfredson, 2001). With so much emphasis placed on academic success, the importance of social interaction is often lost in the shuffle. Social skills, interaction, and integration represent very real and important dimensions of life. Without these, functioning in society can be difficult and awkward, which can negatively impact self-esteem and feelings of self-worth, not to mention fear and perceived risk.

Given that students who perceived teachers as willing to intervene during violent situations had lower levels of fear and risk, it seems necessary to increase the perceived guardianship capability of teachers. This falls squarely on the shoulders of teachers – they need to be viewed as willing to protect students, while also being seen as approachable and fair. Teachers need to be educated on the need of students to feel secure and ways to improve their perceived willingness to intervene. Teachers and other school personnel need to work on reaching out more to students, particularly those that seem at-risk for victimization or who exhibit fear of in-school victimization. Not only would this improve students' perceptions of teachers' willingness to intervene, but it could simultaneously improve their attachment to teachers. Programs that have utilized similar techniques have demonstrated effectiveness in reducing problem behaviors in the classroom while strengthening student-teacher relations (Gottfredson, Gottfredson, & Hybl, 1993). Other programs have focused on the communal school organization, as it has been linked to students' participation in delinquency, as well as

their attachment to schools and teachers (Payne, 2008; Payne, Gottfredson, & Gottfredson, 2003).

Quite simply, students have a right to be and to feel safe in their schools. After all, safety is a basic necessity in a learning environment (McDermott, 1980). Rather than being a breeding ground for delinquency and fear, school should be in an environment where learning, safety, and protection flourish. In order to achieve such lofty goals, though, students' fear and perceptions of risk must be addressed. The findings of this dissertation suggest that several indicators of vulnerability and lifestyle/routine activities are responsible for a portion of students' fear and perceptions of risk. Yet, in order to gain a better handle on the fear and perceived risk of secondary students, future research must continue to explore these important issues. The empirical explorations recommended below are not only central to understanding students' fear and risk perceptions, but in order to more fully understand *adult's* fear and risk, the best starting point may very well be adolescence (Burt & Estep, 1981).

FUTURE STUDIES

Although this dissertation advances the field of fear and risk research in a couple of ways, additional research is needed to more fully understand the fear and risk of secondary students. An important starting point in this endeavor may be replicating the work here on another sample of secondary students. Beyond future replications, the review of school-based literature coupled with the specific findings of this dissertation is suggestive of several future lines of research. First and foremost, future studies should examine these same or similar indicators of vulnerability and lifestyle/routine activities in a multilevel context. In the broader fear research,

there is evidence to suggest that indicators of risk come from both the individual-level and contextual-level (Lee & Ulmer, 2000; Wilcox, Land, & Hunt, 2003). While multilevel criminological research is a rapidly growing area (see e.g., Wilcox, Gialopsos, & Land, forthcoming; Wilcox, Land, & Hunt, 2003), few multilevel fear studies exist (for exceptions see Franklin et al., 2008 or Wyant, 2008) and even less are focused specifically on the school environment (for exceptions see Swartz et al., 2011; Tillyer et al., 2011; Wilcox Rountree, 1998). This appears to be particularly relevant since the variance components of the main models (see Tables 6.5 through 6.7) revealed that cross-school variation remained in the dependent variables even after accounting for the individual-level variables. It is likely that a portion of this unexplained variation is caused by the omission of school-level variables from the analyses. Approaching fear and risk from a multilevel perspective is also important as the context of the school might alter the programs or policies aimed at reducing students' individual vulnerability.

Studies should focus on both the school and the neighborhood as sources of students' fear and perceived risk. McDermott (1980, 1983) argues that fear of victimization at school likely reflects a broader community-level disruption (see also Arnette & Walsleben, 1998). In this way, fear of school-based victimization is just part of a general life of vulnerability and unpredictability. Support for this can be seen in the finding that students who are typically the most fearful of school violence reside in more fear-inducing neighborhoods (McDermott, 1983). As a result, McDermott (1983) argues that treating the school by itself as the source of the fear (as well as offending and victimization) problem is both futile and a waste of limited resources. What is more, targeting just the school for prevention or reduction programs might displace criminal or delinquent acts into the community. Studying the interaction of individual- and

contextual-level factors in tandem may help further our understanding of students' fear and risk (Donnelly, 1989).

Scholars should examine other indicators of vulnerability among secondary students, including physical and mental retardation or handicap. While these have been studied in adult-based samples, no known works have done this using samples of secondary students. Also interesting would be to examine the size of students (both in terms of height and weight) as indicators of vulnerability rather than using age or grade level for measures of physical vulnerability. A student in junior high could be larger and stronger than most high school students whereas a high school upperclassman could be smaller and weaker than many junior high students. By relying solely on age or grade level, researchers are missing a potentially significant form of vulnerability. Though probably controversial, studying the attractiveness of students and how that relates to their fears and perceptions of risk would be a fascinating research endeavor. Similarly, while physical, sexual, and social vulnerability have been advanced as predictors of fear and risk, it appears that there is another type of vulnerability that has yet to be identified in school-based fear and risk literature – that is intellectual vulnerability. Although some studies have examined the effect of GPA on fear and risk, this is not a perfect proxy for intelligence. Thus, it would be useful to explore how other indicators of intelligence (e.g., IQ tests or other measures of performance) affect students' fear and perceived risk. Relatedly, intelligence may also be linked to lifestyle/routine activities, which would also impact fear and risk perceptions.

Other prospective studies could explore the effect of students' personalities on their levels of fear and perceptions of risk. With the exception of low self-control and self-esteem, few empirical works have tested different personality traits or dispositions as predictors of

students' fear and risk. Yet, this seems to be an exceptionally relevant avenue of research. Many personality characteristics, such as openness, conscientiousness, extroversion, agreeableness, and neuroticism (i.e., the five factor model), would likely impact students' perceived vulnerability, as well as their fear and risk. Understanding whether students' fear of crime is a disposition (i.e., a trait) or is situational (i.e., a state) might provide additional insight into their fear and risk (see Gabriel & Greve, 2003). Essentially, these factors could also "bound" or limit the rationality of students' fear and risk perceptions.

In this vein, future works should also consider how personality traits and dispositions, such as low self-control, condition the relationship of indicators of individual-level vulnerability on students' fear and perceived risk. In a similar manner, indicators of lifestyle/routine activities may also moderate the effect of indicators of vulnerability on fear and perceptions of risk. Examining more than just direct effects is an essential next step in the study of fear and risk, in general, and among students, in particular. These conditional effects, too, may impact the rationality of students' fear and risk perceptions. In addition, studies should explore whether students engage in techniques of neutralization and whether this affects their vulnerability, fear, and perceived risk. According to Agnew (1985), these techniques may neutralize or mediate the effect of prior victimization on fear. They may also have an effect on vicarious or indirect victimization and fear. Though proposed for fear, it would also be interesting to see if the techniques of neutralization are applicable to risk as well.

Future studies should also examine the genetic effects on fear and the ability to calculate risk. According to Benson and Sams (forthcoming) and others, emotional reactions (e.g., fear), decision-making, and rational calculation may have roots in our genetic evolution, biological makeup, and brain development. Given the structure of the modern brain, our behaviors may, at

times, be driven by emotional responses (i.e., fear) rather than rational cognition (i.e., perceptions of risk). What is more, a part of our rational decision-making is unconscious. This may have significant effects on the behaviors and lifestyle/routine activities of individuals, in general, and students, in particular. Exposure to repeated stress can also negatively impact our ability to make decisions (Benson & Sams, forthcoming). These propositions and findings have potentially huge implications for policy development. Further, other scholars, such as Fetchenhauer and Buunk (2005) suggest that the greater fear expressed by women, particularly in regards to sexual victimization, is likely evolutionary-based as well.

Another possible research avenue would be to conduct an even lengthier longitudinal study to examine how fear changes over the life-course. This would allow fear and perceptions of risk to be compared across developmental periods (e.g., high school fear/risk could be compared to college fear/risk or fear and risk perceptions as a juvenile could be compared to fear and risk when elderly). Personal fear could also be compared to altruistic fear later in life. Perhaps students who express more fear and perceive greater risk of in-school victimization display more altruistic fear for spouses and children when they are adults. Similar to Farrington's (1993) work with bullies, it might also be important to see if fearful secondary students grow up to be fearful adults, who then produce fearful children of their own.

Incorporating parents or siblings into research on students' fear and risk perceptions might be relevant. An interesting pursuit, for example, would be to examine whether parenting styles (i.e., authoritarian or authoritative) or parental personality characteristics affect students' fear and perceptions of risk of in-school victimization. Related, examining socialization differences and the affect it has on adolescents' fear and risk perceptions seems important. As recommended by Sacco (1990), it would be beneficial to use Hagan, Gillis, and Simpson's

(1985) power control theory as a framework for studying fear and risk. Females who were raised in more egalitarian households should, theoretically, take more risks and engage in different lifestyle behaviors than females raised in more patriarchal families. Perceived vulnerability in general, as well as perceived sexual vulnerability would also differ depending upon the type of family relations and socialization. Together these differences should produce variations in the level or frequency of female students' fear and perceived risk. They may also impact the fear and risk of male students.

Based on the consistent effect of prior teasing on fear and risk, it seems necessary to empirically focus on how bullying affects fear and risk perceptions of in-school victimization. Although once viewed as nothing more than child's play, today bullying is considered an abusive behavior that is frequently a precursor to violent offenses (Arnette & Walsleben, 1998; Olweus, 1993, 1997). In fact, bullying, and its more recently discovered cyber counterpart, has been coined "peer child abuse." Although some studies, such as Nolin et al., (1996), have included bullying in prior victimization, or as a type of fear, most have not. This is important as Nolin et al. (1996) reported that bullying was the offense most reported by students as occurring in their school. They also proposed that fear of in-school victimization is more prevalent in middle school compared to high schools because of the higher frequency of bullying in middle schools. Additionally, Astor et al. (2001) reported that areas deemed unsafe by students were typically places where bullying was prominent. More recently, Randa and Wilcox (2010) found that bullying victimization predicted students' avoidance behaviors in general, as well as at specific places at school. It appears that bullying and other teasing behaviors have a large impact on students' academic lives and should be more fully examined.

Just as the bifurcation of students' fear, perceived risk, victimization, and delinquency proved important, future works should seek to separate peers' sexual and nonsexual delinquency. This may be particularly important as the findings of the current study failed to find, for the most part, significant effects of peer delinquency on fear and risk. Also, dividing self-reported delinquency into delinquent/status offenses and crime might reveal differences in students' fear and risk perceptions. Although both are indicative of some sort of deviance or violation of social norms, there is a definite difference in the severity of these acts. Such differences could have an effect on students' fear and risk perceptions. Consistent with the limitations listed earlier in this chapter, it would be beneficial for future works to find ways to survey students who have dropped out of school, as well as those who have been expelled, suspended, or sent to alternative school. Investigating these students might provide a unique perspective on students' fear and perceived risk. Crime and delinquency, for instance, might be a *reaction* to their fear and risk.

An obvious line of future research would involve students' use of social media, particularly social networking sites. In many ways, this would increase both their vulnerability or attractiveness as targets and their exposure. Not only can this technology affect victimization and bullying, but it provides a rapid avenue for relaying information about everyday life, including events that occur at school. This technology, as well as the prevalence of cell phones and texting in schools, provides new opportunities for students to transmit information that could impact other students' fear and risk perceptions. Although adolescent gossip has long served as a form of vicarious victimization and indirectly affected fear and risk, technological advances of today provide a faster and more far-reaching form of fear and risk transmission.

CLOSING REMARKS

Although not previously discussed, it is important to note that not all fear is bad.[37] In fact, it is reasonable that a certain degree of fear is actually beneficial. In everyday life, fear can help us to accomplish tasks that we never thought possible (Ferraro & LaGrange, 1987). From an evolutionary standpoint, anxiety and fear are normal responses found in virtually all species that help defend against threats and promote survival (Clark, 2003; Marks & Nesse, 1994). Thus, on many levels, being fearful is a form of protection and is fairly useful (Garofalo, 1981).[38] Utilizing target hardening techniques (e.g., locking doors or installing an alarm), avoiding potentially dangerous areas or times, and improving protective capabilities may prevent many individuals from actual victimization. For some, this fear is highly functional, serves as a defense to crime, and motivates precaution instead of restricting the quality of life (Jackson, & Stafford, 2009). In this vein, research by Jackson and Gray (2010) revealed that about one-fourth of respondents who worried about crime actually felt safer because of the precautions they took and believed that their routine activities and quality of life did not suffer. Thus, reducing or eliminating all fear, even if possible, would likely increase both the risk of victimization and actual injuries to the general population (Warr, 2000).

At the same time, though, too much fear can be detrimental. If daily activities and behaviors are altered in such a way that they become inconvenient and unnecessary, than the effects of fear can cripple and destroy lives. In addition to being counterproductive, Ferraro and

[37] This is consistent with the evolutionary analysis of anxiety, which argues that normal forms of anxiety become not normal when they are excessive, deficient, or occur in response to wrong cues/targets/stimuli (Marks & Nesse, 1994).

[38] Interestingly, most of the survey instruments that measure fear or worry about crime assume that it negatively affects individuals and communities (Gray et al., 2008). As discussed in Gray et al.'s work, these emotions can be useful and aid in problem-solving.

LaGrange (1987) argue that too much fear can cause physiological disturbances and lead to a state of incapacitation (see also Ross, 1993). Withdrawing from public life and living in a fortress-like society would decrease social interaction (Warr, 2000) and cohesiveness, which would likely also increase the risk of victimization and actual crime.[39]

Just as fear can adversely affect adults, fear and perceived risk of in-school victimization can have deleterious effects on students' well-being and educational performance (Savitz et al., 1977; Wayne & Rubel, 1982). In highly feared school settings, learning undoubtedly suffers. As Lalli and Savitz (1976) befittingly summarized: "It is difficult to learn if you are afraid to go to school, afraid to be near school, and even afraid to be in a school room" (p. 415). Leitman et al. (1995) found that some students do, in fact, attribute their mediocre academic performance to their fear of victimization. Not only does fear affect concentration and performance, but it likely shapes students' attitudes toward school (McDermott, 1980). Students' fear can lead to a school atmosphere chock-full of mistrust, which can destroy school morale. At the same time, it suggests to students that school personnel are ill-equipped to deal with their problems (Wayne & Rubel, 1982).

To cope with this fear or perceived risk, students adjust their routine activities. Leitman et al. (1995) report that nearly one in eight students resort to changing their routes to and from school to escape fearful situations, people, or places. Students restrict their mobility and activities after school, including avoiding the library (Williams, Singh, & Singh, 1994) or skipping school activities or sports (Lab & Clark, 1997). What is more, students' avoidance behaviors in response to school fear include skipping school or dropping out altogether

[39] See Dolan and Peasgood (2007) or Moore and Shepherd (2006) for information on estimating or 'shadow pricing' the intangible costs associated with fear of criminal victimization.

(McDermott, 1980). Leitman et al. (1995), for instance, conclude that more than 10% of students skip class or school altogether because of their fear of being victimized.

When this occurs, not only does fear and perceived risk disrupt academic learning, but they also hinder the development of personal and life skills (Arnette & Walsleben, 1998). Fear of school-based victimization can, thus, adversely affect students' future prospects and prevent them from contributing to society. In this way, educational disruptions caused by school-based victimization and fear may have more enduring effects on society than crime or fear that occur in other contexts (Bastian & Taylor, 1991). According to Wayne and Rubel (1982), there is "…a subgroup of youngsters so adversely affected by fear as to merit the label 'socially and educationally disadvantaged'" (p. 230).

As correctly stated by Garofalo (1981), research on fear of crime will continue for the foreseeable future. There will always be new hypotheses to test and experiments to conduct, none of which will completely resolve the fear of crime phenomenon. There will always be people who irrationally fear crime and incorrectly calculate their risk of victimization. In this way, there will be those who are too afraid and unafraid of crime and who overestimate and underestimate their risk. There will also be individuals whose fear and risk is not commensurate with their vulnerability and lifestyle/routine activities. Yet, it is vital to point out that regardless of whether risk is correctly or incorrectly calculated or fear is deemed rational or irrational, those risks and fears are very real for those people. Echoing the sentiment of the well-known Thomas theorem, "It is not important whether or not the interpretation is correct – if men define situations as real, they are real in their consequences" (Thomas & Thomas, 1928, p.572). For far too many students, fear and perceived risk of sexual and nonsexual in-school victimization, as well as the

related effects and consequences, are a nasty reality. For these adolescents, the school bell tolls in a different way.

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Appendix A: Survey Items Used to Create the Variables

Variables	Survey Items
Dependent Variables	
Fear of Sexual In-School Victimization	**In the current school year, how often are you afraid that the following will happen to you on school grounds or during school-related activities?** *Receive unwelcome sexual remarks from someone* *Be touched by someone in a sexual manner without your consent/against your will* **Responses coded from 1 = Never to 5 = Always**
Fear of Nonsexual In-School Victimization	**In the current school year, how often are you afraid that the following will happen to you on school grounds or during school-related activities?** *Be physically attacked* *Be forced to give up your money or property* *Have money or property stolen when you are not around* *Have a gun pulled on you* *Have a weapon pulled on you* **Responses coded from 1 = Never to 5 = Always**
Perceived Risk of Sexual In-School Victimization	**In the current school year, what is the chance that the following will happen to you on school grounds or during school-related activities?** *Receive unwelcome sexual remarks from someone* *Be touched by someone in a sexual manner without your consent/against your will* **Responses coded from 1 = Very Low to 5 = Very High**
Perceived Risk of Nonsexual In-School Victimization	**In the current school year, what is the chance that the following will happen to you on school grounds or during school-related activities?** *Be physically attacked* *Be forced to give up your money or property* *Have money or property stolen when you are not around* *Have a gun pulled on you* *Have a weapon pulled on you* **Responses coded from 1 = Very Low to 5 = Very High**

Independent Variables

Gender	**What is your sex?** **Responses coded as 0 = Male and 1 = Female**
Age	**What is your date of birth?** **Responses coded in years**
Ethnicity/Race	**How do you describe yourself?** **Responses coded as 0 = White and 1 = Non-White**
Socioeconomic Status	**How far did your mother go in school? How far did your father go in school?** **Responses coded from 1 = Completed Grade School or Less to 7 = Graduate or Professional School**
Prior Sexual In-School Victimization	**In the current school year, how many times have the following things <u>actually happened</u> to you on school grounds or during school-related activities?** *Received unwelcome sexual remarks from someone* *Been touched by someone in a sexual manner without your consent/against your will* **Responses coded from 0 = None to 10 = 10+**
Prior Nonsexual In-School Victimization	**In the current school year, how many times have the following things <u>actually happened</u> to you on school grounds or during school-related activities?** *Been physically attacked* *Been forced to give up your money or property* *Had money or property stolen when you were not around* *Had a gun pulled on you* *Had a weapon pulled on you* **Responses coded from 0 = None to 10 = 10+**
Prior Teasing Victimization	**Do you feel that you have been teased/picked on in a mean way because you are a member of a certain group?** **Responses coded as 0 = No and 1 = Yes**

Low Self-Control	**Please mark how often the following statements are true.** *I have trouble controlling my temper* *I have difficulty remaining seated at school* *I get very restless after a few minutes if I am supposed to sit still* *When I am angry, I lose control over my actions* *I have difficulty keeping attention on tasks* *I get so frustrated that I feel like a bomb ready to explode* *Little things or distractions/interruptions throw me off* *I'm nervous or on edge* *I can't seem to stop moving* *I don't pay attention to what I'm doing* *I am afraid I will lose control of my feelings* **Responses coded from 1 = Never True to 4 = Always True**
Sexual Delinquency	**In the present school year, how often have you done any of the following?** *Said unwelcome sexual remarks to someone at school* *Said unwelcome sexual remarks to someone not at school* *Touched someone in a sexual manner without their consent/against their will at school* *Touched someone in a sexual manner without their consent/against their will not at school* **Responses coded from 1 = Never to 5 = Daily or Almost Daily**
Nonsexual Delinquency	**In the present school year, how often have you done any of the following?** *Sold marijuana or other drugs* *Forced someone at school to give up their money or property* *Forced someone not at school to give up their money or property* *Stolen someone's money or property at school when they were not around* *Stolen someone's money or property not at school when they were not around* *Physically attacked someone at school (punched, slapped, kicked)* *Physically attacked someone not at school (punched, slapped, kicked)* *Taken a BB gun to school* *Taken a gun to school* *Taken an explosive to school* *Taken a weapon to school (other than gun or explosive)* *Used a gun during a fight* *Used another weapon during a fight (knife, brass knuckles, and so on)* *Vandalized public or private property (ex: destroyed property, graffiti, and so on)* **Responses coded from 1 = Never to 5 = Daily or Almost Daily**

Substance Use	**In the present school year, how often have you done any of the following?** *Smoked cigarettes* *Smoked cigars* *Used spit tobacco* *Drunk alcohol* *Gotten drunk* *Smoked marijuana* *Used inhalants (huffing)* *Used cocaine/crack* *Used speed* *Used crystal meth* **Responses coded from 1 = Never to 5 = Daily or Almost Daily**
Gang Membership	**Do you consider yourself a member of a gang?** **Responses coded as 0 = No and 1 = Yes**
Delinquent Peers	**Out of those closest friends, how many of them have done any of the following things in the present school year?** *Smoked cigarettes daily for one week or more* *Used smokeless tobacco daily for one week or more* *Gotten drunk* *Smoked marijuana* *Used inhalants (huffing)* *Used cocaine/crack* *Cut school completely* *Driven after drinking* *Been suspended from school* *Taken a gun to school* *Taken an explosive to school* *Taken a weapon to school (other than gun or explosive)* *Gotten arrested* *Sold marijuana or other drugs* *Stolen someone's money or property when they were not around* *Physically attacked someone (ex: punched, slapped, kicked)* *Vandalized public or private property (ex: destroyed property, graffiti, and so on)* **Responses coded as 0 = No and 1 = Yes**

Access to Illegal Items	**The following questions ask about how available certain things are to someone your age in your school during a typical school day. During a typical school day, it is easy for someone my age to get:** *Cigarettes* *Alcohol* *Marijuana* *Inhalants (for "huffing")* *Cocaine/crack* *A gun* **Responses coded from 1 = Strongly Disagree to 4 = Strongly Agree**
Parental Attachment	**How often do the following things happen with your mother/father (biological or adoptive mother/father only), <u>even if your mother/father doesn't live with you</u>?** *My mother/father seems to understand me* *My mother/father makes rules that seem fair to me* *My mother/father knows where I am when I am away from home* *My mother/father knows who I am with when I am away from home* *My mother/father is concerned with how I am doing in school* *My mother/father helps me with my homework* *My mother/father talks to me about my report card* *My mother/father sets a time for me to be home at night* *My mother/father makes me feel wanted* *I share my thoughts and feelings with my mother/father* *I do things with my mother/father* *I talk to my mother/father* **Responses coded from 1 = Never to 5 = Always**
Peer Attachment	**Think of those people you consider your closest friend(s). How strongly do you agree or disagree with the following statements?** *I respect the opinions of my closest friend(s)* *My best friend(s) would stick by me if I got in trouble* *The people I think of as my best friend(s) also think of me as a best friend* *I fit in well with my best friend(s)* *My best friend(s) take an interest in my problems* *I take an interest in the problems of my closest friend(s)* **Responses coded from 1 = Strongly Disagree to 4 = Strongly Agree**

School Attachment	**How strongly do you agree or disagree with the following statements about your school?** *I care a lot what my teachers think of me* *Most of my teachers are not interested in anything I say or do (reverse coded)* *Getting an education is important to me* *I would quit school now if I could (reverse coded)* *Most of my classes are a waste of time (reverse coded)* *I look forward to coming to school most mornings* **Responses coded from 1 = Strongly Disagree to 4 = Strongly Agree**
School Sports Activities	**During the school year, about how often do you take part in school sports (ex: basketball, tennis, football, cheerleading - NOT P.E. class)?** **Responses coded from 1 = Never to 5 = Everyday**
Other School Activities	**During the school year, about how often do you take part in other school activities (ex: band, student government, yearbook, FHA)?** **Responses coded from 1 = Never to 5 = Everyday**
Grade Point Average	**Which of the following best describes your overall grade average?** **Responses coded from 1 = A to 5 = F**
Teacher Intervention	**When acts of violence happen at your school, how often do teachers nearby try to stop what is happening?** **Responses coded from 1 = Never to 5 = Always**

I. Background Information

1. What is your sex?

   a) Male b) Female

2. What is your date of birth?

   _____ / _____ / _____
   (Month) (Day) (Year) Example: 06/09/88

3. How do you describe yourself?

   a) African-American
   b) Asian-American
   c) Hispanic American
   d) Native-American
   e) White
   f) White and Black
   g) Other

4. How many times have you moved in the past year?

   1) 0 times
   2) 1 time
   3) 2 times
   4) 3 times
   5) 4 times
   6) 5 times
   7) more than 5 times

5. How many times have you changed schools during <u>this school year</u>?

   1) 0 times
   2) 1 time
   3) 2 times
   4) 3 times
   5) 4 times
   6) 5 times
   7) more than 5 times

6. Do your parents (biological/adoptive) live together in the same house? *Circle Yes or No.*

   YES NO

7. Think of where you live <u>MOST</u> of the time. Who lives with you? **<u>Circle No (0) or Yes (1) for Each Item</u>**:

	No	Yes
a) Mother (biological/adoptive)	0	1
b) Father (biological/adoptive)	0	1
c) Grandparent(s)	0	1
d) Step-parent(s)	0	1
e) Brother(s) and/or Sister(s)	0	1
f) Aunt and/or Uncle	0	1
g) Other Adult(s)	0	1

8. How far did your mother (or female guardian) go in school?

	Mother/Female Guardian
Completed grade school or less	1
Some high school	2
Finished high school/GED	3
Finished vocational/trade school	4
Some college	5
Finished college degree	6
Graduate or professional school	7
Don't know	8

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9. Is your mother living? *Circle Yes or No.*

   YES NO

   - ***If yes, go to question #10.***
   - ***If no, skip to question #12.***

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10. Which of the following best describes your mother's (female guardian's) job situation?

	Mother/Female Guardian
Works full time	1
Works part time	2
Stay-at-Home	3
Unemployed	4
Disabled	5
Retired	6
In school/college	7
Don't know	8

11. How often do the following things happen with your mother (biological or adoptive mother only), <u>even if your mother doesn't live with you</u>?

	Never (1)	**Not very often** (2)	**Sometimes** (3)	**Often** (4)	**Always** (5)
a) My mother seems to understand me.	1	2	3	4	5
b) My mother makes rules that seem fair to me.	1	2	3	4	5
c) My mother knows where I am when I am away from home.	1	2	3	4	5
d) My mother knows who I am with when I am away from home.	1	2	3	4	5
e) My mother is concerned with how I am doing in school.	1	2	3	4	5

Never (1)	Not very often (2)	Sometimes (3)	Often (4)	Always (5)

f) My mother helps me with my homework. 1 2 3 4 5

g) My mother talks to me about my report card. 1 2 3 4 5

h) My mother sets a time for me to be home at night. 1 2 3 4 5

i) My mother makes me feel wanted. 1 2 3 4 5

j) I share my thoughts and feelings with my mother. 1 2 3 4 5

k) I do things (example: watch TV, go to sports events, go to dinner, and so on) with my mother. 1 2 3 4 5

l) I talk to my mother. 1 2 3 4 5

12. How far did your father (or male guardian) go in school?

	Father/Male Guardian
Completed grade school or less	1
Some high school	2
Finished high school/GED	3
Finished vocational/trade school	4
Some college	5
Finished college degree	6
Graduate or professional school	7
Don't know	8

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13. Is your father living? *Circle Yes or No.*

YES NO

- ***If yes, go to question #14.***
- ***If no, skip to question #16.***

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14. Which of the following best describes your father's (male guardian's) job situation?

	Father/Male Guardian
Works full time	1
Works part time	2
Stay-at-Home	3
Unemployed	4
Disabled	5
Retired	6
In school/college	7
Don't know	8

15. How often do the following things happen with your father (biological or adoptive father only), even if your father doesn't live with you?

Never (1)	Not very often (2)	Sometimes (3)	Often (4)	Always (5)

a) My father seems to understand me. 1 2 3 4 5

b) My father makes rules that seem fair to me. 1 2 3 4 5

c) My father knows where I am when I am away from home. 1 2 3 4 5

d) My father knows who I am with when I am away from home. 1 2 3 4 5

e) My father is concerned with how I am doing in school. 1 2 3 4 5

f) My father helps me with my homework. 1 2 3 4 5

g) My father talks to me about my report card. 1 2 3 4 5

h) My father sets a time for me to be home at night. 1 2 3 4 5

i) My father makes me feel wanted. 1 2 3 4 5

j) I share my thoughts and feelings with my father. 1 2 3 4 5

k) I do things (example: watch TV, go to sports events, go to dinner, and so on) with my father. 1 2 3 4 5

l) I talk to my father. 1 2 3 4 5

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16. Do you have an adult other than your mother or father (example: step-mother, step-father, aunt, uncle, boyfriend, girlfriend, grandparent, and so on) who lives with you? *Circle Yes or No*

YES NO

- ***If yes, go to question #17.***
- ***If no, skip to question#18.***

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17. How often do the following things happen with the "live -in" adult other than mother or father (example: step-mother/father, aunt/uncle, boy/girlfriend, grandparent, and so on)?

Never (1)	Not very often (2)	Sometimes (3)	Often (4)	Always (5)

a) A "live-in" adult seems to understand me. 1 2 3 4 5

b) A "live-in" adult makes rules that seem fair to me. 1 2 3 4 5

c) A "live-in" adult knows where I am when I am away from home. 1 2 3 4 5

d) A "live-in" adult knows who I am with when I am away from home. 1 2 3 4 5

e) A "live-in" adult is concerned with how I am doing in school. 1 2 3 4 5

f) A "live-in" adult helps me with my homework. 1 2 3 4 5

g) A "live-in" adult talks to me about my report card. 1 2 3 4 5

h) A "live-in" adult sets a time for me to be home at night. 1 2 3 4 5

i) A "live-in" adult makes me feel wanted. 1 2 3 4 5

j) I share my thoughts and feelings with a "live-in" adult. 1 2 3 4 5

k) I do things (example: watch TV, got to sports events, go to dinner, and so on) with a "live-in" adult. 1 2 3 4 5

l) I talk to a "live-in" adult. 1 2 3 4 5

18. Is there another adult who has an important influence in your life (example: coach, teacher, minister, parent of a friend, etc., someone other than a parent/step-parent, live-in adult)? *Circle Yes or No.*

YES NO

II. School Performance and Involvement

19. Which of the following best describes your overall grade average?

1) A 2) B 3) C 4) D 5) F

20. How much schooling do you think you will complete?

a) Some high school
b) High school/GED
c) Vocational/trade school
d) Some college
e) College degree
f) Graduate or professional school after college
g) Don't know

21. During the school year, how many hours PER WEEK do you work at a part-time job (including babysitting, family farm labor, etc.)?

a) None
b) 10 hours or less
c) 11 to 15 hours
d) 16 to 20 hours
e) 21 to 30 hours
f) Over 30 hours

22. On average, how much money do you have to spend on yourself each week (example: money from allowance, job, and so on)?

$ _____ per week

23. During the school year, about how often do you take part in any of the following:

Never (1)	Less than once per week (2)	1-2 days per week (3)	3-6 days per week (4)	Everyday (5)

a) School sports (example: basketball, tennis, football, cheerleading – NOT P.E. class) 1 2 3 4 5

b) Other school activities (example: band, student government, yearbook, FHA) 1 2 3 4 5

c) Community activities (example: church, youth group, 4H, Boy/Girl Scouts) 1 2 3 4 5

24. **How strongly do you agree or disagree with the following statements about your school?**

	Strongly Disagree (1)	Somewhat Disagree (2)	Somewhat Agree (3)	Strongly Agree (4)
a) I care a lot what my teachers think me.	1	2	3	4
b) Most of my teachers are not interested in anything I say or do.	1	2	3	4
c) Getting an education is important to me.	1	2	3	4
d) I would quit school now if I could.	1	2	3	4
e) Most of my classes are a waste of time.	1	2	3	4
f) I look forward to coming to school most mornings.	1	2	3	4
g) All students are treated fairly.	1	2	3	4
h) Students have a say in making school rules.	1	2	3	4
i) The principal gets out of his/her office and talks with students.	1	2	3	4
j) The principal is friendly.	1	2	3	4
k) Everyone knows what the school rules are.	1	2	3	4
l) The school rules are fair.	1	2	3	4
m) The punishment for breaking school rules is the same for all students no matter who you are.	1	2	3	4
n) The school rules are strictly enforced.	1	2	3	4
o) If a school rule is broken, students know what kind of punishment will follow.	1	2	3	4
p) The teachers keep order in the classroom.	1	2	3	4
q) The teachers are fair.	1	2	3	4
r) The principal is fair.	1	2	3	4
s) Teachers are interested in students.	1	2	3	4

III. School Safety

25. How safe is your school from crime?

a) Very unsafe
b) Somewhat unsafe
c) Somewhat safe
d) Very safe

26. **In the current school year, how often are you <u>afraid</u> that the following will happen to you *on school grounds or during school-related activities* (example: In class, on school bus, at football game, on fieldtrip, and so on)?**

Never (1)	Not very often (2)	Sometimes (3)	Often (4)	Always (5)

How often are you <u>afraid/worried</u> that you will…

a) be physically attacked (example: punched, slapped, kicked)	1	2	3	4	5
b) be forced to give up your money or property	1	2	3	4	5
c) have money or property stolen when you are not around	1	2	3	4	5
d) receive unwelcome sexual remarks from someone	1	2	3	4	5
e) be touched by someone in a sexual manner without your consent or against your will	1	2	3	4	5
f) have a gun pulled on you	1	2	3	4	5
g) have a weapon pulled on you (knife, brass knuckles, and so on, other than gun)	1	2	3	4	5

27. **In the current school year, what is the <u>chance</u> that the following will happen to you *on school grounds or during school-related activities*?**

Very low (1)	Low (2)	Medium (3)	High (4)	Very high (5)

What is the <u>chance</u> that you will…

a) be physically attacked (example: punched, slapped, kicked)	1	2	3	4	5
b) be forced to give up your money or property	1	2	3	4	5
c) have money or property stolen when you are not around	1	2	3	4	5

Very low (1)	Low (2)	Medium (3)	High (4)	Very high (5)

What is the <u>chance</u> that you will…

d) receive unwelcome sexual remarks from someone	1	2	3	4	5
e) be touched by someone in a sexual manner without your consent or against your will	1	2	3	4	5
f) have a gun pulled on you	1	2	3	4	5
g) have a weapon pulled on you (knife, brass knuckles, and so on, other than gun)	1	2	3	4	5

28. **In the current school year, how many times have the following things <u>actually happened</u> to you *on school grounds or during school-related activities*?**

a) been physically attacked (example: punched, slapped, kicked)
0 1 2 3 4 5 6 7 8 9 10+

b) been forced to give up your money or property
0 1 2 3 4 5 6 7 8 9 10+

c) had money or property stolen when you were not around
0 1 2 3 4 5 6 7 8 9 10+

d) received unwelcome sexual remarks from someone
0 1 2 3 4 5 6 7 8 9 10+

e) been touched by someone in a sexual manner without your consent or against your will
0 1 2 3 4 5 6 7 8 9 10+

f) had a gun pulled on you
0 1 2 3 4 5 6 7 8 9 10+

g) had a weapon pulled on you (knife, brass knuckles, and so on, other than gun)
0 1 2 3 4 5 6 7 8 9 10+

29. **When acts of violence happen at your school, how often do students nearby do the following?**

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
a) try to stop what is happening	1	2	3	4	5
b) cheer it on	1	2	3	4	5
c) watch without doing anything	1	2	3	4	5
d) report it to the proper people (teacher, principal)	1	2	3	4	5

30. **When acts of violence happen at your school, how often do teachers nearby do the following?**

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
a) try to stop what is happening	1	2	3	4	5
b) cheer it on	1	2	3	4	5
c) watch without doing anything	1	2	3	4	5
d) report it to the proper authorities (principal)	1	2	3	4	5

31. How many students at your school carry weapons (such as handguns or knives) to school on a regular basis?

a) None
b) Only a few
c) Some
d) Most
e) Not sure

32. **The following questions ask about how available certain things are to someone your age in your school during a typical school day.**

Strongly Disagree (1)	Somewhat Disagree (2)	Somewhat Agree (3)	Strongly Agree (4)

During a typical school day, it is easy for someone my age to get…

a) Cigarettes	1	2	3	4
b) Alcohol	1	2	3	4
c) Marijuana	1	2	3	4
d) Inhalants (for "huffing")	1	2	3	4
e) Cocaine/Crack	1	2	3	4
f) Ecstasy	1	2	3	4
g) OxyContin	1	2	3	4
h) Other pills	1	2	3	4
i) A gun	1	2	3	4

IV. Tobacco Issues

The following questions relate to tobacco products and use. Please answer False (0) or True (1).

	False	True
33. In my opinion, some brands of cigarettes or spit tobacco have cool ads.	0	1
34. I have sent in a coupon or post card to get something with a cigarette or spit tobacco logo or design on it (like a T-shirt).	0	1
35. I have things that advertise tobacco products (like a T-shirt, cap, and so on).	0	1
36. Someone in my family has a tobacco-related illness, such as a persistent cough or lung cancer.	0	1
37. Someone in my family died from a tobacco-related illness.	0	1
38. Someone in my family grows tobacco.	0	1
39. Someone in my family works for a company that makes tobacco products.	0	1
40. My father smokes or uses spit tobacco.	0	1
41. My mother smokes or uses spit tobacco.	0	1
42. The students in my school are allowed to smoke or dip in certain areas.	0	1
43. The teachers in my school are allowed to smoke or dip in certain areas.	0	1
44. My school <u>enforces</u> its policy against smoking/dipping on school property (you get punished for breaking the rules).	0	1

==========

45. Do you smoke cigarettes? *Circle Yes or No.*

YES NO

- ***If yes, go to question #46.***
- ***If no, skip to question #47.***

==========

46a) On average, about how many cigarettes do you smoke per day?
_____ cigarettes/day

b) What brand of cigarettes do you usually smoke?

1) Marlboro
2) Newport
3) Camel
4) Generic/store brand
5) Other

c) How soon after you wake in the morning do you smoke your first cigarette?

1) Within 5 minutes
2) Within 6 to 15 minutes
3) Within 16 to 30 minutes
4) Within 31 minutes to 1 hour
5) Over 1 hour

d) Do you find it hard not to smoke in a place where it is not allowed, such as in school, church, library, or movies? *Circle Yes or No.*

YES NO

e) If I had it to do over again, I would not start smoking. *Circle Yes or No.*

YES NO Don't Know

f) During the past year, how many times did you <u>seriously</u> try to quit smoking?

0) None
1) 1
2) 2
3) 3
4) 4
5) 5 or more

g) How much interest would you have in taking part in a stop smoking or stop dipping/chewing program designed for people your age?

1) No interest at all
2) Little interest
3) Some interest
4) Great deal of interest
5) Don't know

V. Alcohol Issues

==========

47. Which of the following best describes how much alcohol you usually drink at one time?

a) Don't drink
b) Small amount (1beer, 1 drink or less)
c) Medium amount (2 to 3 beers or drinks)
d) Large amount (4 to 8 beers or drinks)
e) Very large amount (9 or more beers or drinks)

- ***If you drink alcohol, go to question #48.***
- ***If you do not drink alcohol, please skip to question #49.***

==========

48. **Below are some things that may happen when drinking alcohol. Please mark how often they happen to you when you are drinking.**

Never (1)	Not very often (2)	Sometimes (3)	Often (4)	Always (5)

Because of alcohol, how often have you…

a) Had a hangover?	1	2	3	4	5
b) Gotten sick to your stomach/ vomited?	1	2	3	4	5
c) Been unable to remember what you did?	1	2	3	4	5
d) Gotten into trouble at school?	1	2	3	4	5
e) Gotten into fights (verbal or physical)?	1	2	3	4	5
f) Been stopped by the police?	1	2	3	4	5
g) Done poorly on a test or school project?	1	2	3	4	5
h) Missed a class at school?	1	2	3	4	5
i) Had sex with someone?	1	2	3	4	5
j) Been forced to have sex with someone?	1	2	3	4	5

VI. Health, Friends, and Risk

49. **How much do you think people will take a chance in harming themselves (physically or in other ways), if they do any of the following…**

No chance (1)	Slight chance (2)	Medium chance (3)	Great chance (4)

a) smoke one or more packs of cigarettes per day?	1	2	3	4
b) use spit tobacco regularly?	1	2	3	4
c) take one or two drinks (beer, wine, liquor) nearly every day?	1	2	3	4
d) have five or more drinks once or twice each weekend?	1	2	3	4
e) smoke marijuana on a regular basis?	1	2	3	4
f) use cocaine sometimes?	1	2	3	4

50. **In the present school year, how often have you done any of the following…**

Never (1)	Less than once a month (2)	About once a month (3)	About 1-2 times per week (4)	Daily or Almost Daily (5)

a) smoked cigarettes?	1	2	3	4	5
b) smoked cigars?	1	2	3	4	5
c) used spit tobacco?	1	2	3	4	5
d) drunk alcohol?	1	2	3	4	5
e) gotten drunk?	1	2	3	4	5
f) smoked marijuana?	1	2	3	4	5
g) used inhalants (huffing)?	1	2	3	4	5
h) used cocaine/crack?	1	2	3	4	5
i) used speed?	1	2	3	4	5
j) used crystal meth?	1	2	3	4	5
k) taken ecstasy?	1	2	3	4	5
l) taken OxyContin?	1	2	3	4	5

	Never (1)	Less than once a month (2)	About once a month (3)	About 1-2 times per week (4)	Daily or Almost Daily (5)
m) taken other pills?	1	2	3	4	5
n) sold marijuana or other drugs?	1	2	3	4	5
o) skipped school?	1	2	3	4	5
p) forced someone *at school* to give up their money or property?	1	2	3	4	5
q) forced someone *not at school* to give up their money or property	1	2	3	4	5
r) stolen someone's money or property *at school* when they were not around?	1	2	3	4	5
s) stolen someone's money or property *not at school* when they were not around?	1	2	3	4	5
t) physically attacked someone *at school* (punched, slapped, kicked)	1	2	3	4	5
u) physically attacked someone *not at school* (punched, slapped, kicked)	1	2	3	4	5
v) been suspended/expelled from school?	1	2	3	4	5
w) said unwelcome sexual remarks to someone *at school*	1	2	3	4	5
x) said unwelcome sexual remarks to someone *not at school*	1	2	3	4	5
y) touched someone in a sexual manner without their consent or against their will *at school*	1	2	3	4	5
z) touched someone in a sexual manner without their consent or against their will *not at school*	1	2	3	4	5
aa) taken a BB gun to school	1	2	3	4	5
bb) taken a gun to school	1	2	3	4	5
cc) taken an explosive to school?	1	2	3	4	5
dd) taken another weapon to school (knife, brass knuckles, and so on, other than gun or explosive)?	1	2	3	4	5

	Never (1)	Less than once a month (2)	About once a month (3)	About 1-2 times per week (4)	Daily or Almost Daily (5)
e) used a gun during a fight?	1	2	3	4	5
ff) used another weapon (knife, brass knuckles, and so on) during a fight?	1	2	3	4	5
gg) gotten arrested?	1	2	3	4	5
hh) driven after drinking?	1	2	3	4	5
ii) run away from home?	1	2	3	4	5
jj) vandalized public or private property (example: destroyed property, graffiti, and so on)	1	2	3	4	5

51. Of the times you have carried a gun to school, if ever, why did you carry a gun to school? *(Mark all that apply.)*

a) Never have carried a gun to school
b) Someone forced me to
c) It made me feel safer
d) It made me more accepted by my friends
e) It showed that I could get away with breaking school rules
f) It helped me get other students to do what I wanted them to do
g) Because I was angry with someone and I was thinking about shooting him/her

52. The following questions are about gun ownership. Circle No (0) or Yes (1).

	No	Yes
a) Do your parents own a BB gun?	0	1
b) Do your parents own a handgun?	0	1
c) Do your parents own a rifle or shotgun?	0	1
d) Do <u>you</u> personally own a BB gun?	0	1
e) Do <u>you</u> personally own a handgun?	0	1
f) Do <u>you</u> personally own a rifle or shotgun?	0	1

53. **How old were you when you FIRST (if ever) did each of the following?**
(Mark only one answer for each line.)

How old were you when you FIRST…	Never	Before Age 10	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	After Age 16
a. Smoked cigarettes?	0	1	2	3	4	5	6	7	8	9
b. Smoked cigars?	0	1	2	3	4	5	6	7	8	9
c. Used spit tobacco?	0	1	2	3	4	5	6	7	8	9
d. Drank alcohol?	0	1	2	3	4	5	6	7	8	9
e. Got drunk?	0	1	2	3	4	5	6	7	8	9
f. Smoked marijuana?	0	1	2	3	4	5	6	7	8	9
g. Used inhalants?	0	1	2	3	4	5	6	7	8	9
h. Used cocaine/crack?	0	1	2	3	4	5	6	7	8	9
i. Used speed?	0	1	2	3	4	5	6	7	8	9
j. Used crystal meth?	0	1	2	3	4	5	6	7	8	9
k. Took ecstasy?	0	1	2	3	4	5	6	7	8	9
l. Took OxyContin?	0	1	2	3	4	5	6	7	8	9
m. Took other pills?	0	1	2	3	4	5	6	7	8	9

54. **Thinking about your closest friends** – How many of them have done any of the following things in the **present school year**?

	None (1)	Very Few (2)	Some (3)	Most (4)	All (5)
a) smoked cigarettes daily for one week or more	1	2	3	4	5
b) used smokeless tobacco daily for one week or more	1	2	3	4	5
c) gotten drunk	1	2	3	4	5
d) smoked marijuana	1	2	3	4	5
e) used inhalants (huffing)	1	2	3	4	5
f) used cocaine/crack	1	2	3	4	5
g) used speed	1	2	3	4	5
h) used crystal meth	1	2	3	4	5
i) taken ecstasy	1	2	3	4	5
j) taken OxyContin	1	2	3	4	5
k) taken other pills	1	2	3	4	5
l) cut school completely	1	2	3	4	5
m) driven after drinking	1	2	3	4	5
n) been suspended from school	1	2	3	4	5
o) taken a gun to school	1	2	3	4	5
p) taken an explosive to school	1	2	3	4	5
q) taken a weapon to school (knife, brass knuckles, and so on, other than gun or explosive)	1	2	3	4	5
r) gotten arrested	1	2	3	4	5
s) sold marijuana or other drugs	1	2	3	4	5
t) stolen someone's money or property when they were not around	1	2	3	4	5
u) physically attacked someone (example: punched, slapped, kicked)	1	2	3	4	5
v) vandalized public or private property (example: destroyed property, graffiti, etc.)	1	2	3	4	5

55. **Think of those people you consider your closest friend(s). How strongly do you agree or disagree with the following statements?**

	Strongly Disagree (1)	Somewhat Disagree (2)	Somewhat Agree (3)	Strongly Agree (4)
a) I respect the opinions of my closest friend(s).	1	2	3	4
b) My best friend(s) would stick by me if I got in trouble.	1	2	3	4
c) The people I think of as my best friend(s) also think of me as a best friend.	1	2	3	4
d) I fit in well with my best friend(s).	1	2	3	4
e) My best friend(s) take an interest in my problems.	1	2	3	4
f) I take an interest in the problems of my closest friend(s).	1	2	3	4

VII. You and Your Family

56. **Has one of your parents ever been…**

	No	Yes
a) In an alcohol or drug abuse treatment program?	0	1
b) In jail or prison?	0	1
c) in therapy or counseling (not physical therapy)?	0	1
d) A patient in a mental hospital?	0	1

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57. **Has one of your brothers/sisters ever been…**

- ***skip to question #58 if you do not have any brothers/sister***

	No	Yes
a) In an alcohol or drug abuse treatment program?	0	1
b) In jail or prison?	0	1
c) in therapy or counseling (not physical therapy)?	0	1
d) A patient in a mental hospital?	0	1

==========

58. **Has one of your friends ever been…**

	No	Yes
a) In an alcohol or drug abuse treatment program?	0	1
b) In jail or prison?	0	1
c) in therapy or counseling (not physical therapy)?	0	1
d) A patient in a mental hospital?	0	1

59. **Have you ever been …**

	No	Yes
a) In an alcohol or drug abuse treatment program?	0	1
b) In jail or prison?	0	1
c) in therapy or counseling (not physical therapy)?	0	1
d) A patient in a mental hospital?	0	1

60. How important is religion/spirituality to your life?

a) Not at all important
b) Not very important
c) Somewhat important
d) Very important

61. How often do you participate in religious services or activities?

a) Never
b) 1 to 4 times per year
c) 5 to 10 times per year
d) 1 to 2 times per month
e) 1 time per week
f) More than 1 time per week

62. How many hours do you spend watching TV on a normal week day?

a) I don't watch TV
b) Less than 1 hour per day
c) 1 to 2 hours per day
d) 3 to 4 hours per day
e) 5 to 6 hours per day
f) More than 6 hours per day

63. How many hours do you spend playing computer games or video games on a normal week day?

a) I don't play computer games or video games
b) Less than 1 hour per day
c) 1 to 2 hours per day
d) 3 to 4 hours per day
e) 5 to 6 hours per day
f) More than 6 hours per day

64. How many hours do you spend on the Internet on a normal week day?

a) I don't spend time on the Internet
b) Less than 1 hour per day
c) 1 to 2 hours per day
d) 3 to 4 hours per day
e) 5 to 6 hours per day
f) More than 6 hours per day

65. a.) Do you take prescription medication(s) for hyperactivity (example: Ritalin)?

YES NO

b.) Do you take prescription medication(s) for anxiety, depression, etc. (example, Prozac, Xanax, Zoloft)?

YES NO

66. **Please mark how often the following statements are true.**

	Never True (1)	Sometimes True (2)	Mostly True (3)	Always True (4)
a) I have trouble controlling my temper.	1	2	3	4
b) I have difficulty remaining seated at school.	1	2	3	4
c) I get very restless after a few minutes if I am supposed to sit still.	1	2	3	4
d) When I am angry, I lose control over my actions.	1	2	3	4
e) I have difficulty keeping attention on tasks.	1	2	3	4
f) I get so frustrated that I feel like a bomb ready to explode.	1	2	3	4
g) Little things or distractions/interruptions throw me off.	1	2	3	4
h) I'm nervous or on edge	1	2	3	4
i) I can't seem to stop moving.	1	2	3	4
j) I don't pay attention to what I'm doing.	1	2	3	4
k) I am afraid I will lose control of my feelings.	1	2	3	4

67. **Please mark your feelings on the following items.**

	Not Wrong At All (1)	Not Very Wrong (2)	Somewhat Wrong (3)	Very Wrong (4)
How wrong is it for someone your age to …				
a) cheat on school tests	1	2	3	4
b) purposely damage or destroy property that does not belong to him or her	1	2	3	4
c) use marijuana	1	2	3	4
d) steal something worth $10 or less	1	2	3	4
e) hit or threaten to hit someone without any reason	1	2	3	4
f) use alcohol	1	2	3	4
g) break into a vehicle or building to steal something	1	2	3	4
h) sell drugs such as marijuana, heroin, cocaine, and LSD	1	2	3	4
i) steal something worth more than $10	1	2	3	4
j) use hard drugs such as heroin, cocaine, LSD	1	2	3	4
k) carry a gun to school	1	2	3	4
l) carry a knife or other (non-gun) weapon to school	1	2	3	4

68. **How much do you agree with the following statements?**

	Strongly Disagree (1)	Somewhat Disagree (2)	Somewhat Agree (3)	Strongly Agree (4)
a) In order to gain respect from your friends, it is sometimes necessary to beat up on other kids	1	2	3	4
b) Its alright to beat up another person if he/she called you a dirty name	1	2	3	4
c) Its alright to beat up another person if he/she started the fight	1	2	3	4
d) Hitting another person is an acceptable way to get him/her to do what you want	1	2	3	4
e) Its okay to break the law if you can get away with it	1	2	3	4
f) To get ahead, sometimes you have to do things that seem wrong	1	2	3	4
g) Most things that adults call "crime" don't really hurt anyone	1	2	3	4
h) Its okay to break the law if nobody is hurt by it	1	2	3	4

==========

69. Do you feel that you have been teased/picked on in a mean way because you are a member of a certain group? *Circle Yes or No.*

YES NO

- ***If yes, go to question #70.***
- ***If no, skip to question #71.***

==========

70. **Have you been teased/picked on in a mean way because …**

	No	Yes
a) of your religion?	0	1
b) of your race?	0	1
c) people think you are gay or lesbian?	0	1
d) of your social class (because you are rich or poor)?	0	1
e) of your gender (being male or female)?	0	1
f) of your hometown or home country?	0	1
g) of a disability (mental or physical)?	0	1
h) of your look/appearance (hairstyle, clothes, weight, and so on)?	0	1
i) of your opinions?	0	1
j) of your speech (speech problem, accent)?	0	1
k) your name?	0	1

71. **Below are a number of characteristics that may or may not apply to you. For each statement, please circle how much you agree or disagree with it.**

	Disagree Strongly (1)	Disagree a Little (2)	Neither Agree nor Disagree (3)	Agree a Little (4)	Agree Strongly (5)
I see myself as someone who…					
a) talks a lot.	1	2	3	4	5
b) tends to find fault with others.	1	2	3	4	5
c) does things carefully and completely.	1	2	3	4	5
d) is depressed, sad.	1	2	3	4	5
I see myself as someone who…					
e) is original, comes up with new ideas.	1	2	3	4	5
f) is quiet around other people.	1	2	3	4	5
g) is helpful and not selfish with others.	1	2	3	4	5
h) can be somewhat careless.	1	2	3	4	5
i) is relaxed, handles stress well.	1	2	3	4	5
j) is curious about many different things.	1	2	3	4	5
k) is full of energy.	1	2	3	4	5
l) starts fights and arguments with others.	1	2	3	4	5
m) is a reliable worker.	1	2	3	4	5
n) can be tense.	1	2	3	4	5
o) is ingenious, a deep thinker.	1	2	3	4	5
p) creates a lot of enthusiasm.	1	2	3	4	5
q) has a forgiving nature.	1	2	3	4	5
r) tends to be disorganized.	1	2	3	4	5
s) worries a lot.	1	2	3	4	5
t) has an active imagination.	1	2	3	4	5
u) tends to be quiet.	1	2	3	4	5
v) is generally trusting.	1	2	3	4	5
w) tends to be lazy.	1	2	3	4	5
x) is not easily upset.	1	2	3	4	5
y) is original.	1	2	3	4	5
z) has a forceful personality.	1	2	3	4	5
aa) can be cold and distant.	1	2	3	4	5
bb) keeps working until the task is finished.	1	2	3	4	5
cc) can be moody.	1	2	3	4	5
dd) likes art and creative things.	1	2	3	4	5

Disagree Strongly (1)	Disagree a Little (2)	Neither Agree nor Disagree (3)	Agree a Little (4)	Agree Strongly (5)

I see myself as someone who…

ee) is sometimes shy, inhibited.	1	2	3	4	5
ff) is considerate and kind to almost everyone.	1	2	3	4	5
gg) does things efficiently (carefully, on time).	1	2	3	4	5
hh) remains calm in tense situations.	1	2	3	4	5
ii) prefers work that is regular or routine.	1	2	3	4	5
jj) is outgoing, sociable.	1	2	3	4	5
kk) is sometimes rude to others.	1	2	3	4	5
ll) makes plans and sticks to them.	1	2	3	4	5
mm) gets nervous easily.	1	2	3	4	5
nn) likes to think, play with ideas.	1	2	3	4	5
oo) has few artistic interests.	1	2	3	4	5
pp) likes to cooperate with others.	1	2	3	4	5
qq) is easily distracted.	1	2	3	4	5
rr) knows a lot about art, music or literature.	1	2	3	4	5

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72. **Do you consider yourself a member of a gang?**

YES NO

- ***If yes, go to question #73.***
- ***If no, this ends the survey for you.***

Thank you for your help with this survey.

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73. At what age did you first join the gang?

_____ years old

74. **People have many reasons why they join or remain members of gangs. Please circle how important the following reasons are for you personally.**

1) Not at all important
2) Not very important
3) Somewhat important
4) Very important

a) It makes me feel important.	1	2	3	4
b) People in the gang accept me.	1	2	3	4
c) Friends/other gang members pressured me to join.	1	2	3	4
d) It's a good source of drugs/alcohol.	1	2	3	4
e) It gives protection from dangerous streets.	1	2	3	4
f) It gives protection from dangers at school.	1	2	3	4

Thank you for helping us with this survey.