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Self-Control, Gang Membership, and Victimization: An Integrated Approach to the Risk Factors of Violent Victimization

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Self-Control, Gang Membership, and Victimization: An Integrated Approach to the Risk

Factors of Violent Victimization

by

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Dedication

This thesis would not have been possible without the love and support of my friends and

family. Thank you all for believing in me, especially when I didn't believe in myself.

Your love and encouragement is what made this project possible.

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Table of Contents

List of Tables

List of Figures

Self-Control, Gang Membership, and Victimization: An Integrated Approach to the Risk

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ABSTRACT

This study integrates one of the most empirically tested individual characteristics (self-control) with situational factors (risky lifestyle) in an attempt to explain the risks involved in violent victimization. Data came from a diverse sample of 3,907 middle school students who participated in the G.R.E.A.T. program during the 1993-1994 school year. Gang membership is used as a proxy variable to measure risky lifestyle. It is hypothesized that 1) gang membership will mediate the effect of self-control on violent victimization and 2) self-control and gang membership will interact to amplify the risk of violent victimization.

Logistic regression was used to analyze the prevalence of violent victimization and negative binomial regression was used to analyze frequency of violent victimization. When all other extraneous factors were controlled, insufficient evidence was found to support the hypotheses of this study. A discussion of the findings, as well as theoretical implications and suggestions for future research are discussed.

v

Chapter 1

Introduction

Several attempts have been made to identify the risk factors involved in criminal victimization. Based on these attempts, the leading theories that have emerged (routine activities, criminal opportunities, and lifestyle/exposure) explain victimization using situational factors such as the presence of motivated offenders, suitable targets, and a lack of capable guardianship (Hindelang et al. 1978, Cohen & Felson 1979, Miethe & Meier 1990). These theories have been empirically supported (Cohen & Felson 1979, Meithe et al. 1987) and widely accepted as plausible explanations of the risk factors involved in victimization. However, they do not involve a complete assessment of all the possible factors that could influence the risk of victimization. More precisely, these theories are only concerned with the situational factors involved, and do not take into account any individual characteristics that may put an individual at risk for victimization.

For example, research has consistently shown that victims of criminal behavior tend to be young, male, and members of a racial or ethnic minority (Lauritsen, Sampson, & Laub 1991, Lauritsen & Quinet 1995). Other individual characteristics such as marriage, peer groups, and number of siblings have also been shown to be associated with criminal victimization (Sampson & Lauritsen 1990, Schreck et al. 2002).

In addition to the demographic characteristics, the bulk of empirical literature concludes that offending and victimization are highly correlated (Sampson & Lauritsen

1

1990, Esbensen & Huizinga 1991, Lauritsen et al. 1991, Lauritsen et al. 1992, Lauritsen & Quinet 1995). Offenders have also been found to be victims of crime at a substantially higher rate than nonoffenders (Sampson & Lauritsen 1990, Lauritsen et al. 1991). Based on these findings, the similarities between offenders and victims raise the possibility that a common underlying factor may be influencing the likelihood of becoming both a victim and an offender. To explore this possibility, a consideration of one of the most empirically supported (Pratt & Cullen 2000) individual traits associated with deviant behavior will be used in an attempt to explain the risk of violent victimization. Specifically, this paper will address the effect that low self-control has on the risk of being victimized.

Chapter 2 begins with a brief explanation of various situational factors that have been found to be related to victimization. Specifically, the routine activities, risky lifestyle/exposure, and structural-choice perspectives are reviewed. Next, individual-level correlates of victimization are discussed. Based on these correlations and the offender-victim link, it is argued that self-control has the potential to influence victimization.

Chapter 3 presents a description and literature review of Gottfredson and Hirschi's (1990) general theory of crime. Based on the work of Schreck (1999), a connection between the elements of self-control and victimization follows. Finally, previous studies that test this self-control-victimization theory are summarized.

Chapter 4 provides a justification of using gang membership as a proxy variable to measure risky lifestyle. Evidence of an association between gang membership and various risky behaviors, gang membership and self-control, and gang membership and victimization is discussed. The hypotheses for this study conclude this chapter.

2

Chapter 5 consists of an overview of the methods used in this study. Sample characteristics, description of the variables, and analytic techniques are provided.

Chapter 6 summarizes the results of the study. Analyses of the influence of self-control and gang membership on the prevalence and frequency of violent victimization are discussed.

Chapter 7 concludes this paper with a discussion of the findings. Theoretical implications, as well as limitations and suggestions for future research are provided.

Chapter 2

Theories and Correlates of Victimization

Routine Activities/Opportunity Theory

For the past few decades, the risk of victimization has been attributed to various situational factors that are either present or absent in an individual's environment. A handful of theories have emerged regarding these factors and are now the most widely cited causes of victimization (Miethe et al. 1987, Miethe & Meier 1990, Schreck et al. 2002). These theories are based on the notion that in order for crime (and in turn, victimization) to occur, a perpetrator, victim, and/or property must converge in time and space. Further, "the occurrence can be facilitated if there are other persons or circumstances in the situation that encourage it, or it can be prevented if the potential victim or another person is present who can deter it" (Akers & Sellers 2004:33).

Cohen and Felson (1979) developed a "routine activities" theory to explain these elements. They provided three categories of variables that increase the likelihood of a direct-contact predatory (personal or property) violation. The first requirement is the presence of a motivated offender. This means that the perpetrator possesses both the inclination and ability to carry out the act. These offenders commit crime if and when the situation allows. Second, a suitable target for the act must also be present. A suitable target is one that is available and attractive to the offender. The more affluence or monetary possessions one has, the more attractive a target he or she is to an offender. The

4

last variable is the absence of capable guardians to prevent violations. Guardianship refers to the extent to which an individual is able to protect oneself, as well as his or her belongings. Guardianship can be in the form of police officers, as well as ordinary citizens.

Cohen and Felson (1979) emphasized that the lack of any one of these variables is sufficient to deter crime. It is the convergence in time and space of these three situations that leads to direct predatory crimes. All three elements vary from person to person, depending on the circumstances and location of their daily environment. In other words, "the spatial and temporal structure of routine legal activities should play an important role in determining the location, type, and quantity of illegal acts occurring in a given community or society" (Cohen & Felson 1979:590). Thus, criminal behavior, and in turn, victimization are most likely to occur when there is at least one person motivated to commit a criminal act, a target that is attractive to the offender, and the absence of formal or informal deterrents at the same place and time.

To test their theory, Cohen and Felson (1979) analyzed various forms of government data from 1947-1975. They looked at family activities, human behavior patterns such as age, marriage and employment rates, trends in the market for consumer products, business establishments and investments, and compared them with trends in stolen property, robbery, burglary, and murders. At the micro-level, victimization rates were inversely related to age, lower for married individuals, and higher for those who were unemployed or lived in single-adult households. At the macro-level, trends in human activities were found to occur during the same period that sales of consumer goods and business establishments were significantly increasing. In turn, these trends

5

were associated with higher rates of all four types of crime. These comparisons yielded significant support for their theory.

Based on these findings, Cohen et al. (1981a, 1981b) tested an extension of routine activities, which they labeled "opportunity theory." They included five factors that were used to explain the risk of victimization. These variables are exposure, guardianship, proximity to potential offenders, target attractiveness, and definitional properties of assault, burglary, personal larceny, and robbery. Nine propositions regarding the mediating role of these variables were tested using data from the 1974-1977 National Crime Survey. Findings revealed support for a routine activities/opportunity explanation of victimization and lead to the conclusion that the structure of routine activities provides the opportunity for these crimes to occur.

Since then, several studies have been conducted to test macro (Sampson & Wooldredge 1987, Stahura & Sloan 1988, Lee 2000) and micro-levels of routine activities/opportunity theory (Nelson & Huff 1998, Mustaine & Tewksbury 1998). For example, using a sample of the largest SMSAs in the United States, Messner and Blau (1987) analyzed crime rates in the 1980s. Patterns of leisure (television watching, commercial cinemas, sports activities, and entertainment producers) and crime rates were consistent with predictions made in routine activities theory. Nonhousehold leisure activities were found to be significantly related to higher crime rates, whereas concentration of household activities tended to reduce risk of crime.

In regard to micro-level findings, Thompson & Fisher (1996) used data from 14,258 households in the 1983 National Crime Survey: Victim Risk Supplement. They found that all three dimensions of routine activities were important predictors of burglary

6

and larceny events. In addition, they found that these routine variables provided a unique opportunity structure for these crimes to occur. Thus, the routine activities perspective appears to be able to account for crime at both macro and micro levels of analysis.

Several other studies have been conducted to test the ability of routine activities/opportunity theory to explain the risk of victimization. These studies have tested both the risk of victimization and rates or trends of victimization. In general, these studies have also yielded findings consistent with a routine activities/opportunities perspective. Being a victim of a property offense, personal offense, motor vehicle accident, homicide, assault, robbery, burglary, personal larceny, and crime in the workplace have all been shown to be related to measures of routine activities/opportunity (Hough 1987, Sampson & Wooldredge 1987, Lasley & Rosenbaum 1988, Sherman et al. 1989, Forde and Kennedy 1990a, Forde and Kennedy 1990b, Wooldredge et al. 1992, Keane & Arnold 1996, Nelson & Huff 1998, Lee 2000). It should be noted, however, that the majority of these findings have also been criticized (Lauritsen et al. 1992) for various limitations, most notably reliance on indirect measures (age, gender, marriage, employment) of the theoretical concepts and failing to include all three elements of the routine activities theory.

Risky Lifestyle/Exposure to Crime

Hindelang et al. (1978) also developed a theory that attributes variations in victimization to differences in personal characteristics. Their "lifestyle/exposure" model proposed that the risk of victimization is a function of an individual's lifestyle. Briefly, lifestyle is considered to be contingent upon demographic characteristics, vocational and recreational activities. Specifically, they maintain that variations in lifestyle are

7

differentially related to probabilities of being in certain places at certain times and coming into contact with persons who have certain characteristics. Because victimization is not randomly distributed and offenders are not representative of the general population, lifestyle differences are proposed to lead to differences in exposure to situations that have a high rate of victimization.

Eight propositions are used to explain the ways in which "risky" lifestyles increase the probability of being victimized. 1) The probability of suffering a personal victimization is directly related to the amount of time a person spends in public places, most notably at night. This is based on the evidence that criminal events are not randomly distributed across time and place. Rather, robbery, rape, and assault have been shown to occur disproportionately at night and on the street (Hindelang et al. 1978). 2) The probability of being in public places, particularly at night, varies by lifestyle. Demands of lifestyles influence where an individual spends his or her time. For example, individuals who work at night will have a higher risk of victimization because their lifestyle requires them to be out of the home at times when victimization is most likely to occur. 3) Contact and social interactions occur among individuals with the same lifestyles. Because Hindelang et al. (1978) used demographics to predict lifestyles, they also maintained that these characteristics are indicative of social interactions. 4) The chances of being victimized depend on the extent to which an individual shares the same demographic characteristics as offenders. This proposition was based on the extant evidence (Hindelang et al. 1978) that victims and offenders disproportionately share the same demographic characteristics (male, young, urban residents, low SES). 5) The proportion of time an individual spends among nonfamily members is a function of lifestyle. 6) The

8

probability of personal victimization increases with the amount of time spent with nonfamily members. To support proposition five and six, Hindelang et al. (1978) pointed to the statistics that show the disproportionate amount of rape, robbery, and assault that is carried out by strangers. 7) Variations in lifestyle are associated with variations in the amount of time spent around persons with offender characteristics. The ability to isolate oneself from persons with these characteristics is dependent upon the vocational and leisure activity one is involved in. 8) Variations in lifestyle are associated with variations in the convenience, desirability, and vincibility of the person as a target for victimization. Lifestyles that place individuals in dangerous areas, out of the home at night, or around nonfamily members will provide a more convenient, desirable target and will be less able to resist the offender successfully.

To test these eight propositions, Hindelang et al. (1978) analyzed data from victimization surveys conducted in eight cities in 1972. Their analyses yielded strong support for a risky lifestyle/exposure explanation of victimization. Age, marital status, employment status, and gender were found to be closely associated with risk of personal victimization. These demographic characteristics were assumed to carry different role expectations, structural constraints, and individual adaptations that determine lifestyle and exposure to crime. As a result, Hindelang et al. (1978) concluded "the theoretical model of the likelihood that an individual will suffer a personal victimization depends heavily on the concept of lifestyle (daily activities, both vocational and leisure)."

Building upon these findings, many criminologists have tested the risky lifestyle/exposure perspective. Using data from the 1982 Canadian Urban Victimization Survey, Forde and Kennedy (1990b) looked at several nighttime activities such as times

9

per month the respondent went to a bar, movie, restaurant, played sports, took a walk, or stayed at work late and compared them to the number of times they reported victimization. The amount of time spent on these activities was named "time spent in risky lifestyles," which was inversely related to criminal victimization, or what the authors called "dangerous results." These findings yielded significant support for the lifestyle perspective, and Forde and Kennedy (1990b) concluded that victimization is contingent upon the exposure that results from certain lifestyles. Furthermore, Kennedy and Baron (1993) conducted a case study to examine a subculture of violence, and found that subcultural lifestyles not only influence exposure to violence, but also shape the behavioral choices in response to victimization.

Additionally, many other lifestyle characteristics such as frequency of alcohol use, activities on college campuses, sports, frequency at bars, time spent out of the house, age, gender, street activity, unemployment, friendship networks, marital status, nighttime activity, deviance, violent lifestyles, drug use, association and time spent with delinquent peers, money spent on amusement arcades and sports events, neighborhood density, and activity on different street segments have all been shown to be associated with higher levels of victimization (Riley 1987, Sampson & Wooldredge 1987, Lasley & Rosenbaum 1988, Lasley 1989, Forde and Kennedy 1990a, Horney et al. 1995, Nelson & Huff 1998, Robinson 1999, Bjarnason et al. 1999, Rapp-Paglicci & Wodarski 2000, Zhang et al. 2001, Schreck et al. 2002, Schreck & Fisher 2004).

Integrating Routine Activities and Lifestyle/Exposure

Although routine activities and lifestyle/exposure theories were developed separately, their theoretical foundations are very similar. Both theories emphasize the

10

causal significance of time and place in daily life and point to differences in situational and/or demographic factors as the sources of differential risk for victimization. As Miethe et al. (1987: 184) explain, "both theories presume that differences in routine activities or lifestyles mediate the demographic correlates of victimization."

As a result, the literature on victimization tends to integrate these two theories by using variables that account for both concepts. For the most part, routine activities are measured using indirect variables such as age, gender, marriage, and nighttime activities, which in turn, tend to be the same variables that are characteristic of a risky lifestyle. Consequently, criminologists have a tendency to integrate the theories and develop a set of routine activities/risky lifestyle measures (Garofalo et al. 1987, Miethe et al. 1987, Lasley 1989, Kennedy & Forde 1990b, Miethe and Meier 1990, Horney et al. 1995, Robinson 1999, Bjarnason et al. 1999, Cochran et al. 2000, Rapp-Paglicci & Wodarski 2000, Schreck & Fisher 2004).

Moreover, Miethe and Meier (1990) proposed a "structural-choice" theory of victimization, which integrates aspects of routine activities and risky lifestyle. Under this model, exposure and proximity are considered the "structural" components and attractiveness and guardianship are the "choice" components. Exposure and proximity are the "structural" components because they represent the nature of social interactions and predispose individuals to higher risk of victimization. Attractiveness and guardianship, on the other hand, are choice components because they are presumed to determine selection of targets. It is the interaction in time and space of these structural and choice components that lead to variation in the risk of victimization. According to Miethe and Meier (1990:246), "it does seem reasonable to predict that differences in risks of

11

victimization by target-selection factors (i.e. attractiveness, guardianship) should be most pronounced among persons with high proximity and exposure to crime.

Using data from the 1982 British Crime Survey, Miethe & Meier (1990) analyzed victimization events of burglary, assault, and petty theft. Proximity to high-crime areas was measured by place of residence, perceived safety of the neighborhood at night, and average rate of offending in the area, while exposure to crime was measured using questions regarding household activities. Measures of target attractiveness included the social-class rank of the respondent and whether or not he or she owned a VCR. Guardianship was measured with two items, whether or not the respondent lives alone and uses some sort of personal protection such as carries a weapon or has a burglar alarm. Analyses revealed that proximity and exposure were in the expected direction and statistically significant for all three types of crime. This finding supports the "structural" component of the theory. Living alone revealed a statistically significant effect in the expected direction. However, all of the other "choice component" variables were either non-significant or associated in the opposite direction.

The handful of studies that have tested this "structural-choice" theory also provide mixed results. Wooldredge et al. (1992) examined workplace victimization on college campuses and found that exposure was associated with personal and property victimization while target attractiveness was not. Hoyt et al. (1999) looked at victimization among homeless and runaway youth. They found significant support for exposure to risk and only modest support for target attractiveness and guardianship. Finally, Cochran et al. (2000) examined a crime "hot spot" and found that victimization was associated with proximity and guardianship, but not with exposure or target

12

attractiveness. These findings, along with Meithe and Meier's (1990) findings, provide mixed support for an integrated "structural-choice" perspective.

Regardless, routine activities, risky lifestyle/exposure, and structural-choice theories all propose that the situational factors present in one's life account for variation in the risk of victimization. These perspectives have been empirically supported (Hindelang et al. 1978, Cohen & Felson 1979, Meithe et al. 1987) and widely accepted as plausible explanations of the risk factors involved in victimization.

However, they have also been criticized for not providing a complete assessment of all the possible factors that could influence the risk of victimization (Lauritsen 2001, Schreck et al. 2002). More precisely, these theories are only concerned with the situational factors involved, and do not take into account any individual characteristics that may put an individual at risk for criminal victimization. As a result, these theories assume that "all other things are equal," implying that all individual traits are invariant and unimportant.

Individual Level Correlates of Victimization

The extant literature on victimization provides evidence of several individual-level characteristics that have been found to be consistent predictors of victimization. For example, time and again, research has shown that victims of criminal behavior tend to be young and male (Lauritsen et al. 1991, Lauritsen & Quinet 1995). In addition, other individual characteristics such as race, marriage, college education, SES, delinquent peers, and number of siblings have also revealed an association with criminal victimization (Sampson & Lauritsen 1990, Esbensen & Huizinga 1991, Lauritsen et al.

13

1991, Lauritsen & Quinet 1995, Dahlberg 1998, Lauritsen 2001, Schreck 2002, Schreck et al. 2002, Schreck & Fisher 2004).

Moreover, although lifestyle theories attribute victimization to the situational characteristics present in one's life, the most common criticism of lifestyle research is the lack of direct measures of lifestyle, and in turn, the use of demographic, or individual-level, variables as indirect measures (Lauritsen et al. 1991). Thus, the findings of these studies provide evidence for an association between individual level factors and victimization, and then are used to imply that these factors lead to variations in lifestyles, which in turn, lead to variations in the risk of victimization. In addition, when separate measures of individual (offending, age, race, gender, peers, SES) and lifestyle variables (time spent away from home, proximity to crime, exercise, driving a car, time spent with family, sports involvement, and time spend at school) are included in a model of victimization, the individual characteristics remain statistically significant (Lauritsen et al. 1992, Lauritsen 2001, Schreck & Fisher 2004). Thus, these individual-level variables seem to have an effect independent of lifestyle choices.

Furthermore, one of the most empirically supported characteristics related to victimization is criminal offending. The extant literature provides evidence that self-reported offending is a significant predictor of victimization (Lauritsen et al. 1992, Lauritsen & Quinet 1995). Esbensen and Huizinga (1991) analyzed data from 877 middle school youth and found that the mean rate of both property and violent victimization was two to three times higher for those who reported self-reported delinquency. Using two waves of the British Crime Survey, Sampson and Lauritsen (1990) also found that offense activity, serious or petty, directly increased the risk of violent victimization. In

14

addition, via data from the National Youth Survey, Lauritsen et al. (1991) concluded that self-reported offenders are approximately three times more likely than nonoffenders to be victims of assault, robbery, or vandalism.

The similarities between offending and victimization in their covariates as well as the robust association between offending and victimization raise the possibility that a common underlying factor may be influencing the likelihood of becoming both a victim and an offender. To explore this possibility, a consideration of one of the most empirically supported (Pratt & Cullen 2000) individual traits associated with deviant behavior will be used in an attempt to explain the risk of criminal victimization. Specifically, this paper will address the effect that low self-control has on the risk of being victimized.

Chapter 3

Self-Control

General Theory of Crime

Although there are several different forms of deviance, Gottfredson and Hirschi

(1990) argue that certain features of behavior are characteristic of all deviant acts, across

all populations and age groups. Based on these common characteristics, they developed a

"General Theory of Crime (GTC)," which attempts to explain criminal behavior in terms

of one versatile phenomenon. GTC was derived from the works of earlier classical

theories, which argue that criminal behavior is the result of the pursuit of self-interest.

Particularly, Gottfredson and Hirschi (1990) base their general theory on the assumption

that all human behaviors, criminal or noncriminal, are motivated by their perceived costs

and rewards.

Based on this premise, Gottfredson and Hirschi (1990) make a distinction

between the nature of crime and the nature of criminality. Crimes are defined as acts of

force or fraud undertaken in the pursuit of self-interest. They are characterized by time

and space, require little effort or skill, and provide immediate, short-term rewards. In

sum, Gottfredson and Hirschi (1990:16) explain crime as "events whose temporal and

spatial distributions are highly predictable, that require little preparation, leave few

lasting consequences, and often do not produce the result that was intended." Criminal

acts are seen as the result of the pursuit of immediate, certain, easy benefits.

16

Criminality, on the other hand, is defined as a characteristic of people. This definition is based on the extant literature that provides evidence of stable individual differences in the propensity to commit criminal acts. Gottfredson and Hirschi (1990) use self-control to account for these differences, and therefore, to define the nature of criminality. More specifically, they conceptualize criminality as the extent to which an individual is compelled to crime. However, this depends on the perceived costs and rewards of the act, which in turn, are dependent upon the individual's level of self-control.

Furthermore, Gottfredson and Hirschi (1990) use six elements to describe an individual's level of self-control. These elements are level of impulsivity, laziness, risk seeking, preference for physical activity, empathy, and tolerance for frustration.

First, level of impulsivity is related to one's ability to defer gratification of desires. A person with low self-control is more likely to possess a "here and now orientation" and lack the ability to consider long-term consequences. Criminal acts provide immediate gratification of desires and delayed consequences, and therefore, are more likely to be committed by people who respond to their instantaneous desires. In contrast, people with high self-control tend to consider long-term consequences and defer gratification in order to avoid the costs.

At the same time, individuals with low self-control are lazy. They prefer simple and easy gratification of desires. Criminal acts provide accumulation of these desires without much effort or planning, such as money or property without work and hardship.

People with low self-control also tend to be adventuresome and active, whereas individuals with high self-control are described as cautious and cognitive. Due to the

17

exciting, dangerous, and risky nature of criminal acts, people with low self-control will seek out these risky behaviors at a much higher rate.

Gottfredson and Hirschi (1990) maintain that crime does not require much thought or skill. People lacking self-control do not value cognitive abilities and prefer to engage in physical, rather than mental activities. Because crime does not require any training or skill, individuals low in self-control are attracted to these acts, based on their physical nature.

Empathy is referred to as an individual's level of self-centeredness and sensitivity to others. Individuals who lack self-control tend to be self-centered and indifferent to the needs of others. Criminal acts result in pain and loss. Thus, people who do not possess empathy will be indifferent to these feelings.

Finally, tolerance for frustration is characterized by an individual's ability to tolerate momentary frustration. Individuals with low self-control do not have this ability and as a result, become frustrated very easily. Consequently, the potential for a violent or aggressive situation is increased.

According to Gottfredson and Hirschi (1990), all six components are essential dimensions of self-control and must be present for crime to occur. Further, these dimensions do not operate separately, but rather come together to represent one underlying trait: self-control. **"**The theorists assert that these traits are not alternative ways of having low self-control, nor are some causes of the others. Rather, the six traits are constitutive of low self-control and tend to come together to form a unidimensional latent trait" (Arneklev et al. 1993: 229).

Moreover, not only is self-control used to explain criminal behavior, it is also used to explain the tendency to engage in noncriminal acts such as accidents, smoking, drug use, drinking, and gambling. For example, gambling is risky and provides fast, easy money without much thought or planning. These "analogous" behaviors share the same traits as crime, immediate gratification and long-term consequences. The pleasure obtained by these criminal and analogous acts are immediate, direct, and obvious, whereas the consequences are delayed, indirect and sometimes not as obvious.

In sum, an individual who is impulsive, lazy, prefers risk and physical activity, lacks empathy and becomes easily frustrated possesses a low level of self-control, and in turn, will engage in criminal and analogous behaviors at a much higher rate than individuals who do not possess these traits.

Furthermore, Gottfredson and Hirschi (1990) assert that an individual's level of self-control is developed by age twelve and remains stable throughout the life course. They believe that individuals are not predisposed to or taught low self-control, but rather that the cause of low self-control is ineffective parenting. According to the GTC, the minimum conditions a parent must set up in order for a child to develop an adequate level of self-control are 1) monitoring of the child's behavior; 2) recognizing deviant behavior when it occurs; and 3) punishing the deviant behavior.

Although these conditions seem obvious and easy to carry out, parents do not always succeed in meeting all three requirements. Gottfredson and Hirschi (1990) rule out the possibility that parents are actively providing ineffective parenting, but instead, point to four situations in which parenting systems have a tendency to go wrong. First, some parents simply do not care for their child. In this situation, none of the three

19

requirements are met. Second, parents may not have the time or energy to monitor the child's behavior. This may be the result of long hours at work, stress, or illness. Third, parents may care for and monitor their child's behavior, but do not realize that the behavior is deviant. On the other hand, parents may recognize deviant behavior, but engage in deviance themselves, and therefore do not feel that the behavior deserves punishment. Last, when everything else is in place, parents may not have the ability to punish their child effectively. Not only does a lack of punishment influence a child's development of self-control but punishment that is too lenient or too harsh can also have a damaging effect. There are numerous possible circumstances that could lead to the presence of one or more of these situations. Sibling size, parental criminality, single-parent families, and parental employment are a few examples.

Gottfredson and Hirschi (1990) include one final situation that is necessary for criminal and analogous behavior to occur: opportunity. This theory does not imply that crime is an automatic consequence of low self-control. Instead, low self-control will lead to criminal and analogous behaviors when the opportunities are available and the circumstances allow for it. Opportunities and circumstances vary from person to person, depending on the individual's immediate environment. As stated by Longshore and Turner (1998:82) "in their theory, the link between crime and self-control is conditional on criminal opportunity, which is a function of structural or situational circumstances encountered by the person."

The general theory of crime provides an explanation of self-control that is applicable across all forms of criminal and analogous behavior, as well as all populations. This theory assumes that all human behavior is contingent upon the perceived costs and

rewards of the behavior. An individual who is impulsive, lazy, risky, physical, self-centered, and unable to tolerate frustration possesses a low level of self-control. Depending on the opportunity present, these individuals will be more likely to engage in criminal and analogous acts, due to the perceived benefits of the behavior.

Literature Review

For more than a decade, research has consistently revealed support for the general theory of crime. The bulk of empirical literature provides weak to moderate support for the generality, dimensionality, stability, and cause of low self-control. However, the ability of self-control to predict criminal and analogous behaviors is overwhelmingly supportive.

In regard to Gottfredson and Hirschi's (1990) notion of a "general" theory of crime, Vazsonyi & Crosswhite (2004) performed a comparative analysis to examine the differences in the effect of self-control on Caucasian and African American youth and found a strong similarity in the ability of self-control to predict behavior. Vazsonyi et al. (2001) looked at a cross-national sample of youth in four different countries and found that low self-control accounted for 17% to 28% of the variance in self-reported delinquency. In addition, low self-control has been found to be a significant predictor of criminal behavior across several age groups including children (Brannigan et al. 2002) middle school students (Unnever & Cornell 2003), high school students (Wood et al.1993, Sorenson & Brownfield 1995, Hay 2001, Perrone et al. 2004), college students (Cochran et al. 1998, Gibbs et al. 1998, Sellers 1999, Arneklev et al. 1999) and adult samples (Burton et al. 1998, Burton et al. 1999). All of these findings support the ability of self-control to predict behavior across diverse populations.

21

The literature regarding the dimensionality of self-control is quite complex. While several researchers (Grasmick et al. 1993, Burton et al. 1998, Cochran et al. 1998, Piquero et al. 1998, Arneklev et al. 1999) argue that self-control is a unidimensional construct, others (Wood et al. 1993, Longshore et al. 1996, Longshore et al. 1998, Vazsonyi & Crosswhite 2004) claim that it is multidimensional. Wood et al. (1993) found that their self-control scale accounted for greater variance in a general delinquency scale than any one of the six dimension subscales alone. However, when the self-control and delinquency scales were disaggregated, different dimensions accounted for different types of behavior. Moreover, several studies have found that risk-seeking (Wood et al. 1993, Winfree & Bernat 1998, LaGrange & Silverman 1999, Nakhaie et al. 1999) and impulsivity (Arneklev et a. 1999) are the strongest correlates of criminal and analogous behaviors. Therefore, although most tests of the self-control scales yield loadings consistent with a unidimensional construct, when the dimensions are analyzed separately, a different picture tends to emerge.

Furthermore, only a handful of studies within the self-control literature have examined the stability of self-control. Polakowski (1994), Arneklev et al. (1998), Arneklev et al. (1999), and Burton et al. (1999) compared levels of self-control across age-groups and found evidence in support of Gottfredson and Hirschi's (1990) stability hypothesis. Using seven waves of data from the NLSY, Turner & Piquero (2002) found stable group differences in levels of self-control for offenders versus nonoffenders. However, the results also revealed variation in individual levels of self-control across time. This finding is important because it is based on longitudinal data and contradicts the notion of self-control as a stable trait. In sum, the scarce literature assessing the stability

22

of self-control provides weak to moderate support and indicates a need for further examination.

The empirical literature directly testing the interaction of criminal opportunities and self-control has also provided moderate support. The interaction of self-control and opportunity has been shown to provide greater explanatory power than self-control or opportunity alone. Significant interactive effects have been found when testing criminal behavior, academic dishonesty, force, fraud, intimate partner violence, drug use, property crime, and violent offenses (Grasmick et al. 1993, Cochran et al. 1998, Longshore 1998, Longshore & Turner 1998, Sellers 1999, LaGrange & Silverman 1999, Smith 2004). In addition, Nagin and Paternoster (1993) and Piquero and Tibbetts (1996) incorporated measures of routine activities into their models of self-control and offending and found that the interaction of self-control and routine activities accounted for more of the variance in self-reported delinquency.

Further, the few studies that have directly examined the causes of self-control (Hay 2001, Perrone et al. 2004, Pratt et al. 2004) provide moderate support for Gottfredson and Hirschi's (1990) supposition that ineffective parental monitoring and discipline are the sources of low self-control. Polakowski (1994) found that parental monitoring at ages 8 to 10 significantly predicted level of self-control at ages 12 to 14, which in turn, predicted official delinquency later in life. In addition, two separate studies have been conducted to test the relationship between parental management and academic dishonesty. Gibbs et al. (1998) concluded that the effects of parental management on behavior are indirect through self-control, which is consistent with the general theory of

23

crime. Cochran et al. (1998), on the other hand, found parental attachment to be significantly related to self-control, but not parental management.

Regardless, the bulk of empirical literature provides substantial evidence that, on average, low self-control is a significant predictor of criminal offending (Grasmick et al.1993, Wood et al. 1993, Gibbs & Giever 1995, Burton et al. 1998, Deng & Zhang 1998, Longshore 1998, Burton et al. 1999, Wright et al. 1999). The predictive ability of self-control has been supported with tests of specific offenses such as academic dishonesty, skipping school, under age smoking, traffic violations, drunk driving, vandalism, software piracy, property offenses, and predicted self-reported delinquency (Keane et al. 1993, Cochran et al. 1998, Gibbs et al. 1998, LaGrange & Silverman 1999, Stylianou 2000, Vazsonyi et al. 2001, Higgins & Makin 2004, Smith 2004, Cauffman et al. 2005). Violent behaviors such as self-reported intimate partner violence, gang violence, sexual assault, bullying, and number of arrests have also been positively correlated with low self-control (Nagin & Paternoster 1993, Sellers 1999, Chapple & Hope 2003, Unnever & Cornell 2003, Piquero et al. 2005).

Further, when other demographic variables such as race, gender, and religious participation are added into a model of criminal behavior, the effect of self-control remains statistically significant (Wood et al. 1993, Sorenson & Brownfield 1995, Burton et al. 1998, Lynskey et al. 2000). Low self-control also remained significant after controlling for competing theoretical variables such as social bond, differential associations, social control, and strain (Sorenson & Brownfield 1995, Burton et al. 1998, Nagin and Paternoster 1993, Polakowski 1994, Piquero & Tibbetts 1996, Nakhaie et al. 1999, Schreck et al. 2002).

24

The literature on self-control and analogous behaviors is just as conclusive. In fact, Paternoster and Brame (1998) conducted a study of 369 adolescent males and concluded that the effect of self-control on analogous behaviors is approximately equal to its effect on criminal behavior. Accidental injuries, motor vehicle accidents, alcohol and drug use, gambling, and gang membership have been shown to be significantly associated with self-control (Arneklev et al. 1993, Junger et al 1995, Sorenson & Brownfield 1995, Paternoster & Brame 2000, Burton et al. 1998, Junger & Tremblay 1999). Moreover, negative social circumstances such as unemployment, interpersonal problems, homelessness, association with delinquent peers, poor school performance, failure in the criminal justice system, and low attachment to parents have also been found to be consequences of low self-control (Krauss et al 2000, Delisi 2001, Baron 2003).

To add to this extant body of literature, Pratt and Cullen (2000) conducted a meta-analysis of 21 studies that directly tested the relationship between self-control and criminal or analogous behavior. The analysis yielded strong empirical support for the general theory of crime. Not only did the results indicate self-control's strong predictive ability, they also provided evidence of the generality of self-control across measures and behaviors. Based on this meta-analysis, Pratt and Cullen (2000:953) concluded that "self-control must be considered an important predictor of criminal behavior and the general theory warrants a measure of acceptance."

Self-Control and Victimization

The extant literature has shown that the general theory of crime is predictive of a wide variety of deviant behaviors, as well as a broad range of negative consequences. One negative consequence that merits closer examination within the context of self-

25

control is victimization. Given the strong empirical correlation between victimization and offending, it is not unreasonable to explore the extent to which low self-control serves as a common thread linking both offending and victimization.

Gottfredson and Hirschi (1990) maintain that low self-control behavior brings immediate, easy and short-term satisfaction of desires; however, they also maintain that this type of behavior involves secondary consequences for an individual's life. Vulnerability to crime is one such consequence. Drug users, for example, are less likely to be aware of their surrounding, defend themselves, or guard their belongings. Offenders tend to associate with other offenders, which may involve untrustworthy acquaintances. Persons with high self-control are more likely to be able to recognize these consequences and refrain from engaging in behaviors that increase vulnerability to crime.

Based on the potential association of self-control and vulnerability to crime, Forde and Kennedy (1997) tested a model that integrated the general theory of crime with aspects of routine activities and risky lifestyles, in an attempt to provide a better explanation of both offending and victimization. Data came from telephone surveys of 2,052 persons living in Canada. Measures included a self-control scale, routine activities/risky lifestyle measure, routine conflict scale, several imprudent behaviors, whether or not the respondent has been victimized, and number of arrests. Results indicated that respecifying the general theory of crime to include aspects of proximate causes, such as a risky lifestyle or routine activities, provides a stronger explanatory model of both offending and victimization.

Elaborating on these findings, Schreck (1999) proposed an extension of the general theory of crime that included victimization. Using the six elements that

26

Gottfredson and Hirschi (1990) use to define self-control, and in turn criminal and analogous behaviors, Schreck (1999) explained of how these same characteristics could predispose an individual to victimization.

The first element of self-control is related to an individual's level of impulsivity or tolerance for deferred gratification. Schreck (1999) argued that individuals with low levels of deferred gratification are less likely to perceive long-term consequences, and therefore will engage in behaviors that put themselves or their possessions in danger, due to the immediate rewards these behaviors are expected to provide. For example, an impulsive person is more likely to accept drugs from a stranger due to the immediate rewards of the "high," rather than consider where the drug came from or whether or not it is safe.

The second element, empathy, refers to the extent that an individual possesses genuine concern for and sensitivity to others. A person low in empathy does not necessarily treat people poorly, but rather their acts are not motivated by genuine kindness. These characteristics may lead an individual to possess few friends or close relationships. Schreck (1999) reasons, therefore, that people low in empathy may not form good relationships with the people around them, for example their neighbors. According to routine activities, this would decrease guardianship, and make an individual more vulnerable to victimization.

The third element of self-control is tolerance for frustration. People with low self-control do not a have a high tolerance for frustration. Frustration causes an individual to become easily angered, upset, or quarrelsome (Schreck 1999). Potentially, this trait could lead to a hostile situation, and in turn, may result in a personal attack.

27

The fourth element of self-control is diligence. Individuals who have low self-control tend to lack persistence and are characterized by laziness. Lack of diligence may lead to inconsistency in taking safety precautions, hence providing an easy target for a motivated offender.

Preference for physical activity versus mental activity is the fifth component. Persons with low self-control tend to prefer physical activities, and accordingly, are less likely to use their mental capacity to assess the risks and possible consequences of a situation.

The final component of self-control is risk seeking. Individuals with low self-control are more inclined to seek out risky activities, such as nighttime activities or entering dangerous areas, which may put them in a more vulnerable position for victimization (Schreck 1999).

To test his theory, Schreck (1999) surveyed a large sample of college students and found strong evidence to support his claim. The results showed that self-control had a significant direct effect on the chances of victimization, and that the effect of low self-control also substantially reduced the effects of other demographic variables, such as gender, income, and criminal behavior. However, Schreck (1999, p 637) points out that his theory does not account for all victims of crime, but that "those who engage in low self-control behavior risk greater vulnerability to crime."

Building on these findings, Stewart et al. (2004) tested Schreck's theory using data from a sample of 466 female offenders. These authors created their own self-control scale using thirteen items and also included a measure of risky lifestyle into the model. Results indicate further support for Schreck's (1999) hypothesis. Women who reported

28

low levels of self-control reported higher levels of victimization. Even after controlling for demographic and lifestyle correlates of victimization, low self-control remained statistically significant.

Finally, the empirical literature provides evidence that, on average, offenders seek out easy or vulnerable targets (Cohen & Felson 1979). Based on a rational choice model of offending, vulnerable targets minimize costs by making the crime easier to commit. Regarding Gottfredson and Hirschi's (1990) elements of self-control, attacking a vulnerable target requires less mental planning and frustration, while at the same time facilitates the act, in turn, providing gratification at a faster rate. Taken together, it seems evident that low self-control influences an individual's tendency to become an easy target, and in turn, their vulnerability to victimization.

This study elaborates on the findings of Forde and Kennedy (1997), Schreck (1999) and Stewart et al. (2004) by assessing the independent effect that low self-control has on violent victimization, the mediating relationship of low self-control and risky lifestyle, and their interactive effect on violent victimization.

Although each of these studies (Forde and Kennedy 1997, Schreck 1999, Stewart et al. 2004) provided evidence of an association between self-control and victimization, they all have their shortcomings. For instance, the measures used in Forde and Kennedy's (1997) study are a limitation. They relied on nighttime activities to measure lifestyle/routine activities and number of arrests to measure crime risk. These measures do not take into account the full range of the lifestyle concept (Hindelang et al. 1978) or offending history. Therefore, the measures of Forde and Kennedy's study lack content validity. Self-reported offending provides a much more accurate estimation of offending

29

history and risky lifestyle is conceptualized with various aspects of an individual's life (e.g. employment, living situation, location of residence).

Stewart et al.'s (2004) sample is a major limitation to their study. Using a nonrandom sample of adult female offenders limits the ability to generalize the findings to any population other than the small subset of women who are involved in high rates of drug use and offending.

Finally, Schreck (1999) did not include a control for peer delinquency. The literature provides evidence that delinquent peer association is a significant predictor of victimization (Lauritsen et al. 1992, Schreck et al. 2002, Schreck et al. 2004). Therefore, the significant relationships that were found in his study may be spurious, due to the uncontrolled effect of prior delinquency. The current study extends on Schreck's (1999) work by including a measure of peer delinquency, as well as a risky lifestyle component.

The current study intends to improve these shortcomings in order to provide adequate evidence of an association between self-control and violent victimization. In addition, integrating risky lifestyle into the model will provide greater insight into the true relationship of self-control and violent victimization. Put another way, incorporating risky lifestyle and gang membership into one multivariate model will help determine whether self-control has a direct effect on victimization, or an indirect effect, through its effect on lifestyle choices.

30

Chapter 4

Gang Membership and Risky Lifestyle

The concept of "lifestyle" is based on an individual's daily activities, both vocational and leisure. Variations in daily activities lead to variations in exposure to situations that have a high risk of victimization. Individuals who engage in dangerous daily activities, such as drug use, staying out late, or association with criminal offenders, have a higher risk of victimization. Thus, "risky lifestyle" is defined as frequently engaging in activities that have a high risk of criminal victimization.

For the purposes of this study, gang membership will be used to measure risky lifestyle. Although there is no universal definition for gang membership, gang involvement clearly leads to a risky lifestyle. The empirical literature provides strong evidence that gang members participate in risky behaviors at a substantially higher rate than nongang members (Curry & Spergel 1992, Battin et al. 1998, Hill et al. 1999, Curry 2000). These risky behaviors include self-reported delinquency, property offending, substance use, drug sales, gambling, more time spent with delinquent friends, and gun ownership (Curry & Spergel 1992, Esbensen & Huizinga 1993, Bjerregaard & Lizotte 1995, Battin et al. 1998, Esbensen & Winfree 1998, Hill et al. 1999, Curry 2000, Hope & Damphousse 2002). Gang members have also been found to report higher levels of violent offenses such as aggravated assault, sexual assault, intimate violence, and robbery (Battin et al. 1998, Hope & Damphousse 2002, Thornberry et al. 2003).

31

In addition, individuals who engage in these types of behaviors tend to report victimization at a substantially higher rate (Esbensen & Huizinga 1991, Lauritsen et al. 1991, Sampson & Lauritsen 1990). Based on these findings, Curry et al. (2002) and Peterson et al. (2004) examined the effect of gang membership on victimization. Both studies revealed a significant association between gang membership and victimization. For instance, using a large sample of middle school students, Peterson et al. (2004:807) concluded that "gang members were victims of violence at a higher rate than were youths who were never gang affiliated in each of the years preceding and the years(s) following gang membership, and they tended to experience the most victimization in the year of membership."

Furthermore, Hope and Damphousse (2002) applied the general theory of crime to gang membership on a sample of 1,139 middle and high school students. Not only did low self-control emerge as a significant predictor of membership in a gang, but the effect also remained significant after controlling for delinquent behavior. Thus, it is expected that using gang membership as a form of risky lifestyle will provide evidence in support of Forde and Kennedy's (1997) integrated theory of low self-control, risky lifestyle, and victimization.

The current study elaborates on previous work by testing a conceptual model that brings together situational and individual factors and relates them to violent victimization. Specifically, this study is based on the findings that low self-control is directly related to victimization (Schreck 1999, Stewart et al. 2004) and Forde and Kennedy's (1997) conclusion that integrating risky lifestyle/exposure and self-control into one theoretical model provides a stronger explanation for victimization.

32

As Figure 1 illustrates, self-control is the central concept in the model.

Figure 1.   Low Self-control Predictive Model
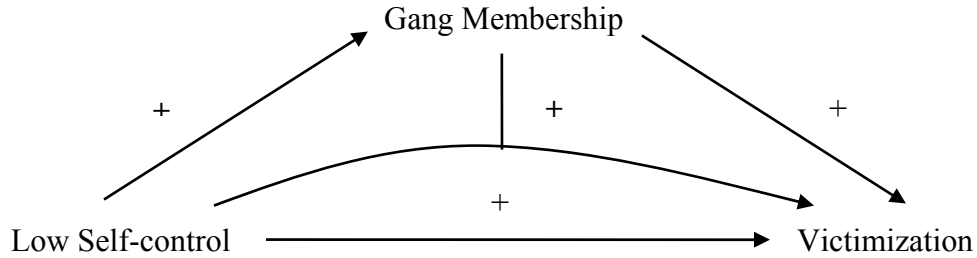
First, I propose that both self-control and gang membership will be directly related to violent victimization. Second, I evaluate the mediating effect of self-control and gang membership on violent victimization. Third, I explore the interaction of these individual and situational factors, which I propose will reveal the greatest risk of violence.

Hypotheses

1.   Based on Schreck's (1999) findings, self-control has a direct effect on victimization. Individuals who report low levels of self-control will report higher prevalence and frequency of violent victimization.

2.   Gang membership will have a direct effect on violent victimization. Research has shown that gang members are victimized at a significantly higher rate than nongang members (Curry et al. 2002, Peterson et al. 2004). Hence, individuals who report higher levels of gang involvement will report higher prevalence and frequency of violent victimization.

3a.   Integrating the findings that self-control is a significant predictor of gang membership (Hope & Damphousse 2002) and that gang members report higher levels of victimization than nongang members (Peterson et al. 2004), it seems

33

plausible that the effect of self-control on victimization will be mediated by gang membership. That is, the effects of self-control on prevalence and frequency of violent victimization will be significantly reduced once gang membership is added into the model.

3b. On the other hand, according the Gottfredson and Hirschi (1990), the effects of gang membership on violent victimization will be significantly reduced once the effect of self-control is introduced as a control variable.

4. Elaborating on Forde and Kennedy's (1997) extension of the general theory of crime to include risky lifestyle, self-control and gang membership will have an interactive effect on victimization. Specifically, the effect of low self-control on violent victimization will be stronger for gang members than nongang members.

Chapter 5

Methods

Data came from Esbensen and Osgood's (1999) evaluation of the Gang

Resistance Education and Training Program (G.R.E.A.T.), a gang prevention program for

middle school students. This program was funded by the Bureau of Alcohol, Tobacco and

Firearms, taught by uniformed law enforcement officers, and consisted of a nine-week

curriculum that focused on goal setting, cultural differences, resistance to peer pressure,

drug education, conflict resolution, and the consequences of criminal behavior.

Sites in which the program was delivered during the 1993-1994 school year were

chosen for inclusion into the initial evaluation. This resulted in participants from forty-

two schools at eleven sites, including Las Cruces, NM; Omaha, NE; Phoenix, AZ;

Philadelphia, PA; Kansas City, MO; Milwaukee, WI; Orlando, FL; Will County, IL;

Providence, RI; Pocatello, ID; and Torrance, CA. These sites provide a very diverse

sample ranging from large urban areas to small rural cities, racially homogenous to

racially heterogeneous areas, and working to upper class families (Esbensen and

Deschenes 1998).

Attendance rates on the day of the survey ranged from 75 to 93 percent and

participation ranged from 98 to 100 percent of the students who were present the day the

surveys were administered. The original sample consisted of 5,935 students (Esbensen

and Deschenes 1998). Cases that included unanswered questions pertaining to the

35

measures used in this analysis were excluded from the original sample. As a result, the

final sample used in this study is 3,907 middle school students. Demographic

characteristics of the sample are presented in Table 1.

Table 1:   Demographics of the Sample

Variable	N = 3907	Percentage	Mean
Sex			
Male	1848	47.3	
Female	2059	52.7	
Race/Ethnicity			
White	1820	46.6	
Black	839	21.5	
Hispanic	665	17.0	
American Indian	88	2.3	
Asian	264	6.8	
Other	61	1.6	
Mixed	170	4.4	
Age			13.78
12 or younger	9	.3	
13	1201	30.7	
14	2369	60.6	
15	313	8.0	
16	11	.3	
17 or older	4	.1	
Gang Membership			
Yes	311	8.0	
No	3596	92.0	
Self-control			23.40

Due to the large sample size and diversity of the sites, the G.R.E.A.T. data have

been analyzed for several types of research questions including the relationship between

gender and gang membership, attitudes toward police officers, race and gender

differences among gang and nongang members, definitional issues pertaining to gang

membership, and the role of single-parent families on juvenile delinquency (Esbensen &

Deschenes 1998, Esbensen & Winfree 1998, Deschenes & Esbensen 1999, Esbensen et

36

al. 1999, Esbensen et al. 2001a, Taylor et al. 2001, Anderson 2002). In addition, the G.R.E.A.T. data have also been used to evaluate the theoretical significance of the general theory of crime, social learning, and social bonding theory (Lynskey et al. 2000).

However, a few limitations regarding the data should be noted. First, although this sample is very diverse, it is not truly random because the sites were chosen on the basis of whether or not the G.R.E.A.T. program was implemented in a certain school year. Furthermore, the sample consists of the students who attended school that day, and therefore does not include students who were absent, suspended, expelled, or had dropped out, which in turn, could lead to an under representation of high-risk youth. Secondly, these data are cross-sectional and based on self-reported measures. Not only does this limit our ability to make causal inferences, but it also warrants some skepticism when relying on teenagers' memory and honesty. Despite these limitations, the diversity of the sample allows for exploration of a large sample of middle school youth.

Victimization

The primary dependent variable is victimization. Victimization is defined as the exploitation or harm suffered by an individual, resulting from the actions or behaviors of other individuals. For this particular study, prevalence and frequency of victimization are measured using eight different variables.

Prevalence was measured by whether or not, in the past twelve months, the respondent experienced one or more of the following: hit by someone purposely trying to hurt them, robbed, or attacked with a weapon. All three items were recoded into dichotomous variables and responses were coded 0 = never been victimized and 1 = victimized one or more times. Then, these three variables were summed and

37

dichotomized into an overall violent victimization scale. Approximately half (51.1%) of the sample reported that they have been victimized one or more times in the past twelve months.

Although prevalence of victimization serves as a sound measure of victimization, including frequency of victimization into the analysis is necessary for several reasons. First, there is a great likelihood that anyone will be victimized once in his or her lifetime. However, as the frequency of victimization increases, so does the possibility that certain factors are influencing the occurrence of these experiences. In addition, since this data set does not include information on the seriousness of the victimization experience, frequency of victimization could also be used as an indicator of seriousness because the more times an individual is victimized, the more serious these experiences become.

Frequency of victimization was measured using an open-ended question regarding how many times, in the past twelve months, the respondent experienced each of the three victimization items. Responses ranged from zero to more than 989, included don't know and "positive-unreadable" answers. We chose to adopt Peterson et al.'s (2004) decision to right-censor the responses at 12 or higher. The premise is that more than 12 victimization experiences in one year constitutes high-frequency victimization (Peterson et al. 2004).

First, "don't know" and unreadable responses were coded to missing. Then, after all of the items were right censored at 12 or higher, the "don't know" and "positive unreadable" responses were recoded from missing to the positive integer (whole number greater than zero) nearest to the mean of each item (robbery: mean = .22, recoded to 1.0; hit on purpose: mean = 1.77, recoded to 2.0; attacked with a weapon: mean = .32, recoded to 1.0). By interpolating the closest positive integer, the intervals of the variable

38

remain the same and the case can still be included in the analysis (Kalton 1983, Studenmund 2001).

Finally, responses to these three items were summed and recoded into one overall count of victimization. This overall count of victimization is also right-censored at 12 or more. Of the respondents, 295 (6.7%) experienced twelve or more victimization experiences.

Self-control

The central explanatory variable is self-control, which is referred to as the propensity of the actor to seek short-term, immediate pleasure without consideration of the long-term consequences. Gottfredson and Hirschi (1990) explain that an individual who is impulsive, lazy, prefers risk and physical activity, lacks empathy and becomes easily frustrated possesses a low level of self-control and in turn, will engage in criminal and analogous behavior at a much higher rate than individuals who do not possess these traits.

The current standard measure of self-control is the Grasmick et al. (1993) scale, which is comprised of twenty-four items that measure all six components described by Gottfredson and Hirschi (1990). However, the G.R.E.A.T. data were not intended to measure self-control, specifically as Gottfredson and Hirschi did, and therefore are limited to only two components, impulsivity and risk seeking. Although this will be a major limitation to the measure of self-control and its ability to corroborate Schreck's (1999) research, risk seeking and impulsivity have been shown to be the dimensions of self-control that carry the most explanatory power (Arneklev et al. 1993, Wood et al.

39

1993, Winfree & Bernat 1998, Arneklev et al. 1999, Nakhaie et al. 1999, LaGrange & Silverman 1999).

Moreover, the items used to measure these two components were taken from the Grasmick et al. scale (1993). However, they include a "neither agree nor disagree" answer choice, whereas the Grasmick scale does not. Both impulsivity and risk seeking are measured on a Likert scale that ranges from one for "strongly disagree" to five for "strongly agree."

Impulsivity is reflected by the respondent's level of delayed gratification and "here and now" orientation. Four items are used to measure this component. "I often act on the spur of the moment;" "I don't devote much time to preparing for my future," "I often do whatever brings me pleasure here and now," and "I'm more concerned with what happens to me in the short run." The scale produced from these items revealed a Cronbach's alpha of .64 and formed a single-factor solution (eigenvalue = 1.93) with loadings ranging from .62 to .74.

Risk seeking corresponds to the respondent's preference for risk, excitement, and adventure. It is also operationalized with four items; "I like to test myself every now and then by doing something risky," "sometimes I will take a risk for the fun of it," "I sometimes find it exciting to do things for which I might get in trouble," and "excitement and adventure are more important to me than security." These items yielded a Cronbach's alpha of .82 and formed a single-factor solution (eigenvalue = 2.60) with loadings that ranged from .73 to .87.

Finally, both summated scales are used to create one eight-item self-control scale. Analysis revealed a single-factor solution, with an eigenvalue of 1.48, loadings of .86 for both dimensions and a Cronbach's alpha of .80.

Gang Membership

Gang membership is defined as whether or not the respondent identifies oneself as part of a gang. It is included as a proxy variable to measure risky lifestyle. This variable will be used as an independent variable to explain violent victimization and to examine the relationship between self-control, gang membership, and violent victimization.

Gang membership is measured dichotomously, using one self-definitional question; "Are you now in a gang?" Although this method of identifying gang members has some definitional limitations, Winfree et al. (1992) conducted a study specifically designed to test various definitions of gang status and their ability to predict behavior. They found that the self-reported definition of gang membership was a better predictor of gang related activity compared to the more restrictive definition, which was based on a series of questions regarding initiation rites and gang symbols. Thus, self-definitional gang membership has been used in previous research and is an accepted measure in the gang literature (Klein 1995, Hope and Damphousse 2002, Peterson et al. 2004). Responses are 0 = no and 1 = yes. Of the respondents, 311 (8.0%) stated that they were current gang members at the time of data collection.

Control Variables

Measures of the respondent's age, race, gender, self-reported delinquency, delinquent friends, parental attachment, parental supervision, and participation in the G.R.E.A.T. program are used as control variables for this analysis. All of these variables

41

have been found to be significantly related to the risk of victimization (Esbensen & Huizinga 1991, Lauritsen et al. 1991, Lauritsen et al. 1992, Lauritsen & Quinet 1995, Schreck et al. 2002, Sampson & Lauritsen 1990), and therefore have the potential to influence the results of the study. Gender is a dichotomous variable coded 1 = male and 0 = female. Age is a continuous variable. The original survey provides seven categories of race/ethnicity: White, Black, Hispanic, Asian, American Indian, other, and mixed. These categories were then recoded into five dummy variables, using white as the reference group. Due to the small number of responses, other and mixed were combined into one dummy variable named "other."

Association with delinquent peers is measured using sixteen items regarding how many of the respondent's friends participated in various behaviors including skipping school, stealing, robbery, and selling and using drugs. Responses were based on an ordinal scale ranging from 1= none of them to 5 = all of them. Three components revealed eigenvalues greater than one; however the first component yielded an eigenvalue of 8.77 and explained 55% of the variance, whereas the second and third components yielded eigenvalues of 1.24 and 1.06, respectively. Based on the scree discontinuity test (Cattell 1966), the first item explained the most variance and therefore, was the only component extracted. Factor loadings for this component ranged from .62 to .83. Cronbach's alpha equaled .94.

Prior delinquency is operationalized using twenty-three items regarding whether nor not, in the past year, the respondent engaged in various activities including; skipping school, purposely damaging property, drug use, carrying or using a weapon, stealing, and selling drugs. These items were measured as dichotomous variables, 0 = no and 1 = yes.

42

Factor analysis of these seventeen items produced a single-factor solution (eigenvalue = 7.23) with loadings from .40 to .70. Cronbach's alpha yielded an internal consistency of .88.

Parental attachment is measured with twelve Likert-type items. Six questions were asked regarding the respondent's relationship with a mother-figure and father-figure, separately. These items measure the extent to which the respondent felt each parent could talk about anything with them, knew his or her friends, understood, trusted, praised, and gave advice. Factor analysis of these twelve items revealed a single- factor solution with an eigenvalue of 5.33 and loadings from .55 to .76. Cronbach's alpha was .89.

Parental supervision is operationalized with four Likert-type items regarding whether or not the respondent agrees or disagrees with the following statements; "when I go someplace, I leave a note or call my parents," "my parents know where I am when I am not at home," "my parents know who I am with when I am not at home," and "I know how to get in touch with my parents if they are not home." Factor analysis formed a single-factor solution (eigenvalue = 2.22) and loadings that ranged from .33 -.68. Cronbach's alpha indicated an internal consistency of .73.

In an analysis of longitudinal data, participation in the G.R.E.A.T. program produced a significant reduction in victimization (Esbensen et al. 2001b). However, a similar evaluation of the cross-sectional data (data used in this study) did not reveal a significant difference in victimization (Esbensen & Osgood 1999). While these findings are equivocal, we include a measure of participation as a control variable. This variable

43

makes a dichotomous distinction between participation (= 1) and nonparticipation (= 0). Of the sample, 45.4% (1994) reported participation in the G.R.E.A.T. program.

Analysis

The prevalence of violent victimization is measured as a dichotomous dependent variable, indicating that logistic regression is the appropriate technique to use. Initially, separate models for each of the four measures of victimization are examined to determine the independent effects of self-control on the prevalence of violent victimization (hypothesis 1) and gang membership on the prevalence of violent victimization (hypothesis 2). Next, a multivariate model is employed to test the effects of self-control on the prevalence of violent victimization, controlling for gang membership. Hypothesis 3 (mediating effect) will be supported if the effects of self-control on victimization are significantly reduced in the multivariate model. To test the fourth hypothesis, separate models splitting the gang members from the nongang members are examined. These models allow a comparison of the effects that self-control has on violent victimization for gang members versus nongang members. A z-test of the maximum likelihood estimator (Brame et al. 1998) is employed to estimate the statistical significance of the difference in coefficients for the two groups. This will determine whether or not an interactive effect is present (hypothesis 4).

Next, negative binomial regression is used to examine the effect of self-control and gang membership on the frequency of violent victimization. Ordinary Least Squares (OLS) regression is inappropriate for this particular analysis because the data are discrete counts and reveal a skewed distribution with many of the observations at zero. As a result, OLS would yield smaller standard errors, inflated t-values, and a statistically

44

significant effect, when in fact, there is not an effect present (Studenmund 2001). Poisson regression would seem to be the better choice because this technique assumes discrete counts, has a skewed distribution, and restricts predicted values to positive numbers (Kleinbaum et al. 1988). However, Poisson also assumes that the variance of the dependent variable equals the mean; the data in this study do not satisfy this assumption (Haight 1967). Significant variation in frequency of victimization is revealed (robbed: mean = .22, SD = 1.13; hit: mean = 1.77, SD = 3.13; attacked: mean = .32, SD = 1.36, overall: mean = 2.07, SD = 3.38). Thus, negative binomial regression is the preferred technique to use in this situation because it includes a random component reflecting the uncertainty about the true rates at which events occur for individual cases and ensures an accurate estimate of the probability distribution of each variable (Gardner et al. 1995, Long & Freese 2003).

The first model in the series of negative binomial regression analyses includes separate analyses for the effect of self-control on each of the four victimization counts (hypothesis 1). The second model includes analyses testing the effect of gang membership on each of the victimization counts (hypothesis 2). Next, a multivariate model tests the effect of self-control on each victimization count, controlling for gang membership. If hypothesis 3 is supported, the effect of self-control will be significantly reduced in the multivariate model. The final model includes separate analyses for gang members and nongang members. If necessary, the coefficients and standard errors for each model will then be used to calculate a z-score, which will determine whether or not self-control and gang membership interact to enhance the frequency of violent victimization (hypothesis 4).

Chapter 6

Results

The purpose of this study was to examine several multivariate models that predict prevalence and frequency of violent victimization. The question addressed by these models is as follows: does low self-control and gang membership influence prevalence and frequency of violent victimization? Logistic regression was utilized to examine the prevalence of violent victimization and negative binomial regression was used to examine frequency of violent victimization.

Preliminary analyses were run to assess the bivariate relationship between self-control and each item, gang membership and each item, and the multivariate relationship between self-control, gang membership and each victimization item. Next, age, gender, race, participation in the G.R.E.A.T. program, parental attachment, parental supervision, peer delinquency and prior delinquency were incorporated into the model as control variables. Three more models of each item were analyzed. Model 1 includes the control variables and self-control, Model 2 includes the control variables and gang membership, and Model 3 includes the control variables and both self-control and gang membership. Finally, separate models for gang and nongang members are provided.

Prevalence of Violent Victimization

Separate tables are displayed for each prevalence measure (ever been hit by someone trying to hurt you, ever been robbed, ever been attacked with a weapon, ever

46

been victimized). Descriptive statistics revealed that 48.3% of the sample reported being hit by someone trying to hurt them, 8.3% had been robbed one or more times, and 10.7% had been attacked with a weapon. Of the respondents, 51.1% reported violent victimization one or more times in the past year.

Tables 2-5 display the logistic regression results, without controlling for extraneous factors. All of the model chi-squares were significant at the .05 level, indicating that each model was able to predict victimization better than chance. Model 1 in each table revealed a statistically significant effect of self-control. It appears that individuals with lower levels of self-control are more likely to report victimization one or more times. Model 2 of each table also revealed a significant bivariate relationship between gang membership and victimization. Gang members appeared to be more likely to report being hit, robbed, attacked, or one or more violent victimization experiences. However, in Model 3 in all of the tables, the effects of gang membership and self-control were significantly reduced. That is, including the self-control and gang membership variables into one model significantly reduced the independent effect that each variable had on victimization.

Table 2: Logistic Regression Predicting Prevalence of "Hit by Someone Trying to Hurt You"   (N = 3907)

Variables	Model 1			Model 2			Model 3		
	$\underline{B}$	$\underline{SE}$	Exp (B)	$\underline{B}$	$\underline{SE}$	Exp (B)	$\underline{B}$	$\underline{SE}$	Exp (B)
Self-Control	.06*	.01	1.06	--	--	--	.06*	.01	1.06
Gang Membership	--	--	--	.68*	.12	1.98	.41*	.13	1.51
Constant	-1.48*	.14	.23	-.12*	.03	.89	-1.41*	.14	.24
χ^2	116.45*			32.33*			127.29*		
Nagelkerke R²	.04			.01			.04		

* p≤ .05

Table 3:   Logistic Regression Predicting Prevalence of Robbery   (N = 3907)

Variables	Model 1			Model 2			Model 3		
	<u>B</u>	<u>SE</u>	Exp (B)	<u>B</u>	<u>SE</u>	Exp (B)	<u>B</u>	<u>SE</u>	Exp (B)
Self-Control	.08*	.01	1.08	--	--	--	.06*	.01	1.06
Gang Membership	--	--	--	1.31*	.15	3.70	1.03*	.16	2.81
Constant	-4.22*	.27	.02	-2.56*	.07	.08	-3.90*	.27	.02
χ^2		54.35*			62.77*			91.57*	
Nagelkerke R²		.03			.04			.05	

* p≤ .05

Table 4:   Logistic Regression Predicting Prevalence of "Attacked with a Weapon"
(N = 3907)

Variables	Model 1			Model 2			Model 3		
	<u>B</u>	<u>SE</u>	Exp (B)	<u>B</u>	<u>SE</u>	Exp (B)	<u>B</u>	<u>SE</u>	Exp (B)
Self-Control	.13*	.01	1.13	--	--	--	.09*	.01	1.10
Gang Membership	--	--	--	2.09*	.13	8.11	1.70*	.14	5.48
Constant	-5.23*	.27	.01	-2.44*	.06	.09	-4.71*	.27	.01
χ^2		176.17*			224.68*			313.81*	
Nagelkerke R²		.09			.11			.16	

* p≤ .05

Table 5:   Logistic Regression Predicting Prevalence of Violent Victimization   (N = 3907)

Variables	Model 1			Model 2			Model 3		
	<u>B</u>	<u>SE</u>	Exp (B)	<u>B</u>	<u>SE</u>	Exp (B)	<u>B</u>	<u>SE</u>	Exp (B)
Self-Control	.07*	.01	1.07	--	--	--	.06*	.01	1.06
Gang Membership	--	--	--	1.02*	.13	2.79	.75*	.14	2.11
Constant	-1.51*	.14	.22	-.03	.03	.97	-1.40*	.14	.25
χ^2		140.81*			67.07*			173.25*	
Nagelkerke R²		.05			.02			.06	

* p≤ .05

However, as seen in Tables 6-9, once the control variables were entered into the models, a very different picture emerged. Table 6 provides logistic regression models for "ever been hit by someone trying to hurt you," including the controls. All three models

48

yield significant chi-squares. The independent effect of self-control is presented in Model 1. The coefficient for self-control (B= .004) is not significant at the .05 level. This indicates that, once all other extraneous effects were controlled, level of self-control did not have a statistically significant effect on the likelihood of being hit by someone. Model 2 reveals a significant effect of gang membership. However, it is not in the hypothesized direction. The B-coefficient equals -.543, which indicates that nongang members were significantly more likely to report being hit by someone trying to hurt them. This finding is contrary to the results in Table 2. When the control variables were not included in the analyses gang membership yielded a positive effect. As seen in Model 3, the effect of gang membership remained statistically significant once self-control was added into the model.

Throughout all three models in Table 6, gender, Hispanic, parental attachment, and prior delinquency revealed statistically significant coefficients. Males, offenders, and respondents who reported lower levels of parental attachment were more likely to report being hit by someone; Hispanics and respondents with fewer delinquent peers were less likely to report ever being hit by someone trying to hurt them.

Table 6: Logistic Regression Predicting Prevalence of "Hit by Someone Trying to Hurt You" Including the Control Variables (N = 3907)

Variables	Model 1			Model 2			Model 3		
	B	SE	Exp (B)	B	SE	Exp (B)	B	SE	Exp (B)
Age	-.06	.06	.94	-.05	.06	.96	-.05	.06	.95
Gender	.68*	.07	1.97	.68*	.07	1.97	.68*	.07	1.97
Black	-.10	.09	.91	-.09	.09	.91	-.09	.09	.91
Hispanic	-.23*	.10	.79	-.21*	.10	.81	-.21*	.10	.81
Indian	.23	.24	1.26	.23	.24	1.26	.28	.24	1.26
Asian	-.13	.14	.88	-.11	.14	.90	-.10	.14	.90
Other	.08	.15	1.08	.10	.15	1.10	.10	.15	1.10
G.R.E.A.T.	-.04	.07	.96	-.04	.07	.96	-.04	.07	.96

49

Table 6 (Continued)

Variables	Model 1			Model 2			Model 3		
	$\underline{B}$	$\underline{SE}$	$\underline{Exp\,(B)}$	$\underline{B}$	$\underline{SE}$	$\underline{Exp\,(B)}$	$\underline{B}$	$\underline{SE}$	$\underline{Exp\,(B)}$
Parental Attachment	-.01*	.00	.99	-.01*	.00	.99	-.01*	.00	.99
Parental Supervision	.02	.01	1.02	.02	.01	1.02	.02	.01	1.02
Peer Delinquency	-.01*	.00	.99	-.01*	.00	.99	-.01*	.00	.99
Prior Delinquency	.16*	.01	1.17	.17*	.01	1.19	.17*	.01	1.18
Self-Control	.00	.01	1.00	--	--	--	.00	.01	1.00
Gang Membership	--	--	--	-.54*	.15	.58	-.54*	.15	.58
Constant	.35	.85	1.42	.19	.84	.58	.20	.85	1.13
χ^2		485.28*			497.41*			497.58*	
Nagelkerke R²		.16			.16			.16	

* p≤ .05

Table 7 summarizes prevalence of robbery. Model chi-squares for each of the three models were statistically significant at the .05 level. However, self-control (B = -.008) and gang membership (B = .011) did not reveal significant (p ≤ .05) coefficients. In fact, the association of self-control was opposite the direction that would be expected. Regardless, the likelihood of being robbed was not related to level of self-control or gang membership.

Peer delinquency, prior delinquency, black, Hispanic, and gender remained significant predictors of robbery in all three models. Males, blacks, and offenders were more likely to report being robbed one or more times and being Hispanic and higher levels of delinquent peers decreased the likelihood of robbery.

Table 7: Logistic Regression Predicting Prevalence of Robbery Including the Control Variables (N = 3907)

Variables	Model 1			Model 2			Model 3		
	B	SE	Exp (B)	B	SE	Exp (B)	B	SE	Exp (B)
Age	.03	.10	1.03	.03	.10	1.03	.03	.10	1.03
Gender	.73*	.13	2.08	.73*	.13	2.07	.73*	.13	2.08
Black	.55*	.15	1.73	.56*	.15	1.75	.55*	.15	1.73
Hispanic	-.56*	.20	.57	-.56*	.21	.57	-.56*	.21	.57
Indian	.63	.34	1.87	.62	.34	1.86	.63	.38	1.87
Asian	-.19	.31	.83	-.18	.31	.84	-.19	.31	.83
Other	.29	.24	1.34	.30	.24	1.34	.29	.24	1.34
G.R.E.A.T.	.05	.12	1.05	.05	.12	1.06	.05	.12	1.05
Parental Attachment	.00	.01	1.00	.00	.01	1.00	.01	.01	1.00
Parental Supervision	-.03*	.02	.97	-.03	.02	.97	-.03	.02	.97
Peer Delinquency	-.01*	.01	.99	-.01*	.01	.99	-.01*	.01	.99
Prior Delinquency	.17*	.02	1.18	.17*	.02	1.18	.17*	.02	1.18
Self-Control	-.01	.01	.99	--	--	--	-.01	.01	.99
Gang Membership	--	--	--	.01	.20	1.01	.01	.20	1.01
Constant	-3.53*	1.43	.03	-3.74*	1.39	.02	-3.53	1.43	.03
χ²		293.14*			292.78*			293.14*	
Nagelkerke R²		.17			.17			.17	

* p≤ .05

Results for prevalence of "attacked with a weapon" are displayed in Table 8. Overall, each model was significant. Model 1 shows that self-control did not yield a significant effect (B = .015) at the .05 level. Model 2 reveals a gang coefficient equal to .507, which was significant and in the hypothesized direction. Gang members were more likely to report being attacked with a weapon, one or more times. When self-control was added into Model 3, the gang membership coefficient remained statistically significant. Thus, a mediating effect was not found.

All three models found gender, prior delinquency, and parental supervision to be significantly related to prevalence of attacked with a weapon. Males, offenders, and

51

respondents who reported less parental supervision were more likely to experience being attacked with a weapon. Regarding race: black, Indian, and respondents in the other/mixed category were also more likely to report being attacked with a weapon.

Table 8:   Logistic Regression Predicting Prevalence of "Attacked with a Weapon"
             Including the Control Variables   (N = 3907)

Variables	Model 1			Model 2			Model 3		
	B	SE	Exp (B)	B	SE	Exp (B)	B	SE	Exp (B)
Age	.20	.09	1.22	.18	.10	.06	.18	.10	1.19
Gender	.53*	.12	1.70	.55*	.12	1.73	.54*	.13	1.72
Black	.71*	.15	2.03	.67*	.15	1.96	.70*	.15	2.01
Hispanic	.23	.17	1.26	.19	.17	1.21	.20	.17	1.22
Indian	.81*	.32	2.24	.85*	.32	2.34	.84*	.32	2.31
Asian	-.43	.35	.65	-.51	.35	.60	-.49	.35	.61
Other	.68*	.22	1.97	.63*	.22	1.88	.64*	.22	1.90
G.R.E.A.T.	.12	.12	1.13	.12	.12	1.13	.12	.12	1.13
Parental Attachment	.00	.00	1.00	-.00	.00	.99	-.00	.01	.99
Parental Supervision	-.05*	.02	.96	-.05*	.02	.95	-.04*	.02	.96
Peer Delinquency	-.03	.01	.99	-.00	.01	.99	-.01	.01	.99
Prior Delinquency	.19*	.02	1.21	.18*	.02	1.20	.18*	.02	1.19
Self-Control	.02	.01	1.02	--	--	--	.02	.01	1.02
Gang Membership	--	--	--	.51*	.17	1.66	.51*	.17	1.67
Constant	-6.44*	1.39	.00	-5.62*	1.35	.00	-6.08*	1.40	.00
χ^2	577.37*			584.55*			586.17*		
Nagelkerke R²	.28			.28			.28		

* p≤ .05

Table 9 presents the results for prevalence of the overall violent victimization measure. The chi-square for each model was statistically significant at the .05 level. Still, the coefficients for self-control (B = .005) and gang membership (B = -.267) are not statistically significant. Neither level of self-control nor gang membership was able to predict prevalence of violent victimization.

52

In all three models of Table 9, males and offenders were more likely to report one or more violent victimization experiences. Parental attachment was also found to have a significant inverse effect. That is, lower levels of parental attachment were found to be associated with one or more violent victimization experiences. In addition, contrary to previous research (Schreck et al. 2002, Lauritsen et al. 1992, Schreck & Fisher 2004), delinquent peer association was inversely related to this item. Respondents with higher levels of delinquent peers were less likely to report a violent victimization experience.

Table 9: Logistic Regression Predicting Prevalence of Violent Victimization Including the Control Variables (N = 3907)

Variables	Model 1			Model 2			Model 3		
	B	SE	Exp (B)	B	SE	Exp (B)	B	SE	Exp (B)
Age	-.04	.06	.96	-.03	.06	.97	-.03	.06	.97
Gender	.74*	.07	2.10	.74*	.07	2.10	.74*	.07	2.10
Black	.05	.09	1.05	.05	.09	1.05	.05	.09	1.06
Hispanic	-.20	.10	.82	-.19	.10	.83	-.19	.10	.83
Indian	.30	.24	1.34	.30	.24	1.35	.29	.24	1.34
Asian	-.12	.14	.89	-.11	.14	.89	-.11	.14	.90
Other	.19	.16	1.21	.20	.16	1.22	.20	.16	1.22
G.R.E.A.T.	-.06	.07	.94	-.06	.07	.94	-.06	.07	.94
Parental Attachment	-.01*	.00	.99	-.01*	.00	.99	-.01*	.00	.99
Parental Supervision	.01	.01	1.01	.01	.01	1.01	.01	.01	1.01
Peer Delinquency	-.02*	.00	.99	-.02*	.00	.99	-.02*	.00	.99
Prior Delinquency	.18*	.01	1.20	.19*	.01	1.21	.19*	.01	1.21
Self-Control	.01	.01	1.01	--	--	--	.00	.01	1.00
Gang Membership	--	--	--	-.27	.16	.77	-.26	.16	.77
Constant	-.05	.87	.95	-.05	.85	.95	-.16	.87	.86
χ^2		594.36*			596.63*			596.98*	
Nagelkerke R^2		.19			.19			.19	

* p ≤ .05

These logistic regression results do not support hypothesis 1. Self-control was not found to be a significant predictor of any of the four prevalence items. Hypothesis 2 was

53

only slightly supported. Gang members were more likely to report being attacked with a weapon. However, they were significantly less likely to be hit by someone trying to hurt them and not associated with robbery and overall violent victimization. Given these null findings, Hypothesis 3 (mediating effect) was also unsupported.

Next, the interactive effect proposed in hypothesis 4 was tested by running separate logistic regression models for gang members and nongang members for the two prevalence items that revealed an association with gang membership ("hit by someone trying to hurt you" and "attacked with a weapon").

As seen in Tables 10 and 11, both the gang (hit: B = .026, attack: B = .007) and nongang (hit: B = -.001, attack: B = .017) models yielded self-control coefficients that were not significant at the .05 level. Therefore, calculation of the z-score of the maximum likelihood estimator (Brame et al. 1998) was not necessary. Based on the insignificant findings of self-control, it can be concluded that gang membership and self-control did not interact to amplify the risk of violent victimization. Regardless of gang membership, self-control did not have an effect on prevalence of violent victimization, once the effects of all the other extraneous influences were controlled.

Table 10: Logistic Regression Predicting Prevalence of "Hit by Someone Trying to Hurt You" by Gang Membership   (N = 3907)

Variables	Gang Members (N = 311)			Nongang Members (N =3596)			
	B	SE	Exp (b)	B	SE	Exp (b)	Z-Score
Age	.12	.19	1.13	-.07	.06	.94	--
Gender	-.09	.27	.91	.74*	.08	2.10	--
Black	-.36	.36	.70	-.08	.10	.92	--
Hispanic	-.20	.34	.82	-.22*	.11	.80	--
Indian	.61	.88	1.85	.16	.25	1.17	--
Asian	1.76*	.81	5.83	-.20	.15	.82	--
Other	.25	.45	1.28	.07	.16	1.08	--
G.R.E.A.T.	-.09	.26	.92	-.04	.07	.96	--
Parental Attachment	.00	.01	1.00	-.01*	.00	.99	--

Table 10 (Continued)

Variables	Gang Members (N = 311)			Nongang Members (N =3596)			
	B	SE	Exp (b)	B	SE	Exp (b)	Z-Score
Parental Supervision	-.01	.04	.99	.03	.01	1.03	--
Peer Delinquency	-.02	.01	.98	-.01*	.00	.99	--
Prior Delinquency	.10*	.04	1.11	.19*	.01	1.20	2.87*
Self-Control	.03	.03	1.03	-.00	.01	.99	--
Constant	-1.91	2.86	.15	.32	.90	1.38	--
χ^2		27.37*			474.02*		
Nagelkerke R²		.12			.17		

* p≤ .05

Table 11:   Logistic Regression Predicting Prevalence of "Attacked with a Weapon" by Gang Membership   (N = 3907)

Variables	Gang Members (N = 311)			Nongang Members (N=3596)			
	B	SE	Exp (b)	B	SE	Exp (b)	Z-Score
Age	.37	.21	1.45	.12	.11	1.13	--
Gender	.79*	.29	2.20	.49*	.14	1.63	.65
Black	.57	.40	1.76	.70*	.16	2.01	--
Hispanic	.24	.36	1.27	.17	.19	1.19	--
Indian	-.68	.99	.51	1.04*	.33	2.83	--
Asian	-.19	.63	.83	-.70	.44	.50	--
Other	1.01*	.46	2.76	.51*	.26	1.67	.68
G.R.E.A.T.	.09	.27	1.09	.14	.13	1.15	--
Parental Attachment	-.00	.01	.99	-.00	.01	.99	--
Parental Supervision	-.01	.04	.99	-.06*	.02	.95	--
Peer Delinquency	.01	.01	1.01	-.01	.01	.99	--
Prior Delinquency	.14*	.04	1.15	.19*	.02	1.20	1.12
Self-Control	.01	.03	1.01	.02	.01	1.02	--
Constant	-8.73*	3.11	.00	-5.02*	1.59	.01	--
χ^2		73.40*			298.12*		
Nagelkerke R²		.28			.19		

* p≤ .05

Frequency of Violent Victimization

Descriptive statistics were used to determine the distribution of each frequency item. Frequency of "hit by someone trying hurt you" revealed a mean of 1.78 and standard deviation of 3.13. The mean and standard deviation for robbery was .22 and 1.12, respectively. Frequency of "attacked with a weapon" produced a mean of .30 and

55

standard deviation of 1.37. Finally, the overall measure of violent victimization scale yielded a mean of 2.07 and standard deviation of 3.38.

Tables 12-20 summarize negative binomial regression analyses for each of the four frequency items. Preliminary analyses without the control variables are provided first. Multivariate models including all of the control variables follow.

The alpha (α) parameter at the bottom of the table determines the degree of dispersion. An alpha that is greater than zero indicates overdispersion in the dependent variable and, in turn, the need to use the negative binomial regression model instead of the Poisson regression model (Long & Freese 2003). The model chi-square (χ^2) represents the significance of the model ($p \leq .05$), which indicates if the model is able to explain more than chance alone. The coefficient, standard error, and percent change of each variable are provided.

Tables 12-15 summarize the independent relationship of self-control, gang membership, and frequency of violent victimization. Overall, all of the models yielded significant chi-squares and alpha parameters greater than zero. Further, self-control (Models 1) was statistically significant in all four tables. For each additional increase in self-control (indicating lower levels of self-control), it appeared that the expected frequency of being hit, attacked, robbed, or violently victimized increased. Gang membership (Models 2) was also significantly associated with all four items. Being a gang member appeared to increase the expected frequency of being hit, robbed, attacked with a weapon, or violently victimized. However, when self-control and gang membership were incorporated into one multivariate model (Models 3), the effect of gang

56

membership on each of the four items was significantly reduced, while the effect of self-

control was only slightly reduced.

Table 12: Negative Binomial Regression Predicting Frequency of "Hit by Someone Trying to Hurt You"   (N = 3907)

Variables	Model 1			Model 2			Model 3		
	$\underline{B}$	$\underline{SE}$	$\underline{\%}$	$\underline{B}$	$\underline{SE}$	$\underline{\%}$	$\underline{B}$	$\underline{SE}$	$\underline{\%}$
Self-Control	.05*	.01	5.6	--	--	--	.05*	.01	5.1
Gang Membership	--	--	--	.60*	.11	83.0	.35*	.11	41.4
Constant	-.75*	.12	--	.51*	.03	--	-.68*	.12	--
χ^2	123.71*			37.30*			135.04*		
Pseudo R²	.01			.00			.01		
A	2.68			2.81			1.67		

* p≤ .05

Table 13: Negative Binomial Regression Predicting Frequency of Robbery   (N = 3907)

Variables	Model 1			Model 2			Model 3		
	$\underline{B}$	$\underline{SE}$	$\underline{\%}$	$\underline{B}$	$\underline{SE}$	$\underline{\%}$	$\underline{B}$	$\underline{SE}$	$\underline{\%}$
Self-Control	.08*	.01	8.5	--	--	--	.06*	.01	6.5
Gang Membership	--	--	--	1.53*	.26	363.3	1.15*	.26	216.5
Constant	-3.59*	.29	--	-1.77*	.08	--	-3.30*	.30	--
X^2	50.32*			46.69*			73.81*		
Pseudo R²	.02			.01			.02		
A	17.19			17.37			16.10		

* p≤ .05

Table 14: Negative Binomial Regression Predicting Frequency of "Attacked with a Weapon"   (N = 3907)

Variables	Model 1			Model 2			Model 3		
	$\underline{B}$	$\underline{SE}$	$\underline{\%}$	$\underline{B}$	$\underline{SE}$	$\underline{\%}$	$\underline{B}$	$\underline{SE}$	$\underline{\%}$
Self-Control	.11*	.01	11.9	--	--	--	.09*	.01	9.8
Gang Membership	--	--	--	2.06*	.21	686.8	1.77*	.20	486.6
Constant	-4.10*	.28	--	-1.64	.07	--	-3.96*	.27	--
χ^2	110.57*			128.71*			208.79*		
Pseudo R²	.03			.03			.05		
α	12.55			11.99			10.10		

* p≤ .05

57

Table 15:   Negative Binomial Regression Predicting Frequency of Violent Victimization
              (N = 3907)

Variables	Model 1			Model 2			Model 3		
	B	SE	%	B	SE	%	B	SE	%
Self-Control	.06*	.01	6.1	--	--	--	.05*	.01	5.4
Gang Membership	--	--	--	.79*	.10	119.2	.53*	.10	69.5
Constant	-.72*	.11		.64*	.03	--	-.62*	.12	--
χ²		159.13*			71.51*			189.23	
Pseudo R²		.01			.00			.01	
α		2.51			2.62			2.47	

* p≤ .05

     However, in line with the prevalence items, including the control variables substantially altered the effects of self-control and gang membership on frequency of violent victimization. Table 16 presents the results for frequency of "hit by someone trying to hurt you," holding all other variables constant. All three models yielded alphas greater than zero and significant model chi-squares. Thus, negative binomial regression is the appropriate technique to use and the models are able to explain more than chance. Model 1 reveals a coefficient for self-control (B = .007) that was not significant (p ≤ .05). Accordingly, holding all other variables constant, self-control did not have a statistically significant effect on the frequency of "hit by someone trying to hurt you." Model 2 tested the independent effect of gang membership. The coefficient for gang membership (B = -.326) was statistically significant, but not in the hypothesized direction. These results indicate that being a gang member decreased the expected frequency of being hit by someone by 28 percent, holding all other variables constant. Furthermore, when self-control and gang membership were included in the same model (Model 3), the effect of gang membership was not significantly reduced and therefore, a mediating effect was not supported.

58

All three models in Table 16 reveal significant coefficients for gender, Hispanic, parental attachment, and prior delinquency. Results indicate that being a male increased the expected frequency of being hit by someone by 46 percent; being Hispanic decreased the expected frequency by 20 percent. Each increase in parental attachment decreased the expected frequency by 1 percent and each increase of self-reported offending increased the expected frequency by approximately 10 percent.

Table 16: Negative Binomial Regression Predicting Frequency of "Hit by Someone Trying to Hurt You" Including the Control Variables (N = 3907)

Variables	Model 1			Model 2			Model 3		
	B	SE	%	B	SE	%	B	SE	%
Age	-.02	.05	-2.4	-.02	.05	-1.4	-.02	.05	-1.7
Gender	.38*	.06	45.6	.38*	.06	45.7	.38*	.06	45.6
Black	-.06	.08	-5.7	-.06	.08	-5.8	-.05	.08	-5.1
Hispanic	-.22*	.08	-19.5	-.19*	.08	-17.7	-.20*	.08	-17.8
Indian	.28	.19	32.7	.26	.19	30.2	.27	.19	31.3
Asian	-.10	.12	-9.4	-.08	.12	-7.7	-.07	.12	-7.2
Other	-.11	.12	-10.4	-.10	.12	-9.8	-.10	.12	-9.0
G.R.E.A.T.	-.04	.06	-3.7	-.04	.06	-4.3	-.04	.06	-3.9
Parental Attachment	-.01*	.00	-1.3	-.01*	.00	-1.3	-.01*	.00	-1.3
Parental Supervision	.01	.01	1.2	.01	.01	1.2	.01	.01	1.3
Peer Delinquency	-.00	.00	-.2	-.00	.00	-0.1	-.00	.00	-.1
Prior Delinquency	.09*	.01	9.4	.10*	.01	10.6	.10*	.01	10.3
Self-Control	.01	.01	.7	--	--	--	.01	.01	.7
Gang Membership	--	--	--	-.33*	.12	-27.9	-.32*	.12	-8.4
Constant	.64	.70	--	.62	.69	--	.47	.70	--
χ^2		386.10*			392.15*			393.53*	
Pseudo R²		.03			.03			.03	
α		2.34			2.33			2.33	

* p≤ .05

Analyses predicting frequency of robbery are summarized in Table 17. All three models yielded significant chi-squares and alpha statistics greater than zero. Neither self-control (B = -.024) nor gang membership (B= -.451) were significant predictors of

59

frequency of robbery. In fact, self-control and gang membership both yielded a negative coefficient. This finding is in the opposite direction of what is expected and consistently found in the literature (Pratt & Cullen 2000, Peterson et al. 2004).

Gender, Black, Hispanic, Indian, and prior delinquency remained significant predictors of frequency of robbery. Being a male, black, Indian, or associating with delinquent peers increased the expected frequency of robbery and being Hispanic decreased the expected frequency.

Table 17: Negative Binomial Regression Predicting Frequency of Robbery Including the Control Variables (N = 3907)

Variables	Model 1			Model 2			Model 3		
	B	SE	%	B	SE	%	B	SE	%
Age	-.02	.12	-2.2	-.01	.12	-.8	-.01	.12	-.7
Gender	.95*	.16	158.4	.95*	.16	158.2	.96*	.16	161.1
Black	.42*	.18	52.3	.46*	.18	59.0	.43*	.18	53.7
Hispanic	-.33	.22	-28.4	-.35	.22	-29.8	-.35	.22	-29.3
Indian	.92*	.44	150.7	.94*	.44	154.7	.92*	.44	151.0
Asian	-.08	.32	-8.0	-.05	.32	-4.6	-.06	.32	-5.7
Other	.22	.30	24.5	.31	.30	36.1	.26	.30	30.2
G.R.E.A.T.	-.15	.15	-14.2	-.13	.15	-1.7	-.15	.15	-13.5
Parental Attachment	-.01	.01	-.6	-.00	.01	-.3	-.01	.01	-.5
Parental Supervision	-.04	.03	-3.5	-.03	.03	-2.8	-.04	.03	-3.6
Peer Delinquency	.01	.01	1.0	.01	.01	1.0	.01	.01	1.3
Prior Delinquency	.14*	.02	14.6	.14*	.02	14.8	.15*	.02	16.0
Self-Control	-.02	.02	-2.4	--	--	--	-.03	.02	-2.6
Gang Membership	--	--	--	-.45	.28	-36.3	-.49	.28	-38.4
Constant	-1.86	1.72	--	--	--	--	-2.18	1.73	--
χ^2	236.22*			235.99*			239.15		
Pseudo R²	.07			.07			.07		
α	10.70*			10.70*			10.66*		

* p≤ .05

Table 18 provides results for frequency of "attacked with a weapon." Each model yielded a significant chi-square and alpha parameter. Self-control (B = .020) and gang

membership (B = .279) failed to obtain statistical significance. Hence, self-control and gang membership were not associated with frequency of "attacked with a weapon."

Race/ethnicity was found to be a significant predictor of frequency of robbery. Being in the Black, Indian, or "other" category increased the expected frequency of robbery, whereas being in the Asian category decreased the expected frequency. Consistent with the bulk of empirical literature (Lauritsen et al. 1991, Schreck & Fisher 2004), higher levels of prior and peer delinquency were found to be associated with increased frequency of robbery. Being a male also increased the expected frequency of robbery by 84 percent.

Table 18:   Negative Binomial Regression Predicting Frequency of "Attacked with a Weapon" Including the Control Variables (N = 3907)

Variables	Model 1			Model 2			Model 3		
	B	SE	%	B	SE	%	B	SE	%
Age	-.03	.10	-3.2	-.05	.10	-5.1	-.05	.10	-5.0
Gender	.61*	.13	84.0	.62*	.13	84.9	.61*	.13	84.0
Black	.62*	.16	85.2	.58*	.16	79.2	.61*	.16	84.7
Hispanic	.26	.17	30.1	.24	.17	27.3	.24	.17	26.8
Indian	1.99*	.34	629.3	1.90*	.33	566.1	1.99*	.34	634.6
Asian	-.86*	.35	-57.6	-.94*	.36	-61.1	-.90*	.36	-59.4
Other	.71*	.24	102.8	.64*	.24	88.9	.69*	.24	98.4
G.R.E.A.T.	.10	.13	9.9	.09	.12	9.2	.11	.13	11.1
Parental Attachment	-.00	.01	-0.0	-.00	.01	-.30	-.00	.01	-.1
Parental Supervision	.01	.02	1.3	.01	.02	.7	.01	.02	1.1
Peer Delinquency	.03*	.01	3.3	.03*	.01	3.4	.03*	.01	3.1
Prior Delinquency	.14*	.02	15.2	.138*	.02	14.8	.13*	.02	14.2
Self-Control	.02	.01	2.0	--	--	--	.02	.01	2.2
Gang Membership	--	--	--	.278	.21	32.0	.31	.21	36.0
Constant	-4.59*	1.51	--	-3.65*	1.49	--	-4.22*	1.53	--
χ^2		486.64*			485.87*			488.88*	
Pseudo R^2		.12			.12			.12	
α		6.22			6.21			6.19	

* p≤ .05

61

Results for the overall frequency of violent victimization measure are presented in Table 19. Each model yielded an alpha greater than zero and significant model chi-squares. Consistent with the findings in Tables 16-18, self-control did not yield a statistically significant effect (B = .007) at the .05 level. In addition, although gang membership revealed an insignificant association (B = -.197), it is not in the expected direction. Peterson et al. (2004) found that gang members report higher levels of violent victimization; however these data show that being a gang member decreased the expected frequency of violent victimization. Further, neither coefficient was reduced in Model 3.

Overall violent victimization was significantly related to gender, Hispanic, parental attachment, and prior delinquency. Holding other variables constant, being a male increased the expected frequency of violent victimization by 51 percent; being Hispanic decreased the expected frequency by approximately 15 percent; lower levels of parental attachment were associated with higher frequency of victimization and; each additional increase on the prior delinquency scale, increased expected frequency of violent victimization by nearly 11 percent.

Table 19:   Negative Binomial Regression Predicting Frequency of Violent Victimization Including the Control Variables   (N = 3907)

Variables	Model 1			Model 2			Model 3		
	B	SE	%	B	SE	%	B	SE	%
Age	.00	.04	0.0	.01	.05	.7	.01	.05	.5
Gender	.41*	.01	50.6	.41*	.06	50.9	.41*	.06	50.6
Black	.05	.07	5.4	.05	.07	5.0	.06	.07	5.8
Hispanic	-.18*	.08	-16.0	-.16*	.08	-14.8	-.16*	.08	-15.0
Indian	.31	.18	35.9	.29	.18	34.2	.30	.18	35.0
Asian	-.10	.11	-9.3	-.09	.11	-8.6	-.08	.11	-8.1
Other	-.05	.12	-4.9	-.05	.12	-4.6	-.04	.12	-3.9
G.R.E.A.T.	-.06	.05	-5.4	-.06	.05	-5.8	-.06	.05	-5.5
Parental Attachment	-.01*	.00	-1.2	-.01*	.00	-1.2	-.01*	.00	-1.1

62

Table 19 (Continued)

Variables	Model 1			Model 2			Model 3		
	B	SE	%	B	SE	%	B	SE	%
Parental Supervision	.01	.01	.6	.01	.01	.50	.01	.01	.6
Peer Delinquency	-.00	.00	-.1	.00	.00	.00	-.00	.00	-.00
Prior Delinquency	.10*	.01	10.2	.11*	.01	11.1	.10*	.01	10.8
Self-Control	.01	.01	.70	--	--	--	.01	.01	.7
Gang Membership	--	--	--	-.20	.11	-17.9	-.19	.11	-17.5
Constant	.311	.665	--	.36	.66	--	.21	.67	--
χ^2		504.20*			505.56*			507.26*	
Pseudo R²		.04			.04			.04	
α		2.11			2.11			2.11	

* $p \leq .05$

Negative binomial regression analyses of the frequency items yielded conclusions consistent with the logistic regression results presented above. Once the control variables were entered into the models, self-control was not found to be a significant predictor of frequency of violent victimization. Gang membership revealed a significant association to frequency of "hit by someone trying to hurt you;" however, it was not in the hypothesized direction. The other three frequency items were not significantly associated with gang membership. As a result of these findings, a mediating effect of self-control and gang membership was also not found.

Given the null findings in Tables 17-19 for the effects of self-control and gang membership, it was not necessary to test their interactive effects. Thus, frequency of "hit by someone trying to hurt you" was the only item tested because of the significant effect of gang membership. Table 20 displays the results. Both groups yielded significant model chi-squares and alphas greater than zero. Yet, self-control was not significant for either group. Consequently, it was not necessary to calculate a z-score of the coefficients and it

63

can be concluded that self-control and gang membership did not interact to amplify the

frequency of violent victimization.

Table 20:   Negative Binomial Regression Predicting Frequency of "Hit by Someone Trying
              to Hurt You" by Gang Membership   (N = 3907)

Variables	Gang Members (N = 311)		Nongang Members (N=3596)		
	B	SE	B	SE	Z-Score
Age	-.04	.11	-.02	.05	--
Gender	.18	.18	.40*	.06	--
Black	.02	.25	-.07	.08	--
Hispanic	.16	.23	-.25*	.09	--
Indian	-.19	.54	.31	.20	--
Asian	.51	.37	-.11	.12	--
Other	-.01	.28	-.10	.13	--
G.R.E.A.T.	-.13	.17	-.04	.06	--
Parental Attachment	-.00	.01	-.01*	.00	--
Parental Supervision	.02	.03	.01	.01	--
Peer Delinquency	-.00	.01	-.00	.00	--
Prior Delinquency	.09*	.03	.10*	.01	.63
Self-Control	.02	.02	.01	.01	--
Constant	-.38	1.69	.56	.75	--
χ^2	38.01*		329.80*		
Pseudo R^2	.03		.03		
α	1.57		2.42		

* p≤ .05

Unfortunately, the G.R.E.A.T. data do not support the hypotheses in this study.

Once the control variables were added into the analyses, self-control was not found to be

associated with violent victimization in any of the models. Out of the eight items

analyzed, only prevalence of attacked with a weapon revealed a significant association in

the hypothesized direction, once the control variables were introduced. Prevalence and

frequency of "hit by someone trying to hurt you" revealed a significant association with

gang membership opposite the hypothesized direction, and all of the other items yielded

an insignificant effect. Consequently, neither mediating nor moderating relationships

were observed between self-control and gang membership.

64

Chapter 7

Conclusion and Discussion

The purpose of this study was to test an integrated model of violent victimization. Victimization has been found to be associated with a variety of situational factors that are either present or absent in an individual's life (Hindelang et al. 1978, Cohen & Felson 1979, Miethe & Meier 1990). More recently, evidence of an association between certain individual level factors, such as low self-control and victimization, has emerged (Forde and Kennedy 1997, Schreck 1999, Stewart et al. 2004). Based on these findings, the core of this study focused on investigating the effects of low self-control and risky lifestyle (gang membership) on prevalence and frequency of violent victimization.

It was predicted that lower levels of self-control would lead to higher prevalence and frequency of violent victimization. The bivariate analyses supported this hypothesis; however, the multivariate models did not. Once the control variables were added into the analyses, neither logistic regression nor negative binomial regression revealed a significant effect of self-control on violent victimization. It was also assumed that gang membership would have an effect on both the prevalence and frequency of violent victimization. The prevalence of "attacked with a weapon" was the only victimization item to provide support for this hypothesis. Conversely, nongang members were found to report greater prevalence and frequency of being "hit by someone trying to hurt you."

65

This finding may be the result of the tendency of some youths to join gangs for protection (Molidor 1996, Mark, 1997, Reiboldt 2001, Walker & Mason 2001).

A self-control and gang membership mediating effect was also predicted. Once the control variables were added into the analyses, the G.R.E.A.T. data failed to support this relationship. When both variables were added into the multivariate model, neither self-control nor gang membership was significantly reduced. Last, it was hypothesized that gang membership would condition the effects of self-control on violent victimization. To assess this possibility, the data were parsed into gang and nongang sub-samples and the effect of self-control on violent victimization was assessed for each group. In each of these models, self-control failed to attain statistical significance. Therefore, it can be concluded that self-control and gang membership did not interact to increase the risk of violent victimization.

These findings do not support the previous work that this study was intended to replicate. Not only did Forde and Kennedy (1997) find an association between self-control and victimization, they also concluded that integrating self-control and risky lifestyle provides a stronger explanatory model of victimization. Furthermore, Schreck (1999) and Stewart et al. (2004) also concluded that low self-control is a significant predictor of victimization. The present study, however, failed to find a significant relationship between self-control and violent victimization when other correlates of victimization were controlled. As a result, these findings provide evidence against Schreck's (1999) self-control-victimization theory and warrant further investigation into this relationship.

66

The insignificant findings for self-control also provide evidence against Gottfredson and Hirschi's (1990) general theory of crime. Gottfredson and Hirschi (1990) maintain that self-control is a versatile characteristic that accounts for all individual differences in behavior. The results of Schreck (1999) and Stewart et al. (2004) supported the versatility of self-control by providing evidence that low self-control is able to explain criminal victimization, in addition to criminal and analogous behaviors. However, the current study failed to find an association between self-control and violent victimization and in turn, provides evidence against the notion of self-control as a versatile predictor of behavior.

The results of this study also provide weak support for the risky lifestyle/exposure theory (Hindelang et al. 1978). Only one item, the prevalence of being attacked with a weapon, revealed an association with gang membership that is consistent with these theories. All other items were either insignificant or significant in the opposite direction.

Although gang membership is not a very comprehensive measure of risky lifestyle, these results are surprising. Using the longitudinal G.R.E.A.T. data, Peterson et al. (2004) found that gang membership was significantly associated with violent victimization. These contradictory findings may be the result of the cross-sectional nature of the data used in this study. Peterson and associates (2004) were able to assess victimization over a five-year period and compare time of gang membership to time of victimization. The current study, on the other hand, was only able to look at the year prior to the survey and, therefore, unable to determine if gang membership leads to future victimization.

67

Further, gender and prior delinquency were the only two control variables that remained significant predictors of victimization throughout all of the models. Not only were males more likely to report one or more victimization experiences, being a male increased the expected frequency of victimization by 46 to 161 percent. This strong association between gender and victimization supports the bulk of empirical literature that concludes that males are victimized at a substantially higher rate than females (Lauritsen et al. 1991, Lauritsen 2001, Schreck & Fisher 2004).

A possible explanation for this consistent finding is that males tend to lead riskier lifestyles. According to the "principle of homogamy" (Hindelang et al. 1978, Lauritsen et al. 1991) victimization is more likely to occur when individuals associate with members of demographic groups that contain a disproportionate share of offenders. Based on this principle, Hindelang and associates (1978) argue that adolescent males are more likely to become victims of crime because they are more likely to associate with other adolescent males who are involved in delinquent activities themselves. Previous research has supported this assumption by showing that males are more likely to associate with delinquent peers (Simons et al. 1980, Mears et al. 1998) and delinquent peer association is related to criminal victimization (Lauritsen et al. 1992, Schreck et al. 2002, Schreck et al. 2004).

At the same time, prior criminal offending is one of the strongest risk factors of victimization (Esbensen and Huizinga 1991, Sampson & Lauritsen 1990, Lauritsen et al. 1992, Lauritsen & Quinet 1995). The findings of this study also contribute to this offender-victim link. For each additional increase in prior delinquency, the expected frequency for violent victimization increased 10 to 16 percent.

Several implications can be drawn from these results. First, Hirschi and Gottfredson (1993) argue that using a behavior scale of low self-control provides a better measure of self-control than cognitive, self-report measures because low self-control can affect survey response. For example, impulsive people may not think through the answers clearly, lazy individuals may feel disinclined to participate, and individuals who do not have the capacity to understand the survey questions will become easily frustrated. Accordingly, Hirschi and Gottfredson believe that an accurate measurement of self-control involves objective observation of the actions that are used to measure self-control, by someone other than the individual whose self-control is being measured (Tittle et al. 2003).

To add to this, Marcus (2004:42) explains that relying on attitudinal measures of self-control provides several drawbacks. Attitudinal questions force the respondent to remember, evaluate, and summarize target attitudes. The more cognitive operations these items require, the greater the likelihood of a distorted response. Furthermore, these cognitive questions rely on an individual's capacity for self-assessment, including feelings regarding past behavior. These are qualities one would not expect to find in low self-control individuals. "We would expect an attitudinal measure or self-reflective scale for self-control to yield more reliable-and thus valid-scores at the high pole than at the low pole of the trait it measures" (Marcus 2004:42). This is an unattractive quality of attitudinal measures because the low self-control individuals are, most often, the interest of the research question.

Based on these arguments, the prior delinquency measure used in this study could be considered an alternative latent indicator of self-control. Moreover, according to

69

Hirschi and Gottfredson (1993; 1995) and Marcus (2004), the prior delinquency scale may also be a more comprehensive, and thus stronger, indicator of self-control. This may be especially true because the self-control measure was comprised of only two of the six components that Gottfredson and Hirschi (1990) use to define self-control and therefore, was a relatively weak indicator of the concept of low self-control. If true, this argument would explain the nonsignificant effect of self-control once the control variables (which included prior delinquency) were added into the analyses.

On the other hand, prior delinquency could also be a measure of risky lifestyle. The extant literature provides strong evidence that criminal offenders participate in risky behaviors such as more time spent away from home, more time spent away from home past 10 pm, less time spent with parents, substance use, and more time spent with delinquent peers, at a disproportionately higher rate than nonoffenders (Riley 1987, Esbensen & Huizinga 1993). These same behaviors have also been associated with higher levels of victimization (Hindelang et al. 1978, Riley 1987, Kennedy and Forde 1990b) and are characteristic of a risky lifestyle.

It is also possible that self-control had an indirect effect on victimization, through its effect on prior delinquency. The literature shows that low self-control is associated with delinquent behavior (Pratt & Cullen 2000) and that prior delinquency is related to victimization (Esbensen & Huizinga 1991, Lauritsen et al. 1991). Therefore, it is likely that low self-control leads to prior delinquency (a risky lifestyle), which in turn, leads to violent victimization. In other words, it is likely that prior delinquency mediates the effect of self-control on violent victimization. Unfortunately, identifying the causal nature

70

of this relationship is beyond the scope of this study, due to the cross-sectional nature of the data.

Finally, a few shortcomings of this study need to be addressed. First, the measures used were a major limitation to this study. The G.R.E.A.T. survey was not designed to measure self-control as explicated by Gottfredson and Hirschi (1990). Consequently, only two of the six dimensions of self-control (risk-seeking and impulsivity) were measured in the survey. Although risk-seeking and impulsivity have been shown to carry the most explanatory power (Nakhaie et al. 1999, Arneklev et al. 1993, Wood et al. 1993, LaGrange & Silverman 1999, Winfree & Bernat 1998, Arneklev et al. 1999), Gottfredson and Hirschi (1990) define self-control as a unidimensional construct comprised of six components. Including only two of the six components means measuring less than half of the concept of self-control, which is a serious problem of content validity. Accordingly, the self-control scale used in this study is a very weak indicator of low self-control.

Moreover, Forde and Kennedy (1997), Schreck (1999), and Stewart et al. (2004) used self-control measures that included all six components of self-control. They all found a significant association between low self-control and victimization. Thus, the other four components of self-control must contribute to the effect that low self-control has on victimization. For that reason, it could also be argued that the self-control measure in this study was not really measuring self-control at all. Instead, it may actually be an impulsive/risk-seeking scale, since it was comprised of only these two characteristics.

Relying on gang membership as a measure of risky lifestyle is also a limitation. The decision to use gang membership as a proxy for risky lifestyle was based on the bulk of empirical literature that shows a correlation between gang membership and several of

71

the same behaviors (age, offending, substance use, drug sales, gambling, more time spent with delinquent friends, and gun ownership [Battin et al. 1998, Bjerregaard & Lizotte 1995, Curry 2000, Curry & Spergel 1992, Esbensen & Huizinga 1993, Esbensen & Winfree 1998, Hill et al. 1999, Hope & Damphousse 2002]) that are used to conceptualize risky lifestyle. However, gang membership does not measure the full range of the risky lifestyle concept. Further, using only one self-definitional question (Are you in a gang now?) does not provide insight into the behaviors or circumstances that are characteristic of each gang. Classifying gang membership by a set of criteria that includes risky behavior (offending, initiation rites) may have provided a more accurate measure of risky lifestyle, and in turn, a stronger association with violent victimization.

Also, neglecting to include property victimization in the analyses limited the measurement of victimization. Based on the theoretical linkage of self-control and victimization provided by Schreck (1999), low self-control has the potential to decrease guardianship. According to the routine activities perspective, this leads to unprotected belongings, which make attractive targets to motivated offenders. Taken together, it seems possible that low self-control may influence an individual's tendency to guard their possessions, which would increase the risk of property victimization.

The use of cross-sectional data limits the results of this study in two ways. First, because data were collected at one point in time, information is only available for the year prior to the survey. Victimization is a relatively rare experience, and therefore, collecting information once, over a one-year period severely limits the chances for victimization to be reported. Collecting information multiple times, over a longer time span, would increase the chances of a respondent reporting victimization and provide

72

more information on the dependent variable. Additionally, causal relationships cannot be determined with cross-sectional data. Therefore, it is impossible to establish whether gang membership leads to future victimization, or if prior delinquency mediated the effects of self-control and/or risky lifestyle on violent victimization.

Last, the use of secondary data is also a limitation to this study, not only in regard to the measure of self-control, but also in the ability to generalize the results. Even though the G.R.E.A.T. data were collected on a large sample of youth in different geographical areas, it was not a truly random sample. In addition, the sample consisted of middle school students, which is a relatively young population to collect information on criminal behavior and victimization. Consequently, these results cannot be generalized beyond the sample of interest.

Future research into the risk factors of victimization should not ignore the possible relationship between self-control, risky lifestyle, and victimization. However, more comprehensive measures of the variables of interest are needed. For example, had the self-control measure included all six components, it is very possible that a different picture would have emerged. At the same time, an accurate measure of self-control would provide stronger insight into the true relationship between prior delinquency, self-control, and victimization.

Furthermore, a measure of risky lifestyle that is comprised of the characteristics described by Hindelang et al. (1978), such as staying out late, frequenting dangerous areas, less time spent with family, and associating with criminal offenders, would increase the validity of the risky lifestyle measure, in turn, potentially increasing the chances of finding a significant association between risky lifestyle and victimization that

73

is in line with the bulk of empirical literature (Hindelang et al. 1978, Forde and Kennedy 1990b, Miethe & Meier 1990).

Victimization is a traumatizing experience that can leave lasting effects. Therefore, the need to recognize which factors lead to this type of experience is critical. Until recently, only situational factors have been used to explain victimization. However, considerations of the individual-level influences on victimization are beginning to emerge. Further research into both the individual and situational risk factors of victimization is needed to identify the full range of direct and indirect causes of victimization, so that appropriate action can be taken to minimize these risks.

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