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## ABSTRACT

ANDIA MINOO AZIMI

Adolescent Sexual Victimization: The Role of Social Support and Risky Lifestyle  
(Under the direction of DR. LEAH E. DAIGLE)

Although about half of all rape victims are adolescents, the bulk of the research on sexual victimization is focused on college or community samples of adult women. As such, little is known about adolescent risk of sexual victimization. Adolescence is an important developmental phase in life, in which an individual undergoes major social and biological changes. These changes may make them more susceptible to environmental characteristics, such as family climate, compared to adults. Environmental factors may influence risk taking among adolescents, which may increase the risk of sexual victimization. The theory of social support can be useful in understanding why some young individuals are sexually victimized and others are not. Data for the analysis is derived from the National Longitudinal Study of Adolescent Health (Add Health). The current study uses the in-home interviews from Wave I, Wave II, and Wave IV of Add Health. The purpose of the study is to examine the relationship between social support, risky behavior, and sexual victimization. Specifically, whether risky behavior mediates the relationship between adolescent sexual victimization and social support will be examined.

INDEX WORDS: Adolescents, sexual victimization, social support, routine activities theory

ADOLESCENT SEXUAL VICTIMIZATION: THE ROLE OF SOCIAL SUPPORT  
AND RISKY LIFESTYLE

by

ANDIA MINOO AZIMI

B.S., GEORGIA STATE UNIVERSITY

A Thesis Submitted to the Graduate Faculty  
of Georgia State University in Partial Fulfillment

of the

Requirements for the Degree

MASTER OF SCIENCE

ATLANTA, GEORGIA

2013

## ACCEPTANCE

This thesis was prepared under the direction of the candidate's Thesis Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Master of Science in Criminal Justice and Criminology in the Andrew Young School of Policy Studies of Georgia State University.

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December 2013

## DEDICATION

I would like to dedicate this Master's thesis to my mother, father, and brother for their continuous love and support. Without their encouragement, I would not be where I am today. Thank you for all you have done for me and continue to do every day, I love you.

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## **Chapter I**

### **Introduction**

Sexual victimization is a serious social problem within the United States.

Research on sexual victimization has mainly focused on female college students, with it indicating that the college years correspond with a period of great risk of rape (Fisher, Daigle, & Cullen, 2010). Another group who has been found to be at high risk of sexual victimization is adolescents. The extent of adolescent sexual victimization tends to vary, however, depending on the study design and measurement. Nevertheless, in general, the prevalence of adolescent sexual victimization ranges from about seven percent to about twenty percent (Raghavan, Bogart, Vestal, & Schuster, 2004; Champion, Foley, DuRant, Hensberry, Altman, & Wolfson, 2004; Silverman, Raj, Mucci, & Hathaway, 2001; Tschumper, Narring, Meier, & Michaud, 1998).

Research conducted on adults has generated many important insights into the risk factors of sexual victimization, however, it is unclear whether the same factors that influence adult sexual victimization also influence adolescent sexual victimization (Livingston, Hequembourg, Testa, & Van Zile-Tamsen, 2007). Research using the lifestyle/routine activities (L/RAT) perspective has found common risk factors for adult and adolescent sexual victimization. In terms of common risk factors, the four elements of L/RAT, proximity to motivated offenders, exposure to crime, lack of capable guardianship, and target suitability have been found to contribute to the risk of adult and adolescent sexual victimization. For instance, the literature indicates that adults and adolescents who come from low income backgrounds are at high risk of sexual

victimization as a function of exposure to crime (Belknap, 1987; Finkelhor, 1980). Alcohol has also been found to increase the risk of sexual victimization for both groups as a function of target suitability (Cass, 2007; Small & Kerns, 1993). Despite these commonalities, there is much evidence that points to unique factors that may influence adolescent engagement in risky behavior, which in turn increases the risk of sexual victimization.

There has also been some debate over the utility of solely using L/RAT in attempts to explain why some adolescents experience victimization (Finkelhor & Asdigian, 1996). For example, according to this theory, family and friends are capable guardians who deter motivated offenders. The theory fails, however, to account for situations where a family member or friend may be the perpetrator. Given that adolescents are more likely to be assaulted by acquaintances or relatives compared to adult women (Peipert & Domaglaski, 1994), the theory may not be equipped to explain all facets of adolescent sexual victimization.

Apart from L/RAT, most of the literature concerning adolescent sexual victimization focuses on family climate, peers, and school factors. Research has indicated that family climate, parental support, parental monitoring, and parental characteristics all play a role in protecting an adolescent from risky behavior and sexual victimization (Gover, 2004; Richards & Branch, 2001; Schreck & Fisher, 2004; de Graff, Vanwesenbeeck, Woertman, Keijsers, Meijer, & Meeus, 2010; Tschumper et al., 1998). Moreover, peer and school factors may also influence the risk of adolescent sexual victimization. It has been found that low levels of friend social support increases the risk of dating violence victimization (Richards & Branch, 2001). Also, attachment to school

has been found to be a protective factor against school-based sexual victimization (Tillyer, Wilcox, & Gialopsos, 2010).

To date, family, peer, and school factors have been studied in a piece-meal fashion, without a theoretical focus or theory underpinning the work. The concept of social support may help elucidate the reason why family, peer, and school factors are important in protecting adolescents from sexual victimization. Cullen (1994) has suggested that the concept of social support may play a crucial role in crime control and prevention. Specifically, criminal behavior is negatively related to social support. As the level of social support increases, the risk of criminal behavior decreases (Colvin, Cullen, & Vander Ven, 2002; Cullen, 1994). Research has pointed to greater levels of parental, peer, and school support protecting adolescents from engaging in delinquency (Boa, Haas, & Pi, 2007; Wright & Cullen, 2001).

Furthermore, Cullen (1994) argues that social support lessens criminal victimization. Social support will reduce the number of individuals motivated to break the law, which in turn should decrease the rate of victimization as well. He also argues that social support will reduce victimization by decreasing suitable targets and increasing guardianship, since social support potentially builds connectedness among community members. It also has the potential to reduce the pains of victimization. This reduction is possible through social support's main effects and the buffering hypothesis (Cohen & Willis, 1985). In general, social support has been found to be an important coping mechanism for illness, stress, and negative life outcomes (Cohen & Willis, 1985; Thoits, 1995). Similarly, experiencing sexual victimization can be stressful and damaging to an individual. Therefore, social support has the potential to protect adolescents from sexual

victimization and help them cope if it does occur. Perceived social support from family protects women from intimate partner violence (Branch, 2005). Also, parental social support has been found to be a significant factor in helping children and adolescents cope with sexual abuse (Feiring, Taska, & Lewis, 1998).

The research in the area of social support and adolescent sexual victimization is limited, but the research on social support and adolescent delinquency has emphasized the importance of social support from various sources (Boa et al., 2007; Drennon-Gala, 1995; Wright & Cullen, 2001). Social support from parents, peers, and teachers may be crucial in preventing adolescents from engaging in risky behavior. As will be discussed, research has indicated that engaging in risky behavior is a risk factor for adolescent sexual victimization. It could be that individuals who experience adolescent sexual victimization lack proper social support from parents, teachers, and peers. In turn, they may be more likely to engage in risky behaviors that increase the risk of sexual victimization.

The current study is designed to examine social support's role in preventing adolescent sexual victimization. In doing so, a better understanding will be gained about the importance of parents, teachers, and peers during adolescence using the concept of social support as a guiding framework. During adolescence, life is marked by biological and social change, in particular physical and sexual development. Adolescents also experience new social status. Individuals are transitioning from childhood to adulthood, which means they are given some of the privileges and responsibilities of adults. For example, adolescents have more autonomy from their parents, but still are under their control. They spend more time at school and with friends away from the direct



supervision of their parents (Agnew, 2009). Therefore, time spent at home, at school, and with friends may be most beneficial to the adolescent's well-being if these environments offer ample amounts of social support that can counteract the strains of adolescent development (Boa et al 2007; Cullen, 1994; De Kemp, Scholte, Overbeek, & Engels, 2006; Wright & Cullen, 2001). In turn, social support may also decrease the risk of engaging in risky behavior and experiencing sexual victimization.

In hopes of better understanding why certain individuals are sexually victimized during adolescence, first sexual victimization is discussed, in terms of its extent for both adults and adolescents, and risk factors for adult sexual victimization from a L/RAT perspective. Next, risk factors for adolescent sexual victimization from a L/RAT will be examined, and then risk factors beyond solely a L/RAT perspective will be discussed. Within the latter section, the independent influence of family climate, peers, and school on adolescent sexual victimization will be highlighted. Based on this literature, the concept of social support will be discussed, especially in terms of how it relates to victimization. The methods section will describe how the data were collected. Data for the thesis are derived from the National Longitudinal Study of Adolescent Health (Add Health), which focuses on the factors that may influence adolescents' health and risk behaviors, including personal characteristics, families, friendships, romantic relationships, peer groups, schools, neighborhoods, and communities. Next, the variables of interest and the analytical plan will be discussed, followed by the results and conclusion. The goal of this thesis is to examine the relationship between adolescent sexual victimization, engagement in risky behavior, and social support.

## **Chapter II Literature Review**

### **Sexual Victimization**

#### **What is Sexual Victimization?**

Sexual victimization encompasses an array of behaviors that are unwanted and sexual in nature, and can be a violation of an individual's body or mind. This type of victimization includes rape, sexual contact, sexual coercion, verbal and visual harassment, and some stalking behaviors. Sexual victimization can be attempted, completed, or threatened (Fisher, et al., 2010). Although most victims of sexual victimization are females, males can also experience this type of victimization. People of all ages can experience sexual victimizations as well. In this way, sexual victimization can potentially happen to anyone at any stage of the life course.

#### **The Extent of Sexual Victimization**

Sexual victimization is a major social problem in the United States, leading some researchers to conclude that sexual victimization is endemic to the U.S. (Humphrey & White, 2000). The true extent of sexual victimization, however, is difficult to capture. Sexual victimization is underreported and its reported prevalence varies depending on the manner in which data are collected (Koss, 1987; Fisher et al., 2010). The three major sources of data on sexual victimization are official statistics, community self-report surveys, and self-report surveys of special populations.

The Uniform Crime Reports (UCR), published by the Federal Bureau of Investigation, is the main source of official crime statistics. The only type of sexual victimization, however, that the UCR collects data on is the forcible rape of females.

According to the UCR, there were an estimated 84,767 forcible rapes reported to the police in 2010 (the FBI has recently adopted a new definition that will change how sexual victimization is measured), resulting in a rape rate of 54.2 per 100,000 female inhabitants (FBI, 2010).

A data source that does not rely on individuals to report their sexual victimization to the police is the National Crime Victimization Survey (NCVS). The NCVS is a household-based self-report survey of all members in sample households ages 12 years or older. In the survey, individuals are asked about their victimization experiences that have occurred within a 6 month period. In this way, the NCVS differs from the UCR in that it does not gather data from law enforcement agencies. Rather, it collects information from victim interviews that are conducted every 6 months, specifically asking about rape and sexual assault (Fisher et al., 2010; Truman, 2011). Each household sample is interviewed 7 times in a 3 year period (Rand, 2009). In 2010, according to the NCVS, there were 188,380 rape/sexual assault victimizations, for a rate of 0.7 rape/sexual assault victimizations per 1,000 persons age 12 or older. According to the NCVS, non-white females under the age of 25 are at the highest risk of sexual victimization. Moreover, females between the ages of 12 and 17 are especially vulnerable to sexual victimization (Truman, 2011).

### **The Extent of Sexual Victimization among College Students**

The largest number of studies of sexual victimization has been conducted on college students. In a groundbreaking study, Koss conducted a national-level survey of 3,187 college women, asking about their experiences with sexual victimization. About 54 percent of the female respondents reported some form of sexual victimization since the

age of 14. Within the 54 percent of females who reported some form of sexual victimization, 12 percent experienced attempted rape, 15 percent experienced rape, 14 percent experienced sexual contact, and 12 percent experienced sexual coercion. The sexual victimization rate of 38 per 1,000 was 10 to 15 times higher than the rate produced from the NCS (an earlier version of the NCVS) (Koss, Gidycz, & Wisniewski, 1987; Koss, 1989). Koss and colleagues uncovered that the college years correspond with a period of great risk of rape. This discovery has led many researchers down a similar path of inquiry (Fisher et al., 2010).

More recently, there have been other national-level studies conducted examining sexual victimization. The National College Women Sexual Victimization Study (NCWSV) was a national study of 4,446 women who were attending a 2-or- 4 year college or university. Respondents were asked in the spring of 1997 if they had experienced a sexual victimization since school began in the fall of 1996. Results indicated that 2.8 percent of the sample experienced either a completed or an attempted rape. When broken down, 1.7 percent of the women in the sample experienced rape and 1.1 percent experienced attempted rape. The rate of victimization was 27.7 per 1,000 female students (Fisher, Cullen, & Turner, 2000). Findings from another national-level study revealed that out of the 2,000 college women interviewed, about 5 percent were raped in the past year and 11.5 percent experienced rape during their lifetime (Kilpatrick, Resnick, Ruggiero, Conoscenti, & McCauley, 2007).

The National Violence Against Women (NVAW) survey used a nationally-representative sample of 8,000 women and 8,000 men 18 years or older. This survey did not focus on college students, but many of the individuals sampled were college aged.

The survey examined sexual victimization in terms of attempted and completed rape. Out of the women surveyed, 17.6 percent reported experiencing a completed or attempted rape at some point in their life. Moreover, 14.8 percent of the female respondents said they had experienced a completed rape, while 2.8 percent experienced an attempted rape. Out of the men surveyed, 3 percent experienced a completed or attempted rape at some point in their life. About 2 percent of the men experienced a completed rape and 0.9 percent experienced an attempted rape only. A majority of the rape incidents occurred before the victim was 25 years old for both men and women (Tjaden & Thoennes, 2000).

### **Adolescent Sexual Victimization**

As mentioned earlier, the risk of rape is high during the college years (Koss et al., 1987; Koss, 1989; Fisher et al., 2000; Tjaden & Thoennes, 2000). Another group, however, that is also at high risk of sexual victimization is adolescents. In the NVAW survey, Tjaden and Thoennes (2000) found that 32.4 percent of female respondents who reported being raped were between the ages of 12 and 17 at the time of the incident (n=1,323). Similarly, almost a quarter (23%) of the male respondents who experienced rape were between the ages of 12 and 17 at the time of the incident (n=204). Results from another nationally-representative study of adolescents revealed that out of the 7,545 adolescent women in the sample, 7 percent had been forced into sexual intercourse. Out of these individuals, 8 percent were sexually revictimized the following year (Raghavan et al., 2004).

There have been many studies that examine the extent of adolescent sexual victimization, but the findings tend to vary due to measurement and study design differences. Champion and colleagues (2002) conducted a two wave longitudinal study of

1,883 adolescent females. They found that 8.2 percent of the sample experienced actual or attempted forced sex. In another longitudinal study of 4,163 female adolescents it was found that about 18 to 20 percent or about 1 in 5 reported being physically or sexually hurt by a dating partner during their lifetime (Silverman et al., 2001). Similar results were reported by Tschumper and colleagues (1998) in their study of 3,993 adolescent girls. They found that in their Swiss study, 723 adolescent girls experienced sexual victimization during their lifetime. Finkelhor (1980) found that among the 796 women in his sample, 4 percent reported a sexual experience with an adult when they were between the ages of 13 to 16. It has also been found that approximately 50 percent of all rape victims are adolescents (as cited in Champion et al., 2004).

Based on this research on adolescent sexual victimization, it is clear that adolescents are at a high risk of being sexually victimized. Although there is much variance, estimates of the prevalence of adolescent sexual victimization range from about 7 percent to about 20 percent (Raghavan et al., 2004; Champion et al., 2002; Silverman et al., 2001; Tschumper et al., 1998). Despite the prevalence of sexual victimization among adolescents, much of the factors that place adolescents at risk for this type of victimization are not well understood. Most of the research on risk factors for sexual victimization focuses on college and community samples of young adult women. Although such research has produced important insights into the factors that lead to the sexual victimization of young adult women, it is unclear if these findings apply to adolescents as well (Livingston et al., 2007). Some of the risk factors for adults and adolescents, which will be discussed later, are similar and adulthood risk factors may give some insight into the factors that place adolescents at risk

### **Lifestyle/Routine Activity Theory**

There are many risk factors that have been identified in predicting sexual victimization of young adults. Many criminological theories have sought to explain why some individuals are more likely to be victimized than others. Individual and societal factors may play a role in this process. Nevertheless, the two most prominent theories of victimization are lifestyles theory and routine activities theory. There is much overlap between these two theories and they are usually discussed together as one theory of victimization (Fisher et al., 2010). Nevertheless, both of them provide a different explanation of the victim's role in the crime process (Meier & Miethe, 1993).

According to these theories, in order for victimization to occur, a potential victim has to come into contact with a motivated offender. It is not enough that there is a motivated offender, there must also be an opportunity to offend. These opportunities arise out of a victim's everyday routine activities and lifestyle (Cohen & Felson, 1979; Hindelang, Gottfredson, & Garofalo, 1978). Routine activities theory (RAT) posits that, in general, a person will be at a higher risk of victimization depending on three key factors. First, there must be a suitable target, this can either be a person or object. Next, there must be an absence of capable guardians who can prevent victimization. Lastly, there must be motivated offenders who have the opportunity to commit a crime. When these factors coalesce in time and space, the risk of victimization is greatly increased, independent of other risk factors. Originally, RAT was developed to explain predatory crimes, which are crimes that involve a target and offender making contact. The theory's main goal was deciphering changes in crime rates over time, which was linked to changes in technology that provided for the portability of goods. Since WWII people's routine daily activities

had shifted, more people were away from their homes and the production of small, easily transportable goods made many homes attractive targets (Cohen & Felson, 1979). These reasons, according to the theory, help explain crime rate trends in the United States. More recently, however, researchers have begun to apply this theory to sexual victimization, and they have found support for the theory's ability to explain this type of victimization (Belknap, 1987; Cass, 2007; Fisher et al., 2010; Schwartz & Pitts, 1995).

Lifestyles theory (LT) is closely related to RAT, which posits that certain lifestyles or behaviors put people in situations in which victimization is likely to occur (Hindelang et al., 1978). In order for a personal victimization to occur, according to lifestyles theory, there must be four conditions present: (1) the offender and victim must meet in time and space; (2) the victim is perceived by the offender as a suitable object of victimization; (3) the offender must be willing and able to threaten or use force in order to complete the victimization; and (4) the offender must perceive the situation as advantageous to use force or the threat of force in order to complete the victimization (Hindelang et al., 1978). The importance of lifestyle in this theory is a function of exposure to risky situations and individual encounters. As touched upon earlier, many factors impact lifestyle, such as age, gender, marital status, and socio-economic status. Based on these factors, some individuals may be more exposed to risky situations that increase their risk of sexual victimization (Meier & Miethe, 1993). These factors are also important in that they condition the opportunity for a motivated offender to commit a crime (Hindelang et al., 1978).

LT has also recently been applied to sexual victimization. Research has found that lifestyle-related risk factors, such as age, gender, time of day, and marital status play a



role in predicting the risk of sexual victimization (Belknap, 1987; Cass, 2007). These factors are tied to an individual's lifestyle in that they influence the activities a person engages in on a daily basis. For instance, women are more likely to participate in routine activities in the presence of friends or intimate others. Males, however, are more likely to spend time away from the protective home environment and be more active in the public sphere (Meier & Miethe, 1993). The differences in lifestyle are partly thought to explain the higher victimization risk of men compared to women. Variations in lifestyle, such as the above example, are important to understand because they are related to exposure and risk of victimization (Meier & Miethe, 1993).

As mentioned above, LT and RAT are very similar and for this reason the two theories have been merged together in order to explain a range of victimization types, which has resulted in evidence to support the theory (Belknap, 1987; Fisher et al., 2002; Gover, 2004; Cass, 2007; Popp & Peguero, 2011). In its combined form, the four main elements of L/RAT are close proximity to motivated offenders, exposure to crime, an individual or object is seen as an attractive target, and a lack of capable guardianship. As will be demonstrated below, all elements of L/RAT have been found to predict the risk of sexual victimization.

### **Risk Factors of Adult Sexual Victimization from a Lifestyle-Routine Activities Perspective**

Although not initially developed to explain sexual crimes, many researchers have applied L/RAT to explain sexual victimization. All elements of L/RAT are supported by research to some extent, but research has indicated that proximity to motivated offenders,

exposure to motivated offenders, and target suitability are particularly salient in predicting the risk of sexual victimization.

To summarize, research that has applied L/RAT to sexual victimization has found that lifestyle and routine activities are important in predicting the risk of sexual victimization for adult women. Being young, single, and sexually active indicate that one will be more likely to engage in activities outside of the home where alcohol and drugs may be consumed (Belknap, 1987; Cass, 2007). Such activities place an individual at higher risk of being around motivated offenders who are often times drinking themselves (Testa & Parks, 1996; Schwartz & Pitts, 1995). These same factors may make a target vulnerable as well.

Research has supported the link between exposure to motivated offenders and sexual victimization. Having friends who are motivated offenders increases the risk of sexual victimization (Schwartz & Pitts, 1995). Risky behaviors, such as engaging in risky sex, illegal behavior, and dating multiple men place women at risk of being sexually victimized (Combs-Lane & Smith, 2002; Champion et al., 2004; Fisher et al., 2002; Schwartz & Pitts, 1995). Lack of proper guardianship, such as living alone and associating with victims, have been found to also increase the risk of sexual victimization (Belknap, 1987; Fisher et al., 2002; Cecil & Matson, 2006; Foshee et al., 2004). College aged women, due to these routine activities and lifestyle factors tend to experience higher rates of sexual assault compared to older women (Fisher et al., 2002).

### **Risk Factors of Adolescent Sexual Victimization from a Lifestyle-Routine Activities Perspective**

It is important to note that some studies have examined risk taking behaviors and their effect on adolescent sexual victimization. The results have indicated that there are

common risk factors for adolescents and adults in terms of sexual victimization. Many of these risk factors are applicable to a L/RAT perspective.

**Proximity to motivated offenders.** Adolescents who engage in deviant lifestyles have an increased risk of victimization (Chen, 2008; Shrier, Pierce, Emans, & Durant, 1998). Deviant lifestyles can also place adolescents in proximity to motivated offenders. Specifically, boys and girls who are sexually active from an early age, do not use condoms, and experience more pregnancies tend to have higher rates of forced or pressured sex compared to adolescents who do not report engaging in these behaviors (Shrier et al., 1998). Other risky behaviors that are important in predicting sexual victimization are fighting, sex without birth control (Champion et al., 2004), genital touching in a romantic relationship (Raghavan et al., 2004), cigarette smoking (Cecil & Matson, 2006), and peer conformity (conforming to cultural norms may place women at a higher risk of being sexually exploited and men are less vulnerable and more sexually aggressive) (Small & Kerns, 1993). These factors, according to L/RAT, indicate that an individual may be in frequent contact with motivated offenders who engage in the same behavior.

Similarly, Livingston and colleagues (2007) examined factors that may increase the risk of sexual victimization among adolescent girls. They found that risky behaviors increased the risk of sexual victimization overall in their sample. Adolescent girls who engaged in risky activities, such as going to parties without adult supervision or going on dates were more likely to experience sexual aggression in these situations. Their results also indicated, however, that adolescent vulnerability was not limited to participation in delinquent behavior. Many of the girls in their sample were victimized in contexts that

appeared to be safe, such as babysitting or spending time with a friend. These findings support Finkelhor and Asdigian's (1996) argument that lifestyle and environmental factors do not alone explain all forms of victimization. Such an argument is bolstered with the finding that 60 percent of adolescent sexual victimization incidents are associated with a voluntary social encounter and that they are more likely to be assaulted by acquaintances or relatives compared to adult women (Peipert & Domaglaski, 1994).

Running away from home can also bring an adolescent in close proximity with motivated offenders. Being a homeless runaway has been found to be a risk factor for sexual victimization among adolescents. In some situations, unfortunately, homeless youth must trade sex in order to survive. Both male and female homeless youth experience sexual victimization as a result of living on the streets, but the risk has been found to be twice as high for females. Running away from home also increases the risk of stranger sexual victimization, since one can be exposed to many different people. Young females who trade sex are more likely to be victimized by known assailants and young males who trade sex are more likely to be sexually victimized by strangers (Tyler, Whiteback, Hoyt, & Cauce, 2004).

**Exposure to crime.** As with adults, low income youth also have a heightened risk of sexual victimization. In fact, research has found that low-income girls are two-thirds more likely to become victims of sexual victimization than girls in higher income brackets (Finkelhor, 1980). As mentioned earlier, individuals who come from low-income families are more likely to spend a lot of time away from home, using public transportation to get them from place to place, for example. Doing so may increase their

exposure to crime. These individuals may also live in poor neighborhoods where the crime rate is high.

**Target suitability.** Many risk factors may contribute to target suitability in terms of adolescent sexual victimization. Associating with victims and having low self-esteem, can contribute to target suitability by making the target seem vulnerable (Cecil & Matson, 2006; Foshee et al., 2004). Also, prior sexual victimization has been found to be a risk factor for adolescent sexual victimization (Foshee et al., 2004). Prior sexual victimization may contribute to target suitability because an individual may still engage in risky behaviors that placed them at risk initially. Depression (Cecil & Matson, 2006; Tschumper et al., 1998) and having low levels of self-efficacy (Walsh & Foshee, 1998) are risk factors that may make the target vulnerable and easily able to be overpowered.

Alcohol and drug use have also been found to increase risk for sexual victimization among adolescents and can also contribute to target suitability due to the inhibitory effects experienced as a result of using drugs or alcohol (Livingston et al., 2007; Smalls & Kerns, 1993; Tschumper et al., 1998). Champion and colleagues (2004) found that 8.2 percent of their sample of adolescent females who had experienced actual or attempted forced sex were drinking at the time of the incident. Females who had their first drink between the ages of 16 and 20 years old were 5 times more likely to be victims of attempted or actual forced sex than those who had never had a drink of alcohol. Risk of victimization also increased with marijuana use in the past 30 days (Champion et al., 2004). Similarly, in another study, alcohol use, marijuana use, and recent cocaine use increased the risk of sexual victimization among adolescent females (Raghavan et al., 2004).

**Lack of capable guardianship.** A major factor that contributes to a lack of capable guardianship is social isolation. The presence of friends and family can act as a deterrent for motivated offenders. Associating with victims is also a risk factor for adolescent sexual victimization (Cecil & Matson, 2006; Foshee et al., 2004) that adds to a lack of capable guardianship.

### **Beyond a Lifestyle- Routine Activities Approach**

Although much attention has been given to the explanatory power of L/RAT, the risk factors derived from this perspective may not be salient for adolescents, however, since the structures of their lives differ greatly from that of young adults. They have less autonomy than young adults and also are more likely to be supervised by their parents (Agnew, 2009). For these reasons, it may be beneficial to incorporate a L/RAT orientation with perspectives that examine non-behavioral factors that increase the risk of adolescent sexual victimization, such as parental characteristics or school factors. These factors may influence behaviors during adolescence that can place an individual at risk of sexual victimization.

For example, research has indicated that experiences such as sexual victimization early in life (Jankowski, Leitenberg, Henning, & Coffey, 2002; Sigel & Williams, 2007; Stermac, Reist, Addison, & Millar, 2002; Humphrey & White, 2000) and poor parenting (Jankowski et al., 2002) may place a person at risk of experiencing sexual victimization. Childhood sexual victimization greatly increases the risk of adolescent sexual victimization (Humphrey & White, 2000), which can also increase the risk of adult sexual victimization (Humphrey & White, 2000; Smith, White, & Holland, 2003). As such, women with a history of abuse have higher rates of sexual revictimization

compared to other women (Gidycz, Coble, Latham, & Layman, 1993). In one study, it was found that women who had suffered child sexual abuse experienced more rape compared to other women. These women were also more likely to have liberal sexual attitudes and engage in risky behaviors, such as having higher than average sexual activity and higher than average alcohol use (Koss & Dinero, 1989). Also, individuals who have been sexually abused as children and teenagers are at a substantially higher risk of adult sexual victimization compared to any other group of women, including those who have been abused only as children (Sigel & Williams, 2003). Stermac and colleagues (2002) found that adult-perpetrated sexual abuse in childhood and early sexual experiences with peers predicted later sexual victimization among their sample of Canadian women.

**Beyond L/RAT: Family climate risk factors.** Outside of L/RAT, most of the literature concerning adolescent sexual victimization focuses on family climate and parental characteristics. These factors have been found to be salient in predicting the risk of adolescent sexual victimization (Finkelhor, 1980). This finding does not mean, however, that risky behavior is not important in predicting sexual victimization risk among adolescents. Rather, outside factors, such as family climate, may also be contributing to why some adolescents engage in risky behavior, which in turn impacts the risk of sexual victimization.

Parenting characteristics influence the risk of sexual victimization in adulthood. Research has found that parental warmth and caring throughout childhood can reduce the negative results of child sexual abuse and reduce the risk of sexual victimization later on in adolescence or young adulthood (Jankowski et al., 2002). Jankowski and colleagues

(2002) found that paternal caring had a direct relationship with being sexually assaulted in late adolescence and young adulthood independent of a child sexual abuse history. Higher perceived paternal caring was also associated with lower levels of sexual assault after the age of 16. These factors are important in influencing the risk of sexual victimization in adolescence and adulthood. If experiences in adolescence can shape an individual's behavior later on in life, then it is important to empirically identify these factors and understand the process.

Family climate and parental feeling have also been found to be strong predictors of violent victimization among adolescents. A study examining about 3,000 adolescents explored family context and its link to risky behaviors. Although the study did not include sexual victimization as a measure, the findings demonstrate the importance of family climate in protecting against violent victimization during adolescence, which could also be applied to sexual victimization. It was found that adolescents who live in households with warm, more accepting climates are less likely to become victims of violence compared to those who have parents who are not warm or accepting. Parenting, however, did not impact risky behavior. Rather, lifestyle effects were found to be independent of family context. Victims were also more likely to engage in risky activities such as sneaking out and driving around unsupervised (Schreck & Fisher, 2004).

Similarly, Richards and Branch (2001) examined the influence of parental social support on adolescent physical dating violence, while controlling for risky activities (e.g., delinquency, alcohol use, drug use). Although this study also did not examine sexual victimization, the findings demonstrate the importance of social support in protecting against victimization during adolescence. Male victims were less likely to receive social



support from their parents than non-victims. They also reported higher levels of alcohol use, drug use, and delinquency than non-victims. The female victims did not report different levels of social support than non-victims, but they did engage in more risky activities compared to non-victims. The multivariate analysis for both females and males revealed, however, that parental social support was not significantly related to experiencing dating violence victimization.

Gover (2004) conducted a study on violent dating victimization among high school students in South Carolina. This study does not include sexual victimization, but the findings point to the role of risky activities in adolescent victimization and factors that can be protective. She hypothesized that risk taking behaviors mediate the effect of life satisfaction and social ties on violent dating victimization. In order to measure life satisfaction, respondents were asked how they felt about family life, friendships, school, self, home location, and overall life. Social ties included family structure (two-parent household or not) and church attendance. In support of the hypothesis, Gover found that adolescents who attended church, were satisfied with life, and lived in a two parent household had lower rates of dating violence compared to adolescents who reported that they did not attend church, were not satisfied with life, and did not live in a two parent household. The latter group was also more likely to use alcohol and drugs and engage in sexual activities. These findings indicate that risky lifestyles do impact behavior among adolescents.

Similarly, parental monitoring and support are important during adolescence because they are linked to safe sex practices and later age at first intercourse (de Graaf, Vanwesenbeeck, Woertman, Keijsers, Meijer, & Meeus, 2010; DiClemente, Wingwood,

Crosby, Sionean, Cobb, Harrington, Davies, Hook, & Oh, 2001). Furthermore, risky sex practices, such as being sexually active at an early age or not using birth control have been linked to sexual victimization during adolescence (Shrier et al., 1998). In a study that examined the relationship between parental support and knowledge and sexual experiences during adolescence, it was found that adolescents who scored higher on support and knowledge were more likely to have their first intercourse at a later age, less sexual partners, and more consistent contraceptive use (de Graff et al., 2010).

DiClemente and colleagues (2001) also found that certain parental characteristics helped reduce risky sexual behavior among adolescents. Specifically, they found that adolescents with less parental monitoring were more likely to report not using birth control during intercourse, to have more sexual partners, to use marijuana, to be arrested, and to have a STD. In a similar study that examined sexual victimization, the strongest predictor was parental monitoring. Individuals who reported no sexual victimization were more likely to come from families that closely monitored their behavior and used authoritative parenting strategies. These individuals were also low in peer conformity and less likely to have been sexually abused or use excessive amounts of alcohol (Small & Kerns, 1993). Taken together, these studies imply that parental monitoring and support are essential during adolescence. Since adolescents are spending more and more time away from direct parental supervision, having knowledge about a child's whereabouts enables parents to properly monitor and control their child's behavior, while also giving feedback about their behavior. Parental monitoring and support may result in higher levels of self-control for the child and higher levels of attachment between the parent and

child, making it more likely the child will be better equipped to regulate their own actions when the parent is not present.

Another indication of the importance of parents in lowering the risk of sexual victimization is that adolescent victims of sexual victimization are less likely to live with their natural parents. At the time of victimization, most are usually living with a step/foster father or a single parent and/or relative. It has also been found that victims are more likely to live in homes with marital strife (Gruber & Jones, 1983). Likewise, in a Swiss study it was found that females who reported sexual victimization were more likely to live without their parents. Their parents were also more likely to be separated, divorced, or dead (Tschumper et al., 1998). Characteristics of a specific parent may also be important in decreasing the risk of adolescent sexual victimization. For example, Foshee and colleagues (2004) examined the risk factors for dating sexual victimization among 8<sup>th</sup> and 9<sup>th</sup> grade adolescents and found that having a mother with low education increased the risk of dating sexual victimization.

Many questions have been left unanswered, however, in terms of parental social support and how it influences risk of sexual victimization. Research has indicated that family climate, parental support, parental monitoring, and parental characteristics all play a role in protecting an adolescent from risky behavior and sexual victimization (Gover, 2004; Richards & Branch, 2001; Schreck & Fisher, 2004; de Graff et al., 2010; Tschumper et al., 1998). A complete examination that addresses all of these factors has yet to be conducted using a theoretical model. The concept of social support takes these factors into consideration in its theoretical model and it may be a useful in furthering the

knowledge on the importance of family context in predicting adolescent sexual victimization.

**Beyond risky behavior: Peer risk factors.** The research concerning peer social support and how it affects the risk of adolescent sexual victimization is limited. Many studies focus on how friend social support affects coping post-victimization. Feiring and colleagues (1998) examined the effects of childhood sexual abuse on victim coping among a group of adolescents. They found that social support from friends was found to be a risk factor for heightened levels of psychological distress. Golding and colleagues (2002) found that adolescents with a history of sexual assault are less likely to have frequent contacts with friends and report receiving less emotional support from friends. Since these studies take into account friend social support after an experience of sexual victimization, it is unclear whether social support from friends was always harmful or if it became harmful post-victimization.

More pertinent to the risk of sexual victimization, however, is how friend social support affects whether a person experiences sexual victimization. To the author's knowledge, there are no studies that have examined the role of friend social support in adolescent sexual victimization. Nevertheless, one study has applied the concept to adolescent dating violence. Richards and Branch (2001) found that among female victims, lower levels of friend social support increased the risk of dating violence victimization. For male respondents, friend social support was not related to dating violence victimization.

Similar to the literature concerning parental risk factors, there are many questions left unanswered about friend social support. Little is known about how this concept

affects the risk of sexual victimization among adolescents. Although, studies that examine social support from friends post-victimization have found it harmful in terms of coping, it is still unclear what its role is in preventing adolescent sexual victimization.

**Beyond risky behavior: School risk factors.** The literature pertaining to how school social support affects adolescent sexual victimization is also limited. Although no study has examined school social support and how it influences adolescent sexual victimization, one study has examined concepts that are similar to social support in the school setting. Specifically, adolescent school-based sexual victimization from an opportunity-based perspective has been examined. Although the researchers did not measure school social support *per se*, they did examine concepts that are similar, such as attachment to school, participation in school sports, and participation in school activities. These items, however, from an opportunity perspective may indicate level of guardianship and proximity to motivated offenders. They found that although attachment to school decreased the risk of school-based sexual victimization, participation in sports and school activities increased the risk (Tillyer et al., 2010). Since this study produced mixed findings regarding the link between school social support and sexual victimization, it is unclear whether school social support is a protective factor against adolescent sexual victimization. More research is needed that specifically measures the concept of school social support as it relates to sexual victimization risk (e.g. how close an individual feels to teachers, how much an individual thinks their teachers care about them).

### **Gaps in the Literature**

The current state of knowledge concerning adolescent sexual victimization has pointed to many risk factors and consequences of experiencing this type of victimization.

There are many questions, however, that have not been answered. Despite the prevalence of sexual victimization among adolescents, much of the factors that place adolescents at high risk of sexual victimization are not well understood. Most of the research in this area focuses on college and community samples of young adult women. Although such research has produced important insights into the factors that lead to sexual victimization of young adult women, it is unclear if these findings apply to adolescents as well (Livingston et al., 2007).

Two of most salient risk factors for adolescent sexual victimization that the literature has identified are family context and parental characteristics, but the exact dynamics of how these factors are protective is not well understood. Family climate and parental characteristics have been found to be strong predictors for violent victimization among adolescents. Victims of adolescent sexual victimization are more likely to come from households in which their parents cannot monitor their behaviors and use effective child rearing strategies (Small & Kerns, 1993) and their household is more likely to have high levels of marital strife (Gruber & Jones, 1983). Furthermore, most adolescent victims of sexual victimization are usually living with a step/foster father or a single parent and/or relative (Gruber & Jones, 1983). It has also been found that adolescent females who reported sexual victimization were more likely to live without their parents. Their parents were also more likely to be separated, divorced, or dead (Tschumper et al., 1998).

These studies have documented how important family dynamics and context are in the prediction of sexual victimization and that these factors are associated with risky behaviors. What is unclear, however, is the exact process within the family that creates an

environment where adolescents will partake in risky activities. As mentioned earlier, L/RAT is a useful theory for explaining why certain individuals experience victimization while others do not. The theory is limited, however, in explaining non-situational and non-behavioral factors. For adolescents, it may be that the family context influences risky behavior. That is, adolescents who have parents who are not warm or supportive may be more inclined to engage in risky behaviors, such as engaging in sex at an early age or drinking alcohol. Moreover since adolescence is a period of life during which individuals spend more time with peers and at school, these may be important aspects that influence behavior and consequently sexual victimization.

It is also unclear the role peer and school context play in influencing risky behavior and adolescent sexual victimization. Friend social support and adolescent sexual victimization have been explored, but in limited ways. Studies that have examined friend social support as a coping tool post-victimization have found that it can be harmful (Feiring et al., 1998; Golding et al., 2002). Moreover, there has been some evidence that points to the importance of friend social support in preventing adolescent dating violence (Richards & Branch, 2001), but it is unclear if the same holds true for adolescent sexual victimization and whether friend social support is a harmful factor before victimization occurs. The literature on school social support is limited as well. Although certain concepts similar to social support, such as attachment to school, have been found to protect adolescents from sexual victimization (Tillyer et al., 2010), no study has examined school social support and its effects on adolescent sexual victimization specifically. The lack of information on social support in general makes the task of understanding important environmental factors that protect individual from sexual

victimization impossible. As such, the concept of social support may better inform researchers about the processes that take place during adolescence that increases risky behaviors and sexual victimization.



## **Social Support**

### **What is Social Support?**

Social support is defined as “the perceived or actual instrumental and/or expressive provisions supplied by the community, social network, and confiding partners” (Cullen, 1994, p. 530). When individuals feel supported and connected to their community and social networks, it is easier for them to adjust to strains, such as marital problems, parental problems, work overload, and chronic illnesses that may occur across the life course (Cohen & Wills, 1985). The nature of social support, however, is broad and complex, requiring researchers to make several distinctions when studying the construct. The first distinction is between the types of social support. There are four main types of social support: emotional, instrumental, informational, and appraisal. Emotional support includes the supplementation of empathy, love, caring, and trust. Instrumental support includes tangible aid and services that directly help a person in need. Informational support is the giving of advice, suggestions, and information that a person can use to help address problems. Lastly, appraisal support is information that is useful in situations of self-evaluation, like constructive feedback, affirmation, and social comparison. These different types of support provide diverse and important functions for individuals, but emotional support has been found to be the key component of social support (Branch, 2005).

The next distinction concerns perceptions of support and actual receipt of support. For social support to be useful and helpful, the individual must perceive it as such. In this way, social support depends on the perception of the beneficiary. Perceived social support is the cognitive evaluation of being connected to others and knowing support is

available. Received support is the actual provisions provided to the individual. In studies comparing received and perceived social support, the perception of support has been a better predictor of health outcomes than received support (Branch, 2005).

Moreover, the consistency of social support is a key component to perceived social support. When social support is received in a consistent manner, support forms a greater sense of trust between the recipient and the giver of support. As a result, a person feels compelled to be more altruistic rather than selfish towards individuals and social institutions, which as a result lowers the chance that persons will turn to deviant or criminal behavior (Cullen, 1994). Consistently received support also reduces strain and anger, while facilitating internalized self-control as individuals learn that certain behaviors lead to positive outcomes and more social support. On the other hand, erratic social support results in a person feeling that he or she cannot depend on other people or social institutions in terms of receiving aid. Instead, erratic social support, leads people to look out for themselves in the best way possible. These individuals experience higher rates of strain and anger, which can result in lower levels of self-control. Similarly, erratic social support permits a person to drift towards deviant undertakings, often searching for alternative sources of social support along the way (Colvin et al., 2002).

The third distinction that has been made is the various levels of social support. Social support is available from many levels within society. It exists in the intermediate connections within families, among friends, and within larger social contexts (i.e., neighborhoods, nations) (Branch, 2005).

The fourth and last distinction concerns different sources of social support. Social support can be provided either from an official agency or informal relations (Branch,

2005). Informal social support occurs through social relationships with others, such as family, friends, and neighbors. Formal social support can be provided by schools, governmental assistance programs, and the criminal justice system (Cullen, 1994).

Also important to note is the two mechanisms through which social support operates (Branch, 2005; Cohen & Wills, 1985). The first mechanism, the main effect of social support, takes place when there is an increase in general well-being as a result of being part of a social network. The second mechanism is the buffering hypothesis which suggests that in times of crisis, stress is reduced due to the specific help that is perceived and/or provided (Cohen & Wills, 1985). This hypothesis suggests that family attachment, friendships, and social activities can help protect an individual against stress, anxiety, and depression (Branch, 2005). Therefore, social support can be a very useful coping mechanism for chronic illness and stress throughout life (Thoits, 1995).

### **Social Support's Link to Criminology**

Many criminologists have overlooked social support as an organizing concept within the field of criminology even though it may be an important factor in preventing delinquent behavior (Boa et al., 2007; Cullen, 1994; Wright & Cullen, 2001). Cullen (1994), however, has suggested that the concept of social support may play a crucial role in crime control and prevention. Specifically, he posits criminal behavior is negatively related to social support. As the level of social support increases, the risk of criminal behavior decreases (Colvin et al., 2002; Cullen, 1994).

Cullen (1994) offers many propositions as to how and why social support prevents criminal or delinquent behavior: (1) the more support a family provides, the less likely it is that a person will engage in crime; (2) the more social support in a person's

social network, the less crime will occur; (3) social support lessens the effects of exposure to criminogenic strains; (4) across the life cycle, social support increases the likelihood that offenders will turn away from a criminal pathway; (5) anticipation of a lack of social support increases criminal involvement; (6) giving social support lessens involvement in crime; (7) crime is less likely to occur when social support for conformity exceeds social support for crime; and (8) social support from conformist sources is most likely to reduce criminal involvement.<sup>1</sup>

Although all of the propositions are relevant to crime and victimization, this discussion will focus on propositions (2) the more social support in a person's social network, the less crime will occur, and (3) social support lessens the effects of exposure to criminogenic strains. Related to proposition two (the more social support in a person's social network), the level of interconnectedness of the network and the types of relationships within that network have been found to influence the receipt of several kinds of social support (Thoits, 1995; Wethington & Kessler, 1986). Evidence of the importance of social support in a person's social network can be seen in Anderson's (1998) work on youth violence. In his ethnographic study, Anderson describes an environment that is lacking in most types of social support. Individuals do not feel supported by social institutions, such as the criminal justice system and the school system. There is no trust in the police, and authority figures are usually seen as unreceptive and unfamiliar.

Anderson (1998) also highlights the fact that many of the youth in his study lack strong conventional social support, which leads them to become more alienated and cut

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<sup>1</sup> In addition to these propositions, Cullen (1994) also argues that America has higher rates of serious crime than other industrialized nations because it is a less supportive society and the less support there is in a community, the higher the crime rate will be.

off from mainstream society. Specifically, Anderson refers to youth in disadvantaged environments. He states that, “the people there lack good education. They lack both job training and good job networks, connections with people who could help them get jobs. They need sympathetic people, such as potential employers, who are able to understand their predicament and are willing to give them a chance.” (Anderson, 1998, p.102).

Therefore, it can be argued that the overall social network within which these youth are enmeshed does not provide much opportunity to foster and nurture supportive relationships. Even if the youth come from “decent” families, as Anderson calls them, they will undoubtedly be forced to participate in violence in order to survive life in the inner city. The perpetration of violence could be a result of the alienation and lack of social support these youth experience within their social networks.

Related to proposition three (social support lessens the effects of exposure to criminogenic strains), a stressor or strain is considered to be any environmental, social, or internal demand that forces an individual to alter his/her usual behavior patterns (Thoits, 1995). As mentioned earlier, a stressor or strain can be poverty, marital problems, parental problems, work overload, and chronic illness (Cohen & Wills, 1985). Since social support is considered to be a coping mechanism, many individuals can counter the negative effects of stress by utilizing social supports that are available to them (Thoits, 1995).

Research has indicated that stressful life change can also be a criminogenic strain. In a study of 10<sup>th</sup> and 11<sup>th</sup> grade adolescents, the greater amount of stressful life change experienced resulted in more acts of criminality and delinquency. Stressful life events included a close friend dying, breaking up with a girlfriend/boyfriend, and parents getting

a divorce (Vaux & Ruggiero, 1983). Although this study did not measure social support, other researchers have argued that conformist social bonds have the ability to condition the impact of strain on deviant behavior by supplying social support and restricting delinquent coping. Contact with deviant sources aggravates the effects of strain on delinquency because individuals exposed to deviant peers receive support and reinforcement for delinquency (Boa et al., 2007). Perhaps, the individuals in Vaux and Ruggiero's (1983) study were lacking in conventional social support and not able to restrict delinquent coping.

Similarly, the benefits of social support on general well-being are seen in a study conducted by Wethington and Kessler (1986). In this study of 1,269 married individuals ages 21 to 65, the stress buffering effects of social support during stressful life events was examined. The authors found that the most influential social support effect was instrumental spouse support. This type of support seemed to promote better emotional adjustment among respondents who had a serious physical illness. Moreover, among respondents who had low levels of perceived support from various sources, recent stressful events increased psychological distress. Individuals with high levels of perceived support from various sources, however, experienced less psychological distress.

Furthermore related to proposition three, social support has been found to play a role in women's use of intimate partner violence (IPV). In a 5 year long longitudinal study, Branch (2005) discovered that women who reported greater social support from friends, perpetrated less IPV. It can be argued that support received from friends buffered

the stress these women were feeling in their relationships, resulting in them not using violence as a response to stress.

### **The Role of Parents, Teachers, and Peers**

As noted, an individual's social network plays an important role in his or her criminal/delinquent behavior (Cullen, 1994). Social support within a person's social network has the potential to counteract the effects of criminogenic strain and prevent delinquent behavior (Cullen, 1994). A period in life during which an individual may encounter high levels of strain is adolescence (Agnew, 2009). During this time, adolescents undergo many changes that they have never experienced before, making certain aspects of life highly stressful. Everyone may not encounter the same experiences, but there are common occurrences that many adolescents share. For these reasons, social support may be crucial during adolescence to prevent delinquency and other forms of deviance.

For instance, this period in life is marked by biological and social change, in particular physical and sexual development. In addition, adolescents also experience new social status. Individuals are transitioning from childhood to adulthood, which means they are given some of the privileges and responsibilities of adults. For example, adolescents have more autonomy than children (but less than adults), more material resources than children (but less than adults), higher status than children (but less than adults), more responsibility for managing their behavior and relations with others, and more responsibility for their educational and career goals (Agnew, 2009). The most salient sources of support may be family, peers, and teachers during this period of development. During adolescence, individuals have more autonomy from their parents,

but still are under their control. Also, they spend more time at school and with friends, away from the direct supervision of their parents (Agnew, 2009). Therefore, time spent at home, at school, and with friends may be most beneficial to the adolescent's well-being if these environments offer ample amounts of social support that can counteract the strains of adolescent development (Boa et al, 2007; Cullen, 1994; De Kemp et al., 2006; Wright & Cullen, 2001).

Moreover, according to Agnew (2009), the risk of deviance is mitigated with parents who are warm and authoritative. These parents have clear rules that are consistently enforced, and maintain a warm and loving relationship with their children. On the other hand, parents who exhibit an inconsistent style of parenting create a greater risk of their children becoming delinquent. Most likely, adolescents who do not have warm and loving relationships with their parents are not emotionally attached to them. Importantly, parental attachment has been found to play a key role in reducing the risk of delinquent behavior (Agnew, 2009; Boa et al., 2007; Wright & Cullen, 2001). When adolescents are attached to their parents, they tend to be less attached to their friends, spend less time with them, and receive fewer rewards from them (Agnew, 2009). That is, adolescents' peer networks will be more influential on their behavior if they are not attached to their parents. Haynie (2002) found that most adolescents have peer networks that are mixed with delinquent and nondelinquent peers. The more delinquent peers in one's peer network will make the risk of delinquency higher for those individuals in general, especially for those who are not attached to their parents. Also, not being attached to one's parents makes it more likely that relationships with teachers will be poor and lacking social support (Boa et al., 2007).



**Peer social support.** As stated above, during adolescence, individuals spend more time with their peers away from the home environment (Agnew, 2009). Social support from peers may be important in preventing delinquency. Boa and colleagues (2007) measured peer support in a sample of Chinese adolescents by assessing the level of attachment of the child to their peers. They predicted that social support from peers would have a buffering effect on the relationship between interpersonal strain and delinquency. The girls in the study were more likely to turn to friends for support when experiencing negative relations with parents, but this support increased the effect of strain on delinquency. This finding is similar to past research that has indicated that friend support may not be beneficial for adolescents in counteracting the effects of stress (Feiring et al., 1998). For boys, affiliation with delinquent peers was a salient factor in increasing the effect of stress on delinquency. Specifically, experiencing negative relations with parents, teachers, and peers increased the risk of responding to stress with delinquency when they had more delinquent friends (Boa et al, 2007).

Other studies on the influence of peer attachment have found similar results. De Kemp and colleagues (2006) did not find full support for their hypothesis that adolescents' delinquent behavior is influenced by their best friend's delinquent behavior and in turn their delinquent behavior affects their best friend's delinquent behavior. Instead, only evidence of the latter proposition was found in the analysis. On the contrary, Michael and Ben-Zur (2007) conducted a study of adolescent risk taking behavior. They found that stronger relationships with peers resulted in higher rates of risk taking behavior, such as breaking the law. Attachment to one's peer group was the strongest predictor of risk taking behavior in the statistical model. These findings are

similar to Boa and colleagues' (2007) findings that indicated attachment to the peer group is a risk factor for delinquent behavior.

**Parental social support.** Parental support, however, has been found to have a powerful influence on decreasing delinquent behavior, independent of other sources of social support. It seems that this mechanism of support is a function of the style of parenting (De Kemp et al., 2006; Wright & Cullen, 2001). As mentioned earlier, parents who are warm and loving with their children and consistently enforce rules will be able to reduce the risk of delinquent behavior (Agnew, 2009). Empirical studies indicate that parental support, parental supervision/monitoring, and household rules significantly reduce the risk of delinquency (De Kemp et al., 2006; Wright & Cullen, 2001). Michael and Ben-Zur (2007) examined parenting on risk taking behavior. Although they did not measure social support *per se*, they did measure related variables. For example, they posited that positive relationships between adolescents and their parents are negatively related to risk taking (e.g., law breaking behavior). Parents who had positive relations with their children were supportive and nurturing and these relations were related with the child engaging in less risk taking.

Another important aspect of parenting is control. It is hypothesized that parents who are successful in controlling their child will reduce the risk of delinquent behavior in their children. Without proper social support, however, this is not possible (Wright & Cullen, 2001). Wright and Cullen (2001) found that social support had a direct negative effect on juvenile delinquency that could not be explained by parental control measures. They argued that control and support are intertwined processes, called "parental efficacy". Parents who support their children are also successful in controlling and being

attached to their children, therefore being efficacious in mitigating the risk of delinquency. De Kemp and colleagues (2006) also found that control is not possible without support. For example, in their study, psychological control was related to an increase in delinquent behavior. Controlling an adolescent's behavior by manipulation and guilt may produce feelings of insecurity and frustration. As research has indicated, frustration can lead to stress which can lead to delinquent behavior (Boa et al., 2007; Cullen, 1994; Vaux & Ruggiero, 1983).

**School social support.** The social support children receive from teachers also seems to be important in controlling delinquent behavior. It has been found that school support can reduce the effect of negative relations with parents (Boa et al., 2007). Moreover, Drennon-Gala (1995) states that, "Teacher social support is the involvement and engagement of the teacher with the early adolescent. It includes the teacher helping the early adolescent with school work, giving the early adolescent comfort when the early adolescent is emotionally distressed or upset" (p. 13). Also, the overall environment of the school has a modest effect on delinquency. For example, schools with strong community involvement that provide praise for student accomplishments and provide opportunities for student success usually have lower rates of in-school violence (Agnew, 2009).

McNeely and colleagues (2004) examined teacher support's influence on health risk behaviors among adolescents. Many of the behaviors they measured are also delinquent behavior, such as smoking marijuana and drinking alcohol. The results indicated that teacher support was a protective factor against the escalation of smoking marijuana and drinking alcohol. Furthermore, teacher support also protected against

suicidal attempts. In a qualitative study, Padilla (1992) posited the lack of social support from teachers resulted in many of the adolescents in the study to search for “others similarly labeled for comfort and affiliation” (p.135). In turn, their classmates began to label them negatively, further increasing their chances of turning to delinquent peers as a substitute for social support. Evidence of this can also be seen in Anderson’s (1999) qualitative study. Many of the adolescents in his study did not have access to good education, while viewing their teacher’s as alien and unreceptive. He implies that the lack of strong social supports, including the school system, in impoverished communities influences the high rates of aggression and violence.

### **Social Support’s Link to Victimization**

According to the literature, it is clear that social support plays an important role in reducing the risk of criminal/delinquent behavior. Given this link, social support may also play a role in reducing the risk of victimization. In support of this notion, Cullen (1994) offers that social support lessens criminal victimization. Social support will reduce the number of individuals motivated to break the law, which in turn should decrease the rate of victimization. Borrowing from routine activates theory (RAT), he also predicts that social support will reduce victimization by decreasing suitable targets and increasing guardianship. Reduction of victimization is possible since social support potentially builds connectedness among community members. Under these circumstances, targets become less attractive for two reasons: (1) if a motivated offender received support from a potential target, victimization would violate reciprocity norms and would result in a psychological cost for the offender, and (2) intimacy creates the chance that a victim can

identify the offender again, thus increasing the costs of offending and decreasing the target's attractiveness.

Another way social support can reduce victimization, which Cullen (1994) does not touch on, is that more social support would produce less opportunities for individuals to participate in risky activities. Fewer opportunities to become victimized arise out of an individual being part of a social network based on connectedness, support, and care. The people in the social network are less likely to be motivated offenders who would want to harm the individual.

The criminological literature on social support and risk of victimization is limited. There have been three studies, however, that utilize social support in some way to explain victimization risk. A study that provides some support for Cullen's (1994) argument was conducted by Schreck and Fisher (2004). In their study, they explored the family context and whether it reduces adolescent violent victimization. They argued that families characterized by emotional warmth and support will be more successful in reducing the chances that adolescents will experience violent victimization. The results supported this hypothesis. Adolescents living in a warm and accepting family environment experienced less violent victimization than adolescents living with parents who did not provide such an environment. The latter group of adolescents had a greater risk of becoming victims.

Branch (2005) conducted a study of social support's role in experiencing intimate partner violence (IPV) victimization. She found that women who perceived social support from family had lower reports of IPV victimization, even when controlling for other common correlates of IPV. The findings from this study are consistent with past research

that has identified perceived social support as a better health outcome predictor than actual received support.

In a study focusing on violent dating victimization among high school students in South Carolina, respondents were asked how they felt about family life, friendships, school, self, home location, and overall life. Social ties included family structure (two-parent household or not) and church attendance. It was hypothesized that adolescents who were not satisfied with their life, did not attend church, and did not live in two parent households would be more likely to participate in alcohol and drug use and engage in sexual activities. The results supported this hypothesis. Adolescents who attended church, were satisfied with life, and lived in a two parent household had lower rates of dating violence compared to adolescents who reported the opposite (Gover, 2004).

Nevertheless, more research is needed examining social support's role as a protective factor against adolescent sexual victimization. Although these studies have begun to generate evidence for the link between social support and victimization, a comprehensive picture of the relationship between social support and adolescent sexual victimization, however, has yet to be produced.

### **Current Study**

The current study focuses on the relationship between social support, risky lifestyles, and adolescent sexual victimization. As noted above, social support may have the potential to lower the incidence of crime and victimization. Nevertheless, the field of criminology has generally overlooked the concept of social support as factor in crime control and prevention. Cullen (1994) has offered reasons why social support may be

important in terms of victimization. For example, social support may reduce target attractiveness, increase capable guardianship, generate connectedness between community members, and lessen the pains of victimization (Cullen, 1994). There are few studies that examine the relationship between social support and sexual victimization, however, particularly for adolescents. The ones that do focus on social support, usually measure it as a coping mechanism post-victimization. Therefore, there is much that is unknown about social support and its role in preventing adolescent sexual victimization.

Given that the research on adolescence and delinquency has emphasized the importance of social support from various sources (Boa et al., 2007; Drennon-Gala, 1995; Wright & Cullen, 2001), social support from parents, peers, and teachers may be crucial in preventing adolescents from engaging in risky behavior. Moreover, as previously discussed, risky behavior has been found to be a risk factor for adolescent sexual victimization. Could it be that individuals who experience adolescent sexual victimization engage in risky behavior that increases the risk of this type of victimization, because they lack proper social support from parents, teachers, and peers?

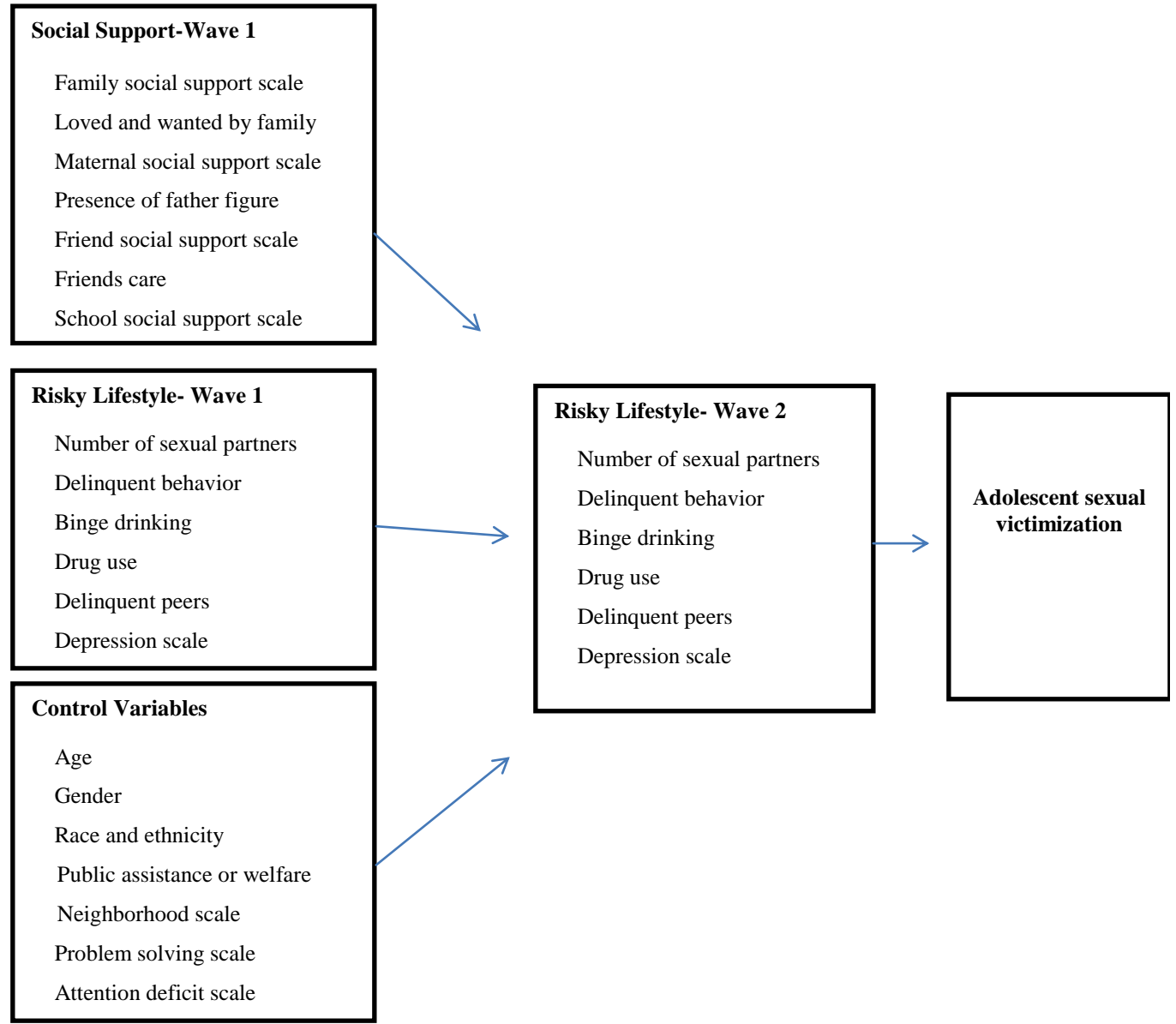
### **Research Questions and Hypotheses**

The thesis's purpose is to address these questions concerning social support's role in preventing adolescent sexual victimization. Specifically, the research questions that will be addressed are: (1) to what extent do adolescents experience sexual victimization and who experiences sexual victimization? It is expected that about seven to 20 percent of adolescents in the sample have experienced adolescent sexual victimization. Younger females are also expected to experience more sexual victimization compared to males and older females in the sample. (2) Is social support related to a decreased risk of sexual

victimization during adolescence? Social support from various sources is expected to protect an adolescent from sexual victimization. (3) Is social support from various sources related to a decreased risk of involvement in risky activities? Social support from various sources is also expected to decrease the risk of involvement in risky activities. (4) Does engaging in risky activities mediate the relationship between social support from various sources and sexual victimization? Engagement in risky activities is expected to mediate the relationship between social support and sexual victimization.



Figure 1. Conceptual Model



## **Chapter III Methods and Procedures**

### **Data and Sample**

Data for this project are derived from the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a prospective, longitudinal study of youths in grades 7 through 12. These data include measures on parenting, family dynamics, mental and physical health, engagement in risky behaviors, decision making, sexual behaviors, education, employment, relationships, and household structure (Harris, Florey, Tabor, Bearman, Jones, & Udry, 2009). Given that this study will examine sexual victimization, parental social support, teacher support, and peer support, Add Health is well equipped to measure these concepts.

Add Health data collection occurred in four waves. Wave 1 data collection began in September 1994 and lasted until April 1995. There were three types of surveys administered during Wave I, an in-school questionnaire, an in-home questionnaire, and a parent in-home questionnaire. The school sample participants were chosen using a multi-stage stratified sampling procedure in which 80 high schools were identified for inclusion in the study from a sampling frame of 26,666. Prior to sampling, schools were sorted by size, school type, census region, percent white, and level of urbanization. Of the 80 high schools selected, 52 agreed to participate. The remaining 28 schools were replaced by similar high schools. Participating high schools were also asked to identify 5 junior or middle schools that would most likely provide 5 students to the entering high school

class. One feeder school was selected for each high school, resulting in a total of a 160 schools (Harris et al., 2009).

In the second stage of gathering the sample, students enrolled in these schools filled out the Wave I in-school questionnaire using a roster of all students enrolled in the school whose parents granted consent for their child to be listed on the roster and to participate in the study (Harris et al., 2009). In total, 90,118 adolescents completed the in-school questionnaire. The in-school questionnaire included questions regarding student's and parent's background, his or her friends, school life, school work, school activities, general health status, and health related behaviors.

Furthermore, each school provided a roster of all students enrolled. From the rosters and the participants in the in-school questionnaire, individuals in grades 7 through 12 were chosen to participate in the in-home questionnaire. In-home questionnaires were collected at all four waves of data. All students who completed the in-school questionnaire plus those who did not complete a questionnaire but were listed on a school roster were eligible for selection into the core in-home sample. An in-home sample of 27,000 adolescents was drawn consisting of a core sample from each community plus selected special oversamples. Eligibility for oversamples was determined by an adolescent's responses on the in-school questionnaire (Harris et al., 2009). Out of the 90,118 adolescents who participated in the in-school questionnaire, 20,745 adolescents were also chosen to participate in the in-home survey at Wave I.

A Computer –Assisted Interview (CAPI)/ Audio Computer-Assisted Self Interview (ACASI) was administered to these adolescents. During the in-home survey, respondents were asked questions about family composition, health history, sexual

history, friends, drug/alcohol use, and delinquent behavior. Written informed consent was obtained from both the parent and adolescent to participate in the in-home survey (Harris et al., 2009).

A majority of the respondents in Wave I were white, but certain minority groups were oversampled during the in-home survey who are usually not represented well in other datasets. These groups include adolescents with disabilities (N=957), African Americans (N= 1,547), Cubans (N= 538), Puerto Ricans (N= 633), and Chinese (N=406) (Harris et al., 2009). A sample of twins (N= 1,534), full siblings (N=2,500), half-siblings (N=848), non-related adolescents living in the same household (N=1,314), and genetic pairs (N= 2,553) were also included in the Wave I in-home questionnaire (Harris et al., 2009).

In the parent questionnaire, parents were asked to complete questions about family and relationships during Wave I. This provided more information about family composition and the adolescent's health history. The parent questionnaire also asked about demographic and health-related information about the parent or guardian and general questions about the adolescent.

Wave II data collection began in April 1996 and continued until August of that same year. The Wave II in-home interview, administered with a CAPI/ACASI, consisted of 14,738 adolescents in grades 8 through 12, who were drawn primarily from the pool of participants in Wave I. One exception, however, is that individuals in 12th grade at Wave I were not included in Wave II data collection, as they exceeded the grade eligibility. The twelfth-graders who were part of a genetic pair, however, were retained from Wave I. In addition, the Wave I disabled sample was not re-interviewed at Wave II and no parent

interview was conducted. Wave II also contains a small number of adolescents who did not participate in the first wave of data collection (Harris et al., 2009).

Wave III data was collected through an in-home interview administered with a CAPI/ACASI in July 2001 through April 2002. This wave included 15,197 young adults aged 18-26. Wave III includes 15,170 respondents from Wave I and 27 Wave II special genetics respondents. During Wave III, 14,979 respondents were interviewed during the main study and 218 were interviewed during the pretest. Moreover, 1,507 romantic partners of Add Health respondents were included (Harris et al., 2009).

Wave IV data collection was conducted from January 2008 to February 2009. Respondents were aged 24-32 in Wave IV. At Wave IV, an in-home comprehensive personal interview was conducted, administered with a CAPI/ ACASI, which included physical measurements and biospecimen collection. Wave IV data (N= 15,701) combined social and behavioral data with biological information pertinent to the current and the future health concerns of the respondents (Harris et al., 2009). The current study uses the in-home interview from Wave I, Wave II, and Wave IV. The total final sample used in the current study is 11,610. The final sample decreased from the original sample size because of the way the dependent variable, sexual victimization, was constructed and 12<sup>th</sup> graders from Wave I were excluded from Wave II.

As discussed later in the measures section, the sexual victimization questions were asked at Wave IV, at which there were 15,701 respondents. To ensure proper time order of the independent variables, the potential mediating variables, and the dependent variables, the Wave I and II age variables were used. Individuals had to have valid responses to the age variable at Waves I and II as well to the sexual victimization

variables at Wave IV to be included in the analysis. The majority of the final study sample (see table 1) is white (64.3 %) and female (53.4%). The mean age for the sample is 15.81. Also, 8.3 percent of the sample reported receiving public assistance or welfare.

## Measures

### Dependent Variable

**Adolescent sexual victimization.** Two measures from Wave IV were used to assess the occurrence of adolescent sexual victimization among respondents. The first measure is “have you ever been forced, in a non-physical way, to have any type of sexual activity against your will? For example, through verbal pressure, threats of harm or by being given alcohol or drugs? Do not include any experiences with a parent or caregiver.” The next measure is “have you ever been physically forced to have any type of sexual activity against your will? Do not include any experiences with a parent or caregiver.” There are separate questions after each of the above questions that asked the respondent how old they were at the time of the incident. For the analysis, only individuals’ sexual victimization that occurred between the ages of 11 and 21 were included, to capture adolescent and late adolescent sexual victimization.

Although the early 20’s may not technically be considered adolescence, many previous studies on adolescent sexual victimization have included individuals in their early 20’s (Tschumper et al., 1998; Champion et al., 2004; Tyler et al., 2004).

Respondents who indicated experiencing either one of these types of victimization and if their age at the time of victimization was greater than their age at Wave I and Wave II but less than 22, they were coded as 1 reflecting “yes”. Respondents who indicated no to both of the questions or were older than the age parameters are coded as 0 reflecting “no”.

This coding scheme was used to ensure that the independent variables are measured in time before the dependent variable, sexual victimization.

### **Independent Variables**

**Family social support.** A family social support scale was created from five items in Wave I. Respondents were asked how much they feel people in their family understand them, how much they feel that they want to leave home, how much they feel that their family pays attention to them, how much they feel that their parents care about them, and whether they feel loved and wanted. The first 4 items were coded using a 5-point likert scale with 1 reflecting “not at all” and 5 indicating “very much”. Items were reverse coded as needed so that higher scores indicate more family social support and the first 4 items were then summed to create an additive scale ( $\alpha = .66$ ). A factor analysis was done on the family social support scale. The analysis suggested a 1 factor solution with an eigenvalue of 2.08. The factor loadings for these variables were also high. There was no factor loading below .60, which indicates that variables were strongly correlated with the factor family social support.

Feel loved and wanted was turned into three dummy variables due to the non-linear shape of the responses on the original variable. These variables were agree that you are loved and wanted by your family, neither agree nor disagree that you are loved and wanted by your family, and disagree that you are loved and wanted by your family. All of these variables were dichotomously coded 0 as “no” and 1 as “yes”. The reference variable was agree that you are loved and wanted by your family.

**Maternal social support.** A maternal social support scale was created from six items in Wave I. Respondents were asked if their mother is warm and loving toward

them, if their mother talks to them when they have done something wrong, if they are satisfied with the way they communicate with their mother, and if they are satisfied with the relationship with their mother overall. These items were coded using a 5-point likert scale ranging from 1 for “strongly agree” and 5 for “strongly disagree”. Respondents were also asked how close they feel to their mother and how much they think she cares for them. These 2 items were coded using a 5-point likert scale with 1 reflecting “not at all” and 5 indicating “very much”. Items were reverse coded so that higher values indicated greater maternal social support and then summed to create an additive scale ( $\alpha = .85$ ). A factor analysis was done on the maternal social support scale. The analysis suggested a 1 factor solution with an eigenvalue of 3.48. The factor loadings for these variables were also high. There was no factor loading below .60, which indicates that all the variables in the scale were strongly correlated with the factor maternal social support.

**Presence of paternal figure.** One measure from Wave I was used to assess whether the respondent had a father figure present. Questions from the household roster section were used to indicate whether there was a father figure present. If the respondent indicated at some point that a father figure was present in their household, they were coded as 1 reflecting “yes” and 0 reflecting “no”.

**Friend social support.** A friend social support scale was created from six items in Wave I. Respondents were asked how much they feel that their friends care about them. Friends care was turned into three dummy variables due to the non-linear shape of the responses on the original variable. These variables are friends care very little about you, friends care somewhat about you, and friends care quite a bit about you. The



reference variable was friends care quite a bit. Respondents were also asked about the activities they did with their first same-sex best friend and opposite-sex best friend. These activities included going to the friend's house in the past seven days, meeting after school to hang out or go somewhere during the past seven days, spending time with the friend during the past weekend, talking about a problem during the past seven days, and talking on the telephone during the past seven days. These items were dichotomously coded as 0 for "no" and 1 for "yes" and summed to create an additive scale, with higher scores reflecting greater friend social support ( $\alpha=.70$ ). A factor analysis was done on the friend social support scale. The analysis suggested a 1 factor solution with an eigenvalue of 2.31. The factor loadings for these variables were also relatively high. There was no factor loading below .50, which indicates that all the variables in the scale were strongly correlated with the factor friend social support.

**School social support.** Six items from Wave I related to school social support were used to create a school social support scale. Respondents were asked how much they feel teachers care about them. This item was coded using a 5-point likert scale with 1 indicating "not at all" and 5 indicating "very much". Respondents were then asked how much they agree or disagree with they feel close to the people at school, they feel like they are a part of their school, they are happy to be at school, the teachers at school treat students fairly, and they feel safe in their school. These items were coded using a 5-point likert scale with 1 for "strongly agree" and 5 for "strongly disagree". All items were reverse coded so that higher values indicate greater school social support and then summed to create an additive scale ( $\alpha= .77$ ). A factor analysis was run on the school social support scale. The analysis suggested a 1 factor solution with an eigenvalue of

2.82. The factor loadings for these variables were also relatively high. There was no factor loading below .50, which indicates that all the variables in the scale were strongly correlated with the factor family social support.

**L/RAT.** Risky behavior items were chosen to represent the elements of L/RAT. To measure risky sexual practices, which can be considered proximity to motivated offenders, respondents were asked, out of the three romantic relationships they indicated in the survey, whether they had sexual intercourse within each of these relationships. These items were dichotomously coded with 1 reflecting “yes” to having sex in any of the three relationships and 0 reflecting “no”. Respondents were also asked to indicate how many people outside of a romantic relationship with whom they had sexual intercourse. The responses of the questions were added together and higher values indicate greater risky sexual practices. The natural log value was then used for the analysis because the original variable was positively skewed. The measures for risky sexual practices were created for Wave I and II.

A measure of delinquency for Wave I and Wave II was created, which also indicates proximity to motivated offenders. Respondents were asked how often they took something from a store without paying for it, drove a car without the owner’s permission, stole something worth more than \$50, stole something less than \$50 dollars, went into a house or building to steal something, threatened to use a weapon to get something from someone, had ever damaged property, painted graffiti, and sold marijuana or other drugs. A final measure of engaging in any delinquency was created by creating a variable that indicates whether (coded as 1) or not (coded as 0) a person engaged in any of these acts.

A measure of binge drinking was created for Wave I and Wave II, which can indicate target suitability. Respondents were asked in the past 12 months how many days they drank five or more drinks in a row. This item was reverse coded as a dichotomous variable, with 0 indicating “no” and 1 indicating “yes”.

To gauge drug use, which can also be an indication of target suitability, respondents were asked how many times that had ever used marijuana, cocaine, inhalants, and other illegal drugs, such as LSD, PCP, ecstasy, mushrooms, speed, ice, heroin, or pills without a doctor’s prescription in their lifetime. All the above items were dichotomously recoded as 0 indicating “no” and 1 indicating “yes”. A final measure of drug use was created that reflects if a person indicated using any of these substances during the past 12 months, coded 0 for “no” and 1 for “yes”. The measures for drug use were created for Wave I and Wave II.

Associating with delinquent peers, which can be an indication of proximity to motivated offenders, was measured by asking respondents about the deviant activities in which their three best friends are engaged. They were asked, of their three best friends, how many smoke at least 1 cigarette a day, drink alcohol at least once a month, or use marijuana at least once a month. The items were also summed to create an additive scale, with higher scores indicating association with a greater number of delinquent peers ( $\alpha = .76$ ). The measures for delinquent peers were created for Wave I and Wave II. A factor analysis was done on the delinquent peer scales for waves I and II. The analysis suggested a 1 factor solution with an eigenvalue of 2.04 (Wave I) and 2.02 (Wave II). The factor loadings for these variables were also high. There was no factor loading below

.80 (both waves), which indicates that all the variables in the scale were strongly correlated with the factor delinquent peers.

A depression scale was created, which can be an indication of target suitability, from 19 items. Respondents were asked whether they were bothered by things that usually don't bother them, didn't feel like eating, felt that they could not shake off the blues, felt that they were just as good as other people, had trouble keeping their mind on what they were doing, felt depressed, felt too tired to do things, felt hopeful for the future, thought life had been a failure, felt fearful, were happy, talked less than usual, felt lonely, people were unfriendly to them, they enjoyed life, felt sad, felt that people disliked them, hard to get started doing things, and felt life was not worth living. These items use a 4 point likert scale with 0 indicating "never or rarely" and 3 indicating "most of the time or all the time". Responses were reverse coded as needed and summed to create an additive scale, with higher scores reflecting greater depression ( $\alpha=.86$ ). The measures for depression were created for Wave I and Wave II. A factor analysis was done on the depression scale for waves I and II. The analysis suggested a 4 factor solution. Despite this, the eigenvalue for the first factor was 5.94 (Wave I) and 6.10 (Wave II). All 19 variables loaded well on the first factor for both waves. There was no factor loading below .30 (both waves), which indicates that all the variables in the scale correlated well with the factor depression.

### **Control Variables**

**Age.** Age was measured in years. This measure was created for Wave I.

**Gender.** Gender is coded as 0 for "male" and 1 for "female". This measure was created for Wave I.

**Race and ethnicity.** Race was made into 4 dummy variables. The reference variable is Black and the other variables are White, Hispanic, and other race. The variables were dichotomously coded 0 for “no” and 1 for “yes”. Black was used as the reference group because previous research has shown that black females are more at risk of being raped compared to white females (Truman, 2011). These measures were created for Wave I.

**Neighborhood context.** Neighborhood context measures included whether the respondent knows most of the people in their neighborhood, whether they stopped on the street to talk with someone who lives in their neighborhood in the past month, and whether people in their neighborhood look out for each other. These items were dichotomously recoded with 1 as “yes” and 0 as “no” and then summed to create an additive scale, with higher scores reflecting more informal social control ( $\alpha=.57$ ). These measures were created for Wave I. A factor analysis was done on the neighborhood context scale. The analysis suggested a 1 factor solution with an eigenvalue of 1.62. The factor loadings for these variables were also high. There was no factor loading below .60, which indicates that all variables in the scale were strongly correlated with the factor neighborhood context.

**Socio-economic status.** Socio-economic status (SES) was assessed by asking the parents, usually the mother or the child’s primary guardian, if the mother was not present in Wave I, if a member of their household received public assistance or welfare. This item was dichotomously coded with 0 as “no” and 1 as “yes”. If a respondent’s parent received this benefit they were coded as 1 and 0 indicated not receiving this benefit.

**Problem solving.** As a measure of an element of self-control, a problem-solving scale was created. Respondents were asked whether they gather as many facts as they can when they have a problem, think of many different ways to approach a problem as possible, and use a systematic method for judging and comparing alternatives when making decisions. These items use a 5-point likert scale, with 1 indicating “strongly agree” and 5 indicating “strongly disagree”. Items were reverse coded so that higher values indicated greater levels of problem solving skills and then summed to create an additive scale, with higher scores reflecting greater problem solving skills ( $\alpha=.70$ ). This measure was created for Wave I. A factor analysis was done on the problem solving scale. The analysis suggested a 1 factor solution with an eigenvalue of 1.90. The factor loadings for these variables were also high. There was no factor loading below .70, which indicates that all variables in the scale were strongly correlated with the factor problem solving.

**Attention deficit.** As a second item to measure low self-control, an attention deficit scale was created. Respondents were asked how often they had trouble paying attention in school and how often that had trouble getting all their homework done. These items use a 5-point likert scale with 0 as “never” and 4 as “every day”. Items were summed to create an additive scale, with higher scores reflecting greater attention deficit ( $\alpha=.70$ ). These measures were created for Wave I. A factor analysis was done on the attention deficit scale. The analysis suggested a 1 factor solution with an eigenvalue of 1.54. The factor loadings for these variables were also high. There was no factor loading below .80, which indicates that variables were strongly correlated with the factor attention deficit scale.

### **Analytical Plan**

In the first stage of analysis, the extent to which adolescents are sexually victimized is determined. In the second stage, bivariate analyses are conducted. The relationship between the independent variables and sexual victimization is examined. Specifically, the relationship between social support and sexual victimization is examined, as well as the relationship between risky behavior and sexual victimization. The relationship between social support and risky behavior is also examined. In the third stage, multivariate analysis is conducted using logistic regression, due to sexual victimization being a dichotomous dependent variable. Model 1 includes social support, risky behavior, and the control variables. Also, a mediation analysis is conducted to determine if risky lifestyles mediate the influence of social support on sexual victimization, which is included in Model 2.

## Chapter IV Results

Five percent of the sample indicated that they had experienced sexual victimization (see Table 1). Individuals in the sample who experienced sexual victimization are more likely to be younger ( $t= 15.33, p <.01$ ), white ( $\chi^2= 20.36, p <.01$ ), and female ( $\chi^2 = 375.23, P <.01$ ) than individuals who were not sexually victimized (results not in table). Table 2 displays the results from the bivariate analysis between social support and risky lifestyle. As can be seen, most of the social support and risky lifestyle variables are related. Respondents who were higher in family social support, maternal social support, school social support and felt loved and wanted by family reported lower levels of engagement in delinquent behavior. Friend social support was not related to delinquent behavior in the expected way. Persons with friend social support had a higher mean delinquency score compared to person with no friend social support. Moreover, respondents who were higher in family social support loved and wanted by family, maternal social support, and school social support reported lower levels of binge drinking. The relationship between the presence of a father figure and binge drinking is significant, however, it is not in the expected way. A greater percentage of people who said a father figure was present engaged in binge drinking compared to people who said they did not have father figure present. Moreover, friends care and binge drinking were related in the expected way. A greater percentage of people who said their friends care very little engaged in binge drinking compared to those who said their friends care



somewhat. Respondents who were higher in family social support, maternal social support, father social support, school social support, and felt loved and wanted by family reported lower levels of drug use.

<b>Variable</b>	<b>%</b>	<b>Mean</b>	<b>SD</b>	<b>Minimum</b>	<b>Max</b>
<b>Dependent variable</b>					
Sexual victimization (1= yes)	5.00			0.00	1.00
<b>Independent variables</b>					
<b>Social support – wave 1</b>					
Family social support scale		16.18	2.68	4.00	20.00
Feel loved and wanted by family					
Disagree loved family	2.20			0.00	1.00
Neither agree nor disagree loved by family	8.50			0.00	1.00
Maternal social support scale		26.25	3.64	6.00	30.00
Presence of father figure (1= yes)	69.0			0.00	1.00
Friend social support scale		3.54	1.51	0.00	5.00
How much do friends care					
Friends care somewhat	13.2			0.00	1.00
Friends care very little	2.60			0.00	1.00
School social support scale		22.06	4.19	6.00	30.00
<b>Risky lifestyle- wave 2</b>					
Number of sexual partners (log)		0.17	0.25	0.00	2.01
Delinquent behavior (1= yes)	34.5			0.00	1.00
Binge drinking (1= yes)	27.7			0.00	1.00
Drug use (1=yes)	25.4			0.00	1.00
Delinquent peers		2.76	2.69	0.00	9.00
Depression scale		11.14	7.53	0.00	56.00
<b>Control variables</b>					
Age		15.81	1.59	11.43	21.23
Gender (1= male)	46.6			0.00	1.00
<b>Race and Ethnicity</b>					
White (1= yes)	64.3			0.00	1.00
Black (1= yes)	22.6			0.00	1.00
Other race (1= yes)	19.2			0.00	1.00
Hispanic (1= yes)	15.8			0.00	1.00
Received public assistance or welfare (1= yes)	8.30			0.00	1.00
Neighborhood context		2.25	0.94	0.00	3.00
Problem solving scale		11.32	2.06	3.00	15.00
Attention deficit scale		5.59	1.82	0.00	8.00
<b>Risky lifestyle- wave 1</b>					
Number of sexual partners (log)		0.15	0.26	0.00	2.61
Delinquent behavior (1= yes)	41.5			0.00	1.00
Binge drinking (1= yes)	24.0			0.00	1.00
Drug use (1=yes)	26.7			0.00	1.00
Delinquent peers		2.39	2.57	0.00	9.00
Depression scale		11.25	7.53	0.00	54.00

Social support	Delinquent behavior		Test statistic <i>t</i> or $\chi^2$	Binge drinking		Test statistic <i>t</i> or $\chi^2$	Drug use		Test statistic <i>t</i> or $\chi^2$
	Mean (s.d.) or % yes	Mean (s.d.) or % no		Mean (s.d.) or % yes	Mean (s.d.) or % no		Mean (s.d.) or % yes	Mean (s.d.) or % no	
Family social support	15.57 (2.73)	16.50 (2.60)	17.56**	15.42 (2.68)	16.46 (2.63)	18.85**	15.22 (2.78)	16.50 (2.57)	21.92**
Loved and wanted <sup>1</sup>	42.6%	52.2%	70.06**	35.6%	41.2%	59.92**	36.0%	46.3 %	129.12* *
Maternal social support	25.68 (3.82)	26.55 (3.50)	12.01**	25.52 (3.92)	26.53 (3.49)	12.78**	25.35 (4.07)	26.56 (3.43)	14.44**
Presence of father figure	34.0%	35.7%	3.13	28.3%	26.3%	5.10*	24.0%	28.6 %	27.23**
Friend social support	3.68 (1.43)	3.46 (1.55)	-7.603**	3.98 (1.29)	3.37 (1.56)	-21.634	3.93 (1.32)	3.40 (1.55)	-18.05
Friends care <sup>2</sup>	36.2%	36.6%	2.84	24.2%	20.5%	20.04**	24.0%	21.1 %	5.18
School social support	21.28 (4.20)	22.47 (4.12)	14.71**	21.24 (4.30)	22.37 (4.10)	12.83**	20.80 (4.29)	22.49 (4.06)	18.65**

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

<sup>1</sup>Responses for this variable are neither disagree nor agree and disagree instead of yes or no

<sup>2</sup>Responses for this variable are somewhat or very little instead of yes or no

Table 3 shows the results of the analysis of variance between social support and risky lifestyle. There is a significant mean difference in the number of sexual partners, number of delinquent peers, and levels of depression across groups for social support. To determine mean differences between groups, Tukey's HSD (honestly significant difference) test was conducted on all of the ANOVAs. For all three risky lifestyle variables, the mean number of sexual partners for persons who disagree that they feel loved and wanted by their family was higher than persons who neither agree nor disagree and persons who agree. Furthermore, for friends care there was a significant difference between group means for depression. The mean depression score was higher for persons who said their friends care very little about them compared to those who answered somewhat and quite a bit for friends care.

Social support	Number of sexual partners		Delinquent peers		Depression	
	df	F	df	F	df	F
Loved and wanted by family	2	12.50**	2	47.21**	2	453.16**
Friends care	2	1.13	2	0.23	2	126.57**

\*\*  $p < .01$

As shown in Table 4, all of the social support variables were significantly related to risky lifestyles. Most of the social support variables exhibited a negative relationship with risky lifestyles, which indicates that as social support increases risky lifestyles decreases and vice versa. One exception, however, is the relationship between friend social support and risky lifestyle. This variable was the only social support variable that exhibited a positive relationship with risky lifestyles.

	Number of sexual partners	Delinquent Peers	Depression
Family social support	-.192**	-.228**	-.323**
Maternal social support	-.108**	-.144**	-.238**
Friend social support	.172**	.177**	.054**
School social support	-.170**	-.199**	-.273**

\*\*  $p < .01$

Table 5 displays the t-test results between presence of a father figure and the risky lifestyle variables. There was a significant mean difference for number of sexual partners, number of delinquent peers, and level of depression across groups for social support. In general, with the exception of friend social support, friends care, and in some instances presence of father figure, the bivariate analysis supports hypothesis 3, that social support from various sources is related to a decreased risk of involvement in risky behavior.

	Number of sexual partners		Test statistic	Delinquent peers		Test statistic	Depression		Test statistic
	Yes (s.d.)	No (s.d.)	<i>t</i>	Yes (s.d.)	No (s.d.)	<i>T</i>	Yes (s.d.)	No (s.d.)	<i>t</i>
Presence of father figure	0.15 (0.24)	0.21 (0.26)	11.37**	2.67 (2.63)	2.97 (2.73)	5.72**	10.67 (7.28)	12.17 (7.94)	9.65**

\*\*  $p < .01$

Table 6 displays the bivariate results examining the relationship between social support and sexual victimization. Four social support variables are significantly related to sexual victimization. A greater percentage of people who reported not having family and maternal social support experienced sexual victimization compared to those who reported

yes to having family and maternal social support. Also, 9.4 percent of individuals who said they do not agree that they feel loved and wanted by family experienced sexual victimization compared to 6.4 percent who agreed that they feel loved and wanted by family. Moreover, 2.7 percent of individuals who said that friends care somewhat were sexually victimized compared to 3.4 percent said their friends care very little. This relationship was in the expected direction.

Social support	Sexual victimization		Test statistic <i>t</i> or $\chi^2$
	Mean (s.d.) or % yes	Mean (s.d.) or % no	
Family social support	15.87 (2.78)	16.19 (2.68)	2.78*
Loved and wanted by family <sup>1</sup>	6.4%	9.4%	15.61**
Maternal social support	25.56 (4.18)	26.29 (3.60)	4.09**
Presence of father figure	5.0%	5.1%	0.05
Friend social support	3.59 (1.49)	3.54 (1.52)	-0.83
Friends care <sup>2</sup>	2.7%	3.4%	21.85**
School social support	21.88 (4.38)	22.07 (4.19)	1.09

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

<sup>1</sup>Responses for this variable are neither disagree nor agree or disagree instead of yes or no

<sup>2</sup>Responses for this variable are somewhat or very little instead of yes or no

Table 7 displays the results examining the relationship between risky lifestyle and sexual victimization. The only risky lifestyle variables in the table that are significantly related to sexual victimization as hypothesized are depression and drug use. Individuals who experienced sexual victimization had a higher mean depression scale score than those who had not been sexually victimized. Furthermore, a greater percentage of people who reported using drugs experienced sexual victimization. Individuals who had not been

sexually victimized had more sexual partners than those who had been sexually victimized, which was not in the expected direction.

Risky Lifestyle	Sexual victimization		Test Statistic
	Mean (s.d.) or % yes	Mean (s.d.) or % no	<i>t</i> or $\chi^2$
Number of sexual partners	.14 (.22)	.17 (.25)	2.87**
Delinquent behavior	5.3%	4.9%	1.18
Delinquent peers	2.74 (2.71)	2.76 (2.66)	0.20
Binge drinking	4.9%	5.0%	0.10
Drug use	5.9%	4.7%	6.51*
Depression	12.26 (8.46)	11.08 (7.47)	-3.29**

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

Table 8 displays the results for the multivariate analysis for the relationship between the exogenous variables and adolescent sexual victimization. The social support variables that are significant in the model are maternal social support and friends care somewhat. Maternal social support decreased the odds of experiencing adolescent sexual victimization by three percent. Friends caring somewhat reduced the odds of sexual victimization by 38 percent. As for the risky lifestyle variables, individuals who engaged in delinquent behavior had 30 percent higher odds of experiencing sexual victimization than those who did not engage in delinquent behavior and having delinquent peers lowered the odds of sexual victimization by 5 percent, which was not the expected direction. Moreover, being older in age lowered the odds of experiencing sexual victimization by 32 percent and being male lowered the odds of sexual victimization by 91 percent compared to being female. Being white increased the odds of sexual

victimization by 40 percent (compared to being black) and being Hispanic decreased the odds of sexual victimization by 31 percent (compared to being black).

<b>Table 8. Logistic Regression Model 1</b>		
Variables	Odds Ratio	95% Confidence Intervals
<i>Social Support</i>		
Family social support	0.97	0.94 – 1.02
Loved by family		
Disagree loved by family	1.48	0.86 – 2.56
Neither agree nor disagree that loved by family	1.21	0.86 – 1.71
Maternal social support	0.97*	0.95 – 1.00
Presence of father figure	0.97	0.80 – 1.17
Friend social support	1.01	0.94 – 1.08
Friends care		
Friends care somewhat	0.62*	0.43 – 0.87
Friends care very little	0.74	0.39 – 1.39
School social support	0.99	0.97 – 1.01
<i>Risky Lifestyle Wave I</i>		
Number of sexual partners	1.43	0.94 – 2.15
Delinquent behavior	1.30*	1.05 – 1.61
Delinquent peers	0.95*	0.91 – 0.99
Binge drinking	0.96	0.74 – 1.24
Drug use	1.02	0.80 – 1.31
Depression	1.00	0.98 – 1.01
<i>Control Variables</i>		
Age	0.68**	0.63 – 0.73
Gender	0.09**	0.06 – 0.13
White	1.40*	1.06 – 1.84
Other race	0.93	0.66 – 1.30
Hispanic	0.69*	0.49 – 0.98
Neighborhood context	1.02	0.93 – 1.12
Received welfare	0.91	0.62 – 1.32
Problem solving	1.00	0.97 – 1.04
Attention deficit	0.96	0.91 – 1.00
Log pseudolikelihood		-1828.14
Wald $\chi^2$ (24)		494.20**
R <sup>2</sup>		0.15

\*  $p < 0.05$ , \*\*  $p < .0$

In the full regression model (table 9), none of the risky lifestyle variables from Wave II mediated the relationship between social support and adolescent sexual

victimization. Nevertheless, maternal social support still lowered the odds of adolescent sexual victimization by 3 percent and friends caring somewhat decreased the odds of victimization by 38 percent. Engaging in delinquent behavior increased the odds of experiencing adolescent sexual victimization by 29 percent and having delinquent peers lowered the odds of experiencing adolescent sexual victimization by 6 percent.

Furthermore, the odds ratios for age and gender were the same as model 1. Similar to model 1, respondents who are at the most risk of experiencing sexual victimization were more likely to be younger compared to nonvictims. Older age decreased the odds of sexual victimization by 32 percent. Being white increased the odds of sexual victimization by 38 percent and being Hispanic decreased the odds by 32 percent compared to being black. Males had 91 percent lower odds of experiencing sexual victimization compared to females. A model with just the significant risky lifestyle variables at the bivariate level was run as well.<sup>2</sup> Figure 2 graphically depicts the major findings from Table 9.

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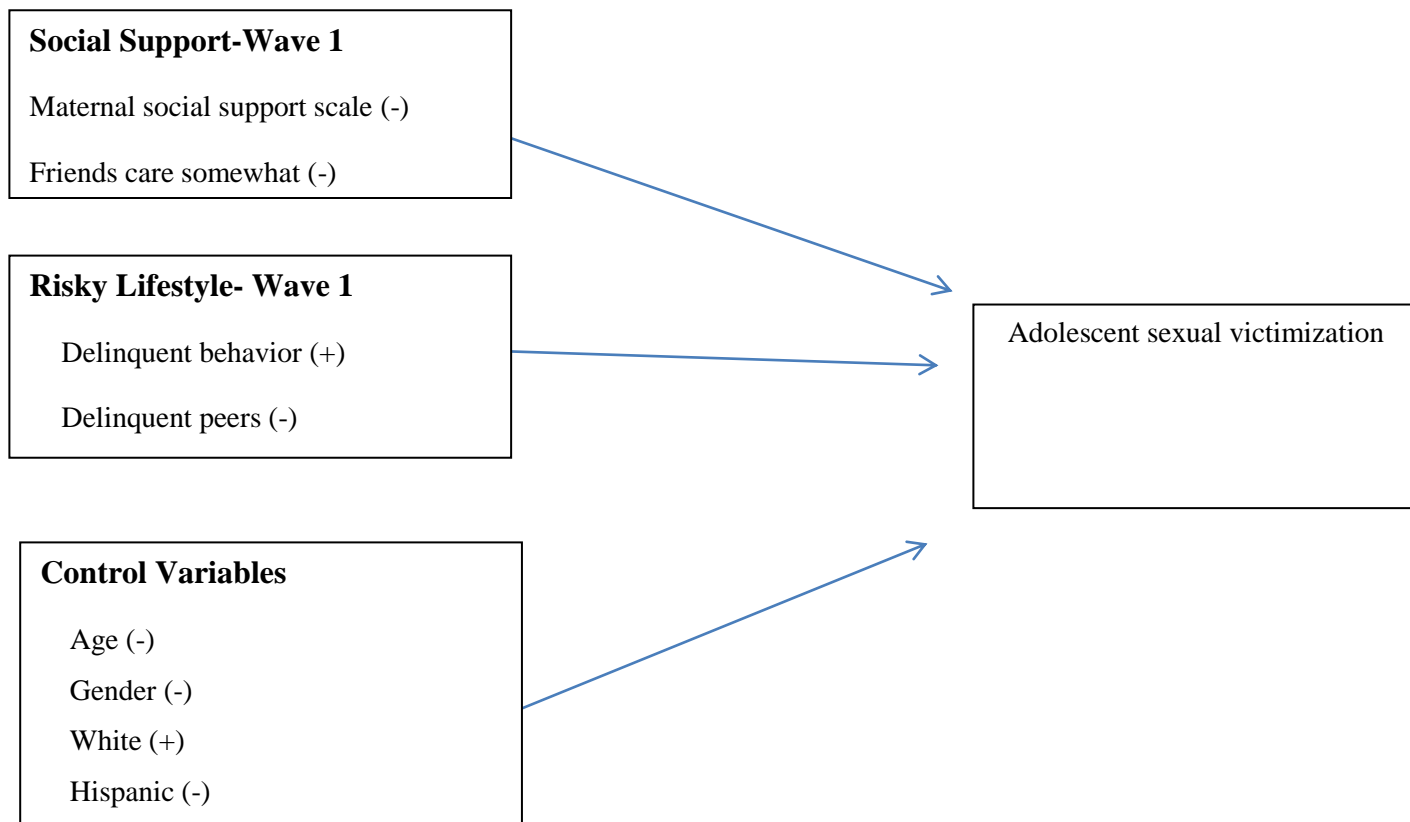
<sup>2</sup> There was no change in the social support items and there was no mediation. The only change was drug use became significant. Multicollinearity was also checked by running OLS regression with variance inflation factors. All scores indicated no multicollinearity. The highest variance inflation factor score was 2.02.



<b>Table 9. Logistic Regression Model 2</b>		
Variables	Odds Ratio	95% Confidence Intervals
<i>Social Support</i>		
Family social support	0.97	0.93 – 1.02
Loved by family		
Disagree that loved by family	1.22	0.87 – 1.71
Neither agree nor disagree that loved by family	1.45	0.83 – 2.52
Maternal social support	0.97*	0.95 – 1.00
Presence of father figure	0.98	0.81 – 1.18
Friend social support	1.00	0.94 – 1.07
Friends care		
Friends care somewhat	0.62*	0.46 – 0.88
Friends care very little	.074	0.39 – 1.40
School social support	0.99	0.97 – 1.01
<i>Risky Lifestyle Wave I</i>		
Number of sexual partners	1.34	0.87 – 2.06
Delinquent behavior	1.29*	1.03 – 1.62
Delinquent peers	0.94*	0.89 – 0.98
Binge drinking	0.90	0.69 – 1.17
Drug use	0.95	0.74 – 1.24
Depression	1.00	0.98 – 1.01
<i>Control Variables</i>		
Age	0.68**	0.63 – 0.73
Gender	0.09**	0.06 – 0.13
White	1.38*	1.03 – 1.86
Other race	0.92	0.66 – 1.29
Hispanic	0.68*	0.48 – 0.96
Neighborhood context	1.02	0.93 – 1.12
Received Welfare	0.90	0.62 – 1.30
Problem solving	1.00	0.96 – 1.03
Attention deficit	0.96	0.92 – 1.01
<i>Risky Lifestyle Wave II</i>		
Number of sexual partners	1.20	0.76 – 1.88
Delinquent behavior	0.95	0.76 – 1.18
Delinquent peers	1.00	0.96 – 1.05
Binge drinking	1.15	0.92 – 1.44
Drug use	1.17	0.93 – 1.46
Depression	1.01	0.99 – 1.02
Log pseudolikelihood	-1824.37	
Wald $\chi^2$ (30)	552.60**	
R <sup>2</sup>	0.15	

\*  $p < 0.05$ , \*\*  $p < .01$

Figure 2. Full Regression Findings



## **Chapter V**

### **Discussion and Conclusion**

There are several key findings that can be gleaned from this study. First, 5 percent (N= 582) of the sample reported experiencing adolescent sexual victimization.

Individuals most at risk were young, white females. These findings are in line with previous research that has also identified young, white females as being at most risk for experiencing sexual victimization (Belknap, 1987; Tschumper et al., 1998; Champion et al., 2004; Tyler et al., 2004). Compared to past research, however, the extent of sexual victimization in the sample was slightly lower. In general, past research has found that the prevalence of adolescent sexual victimization ranges from about seven percent to about twenty percent (Raghavan et al., 2004; Champion et al., 2004; Silverman et al., 2001; Tschumper et al., 1998). The questions used for the dependent variable excluded any sexual victimization experience with a parent or caregiver. The exclusion of experiences with parents or caregivers may have contributed to the lower extent found in the study compared to past research.

Young, adolescent females are more likely to be the victims of sexual victimization compared to older females and males due to several factors. An explanation for why some adolescents, especially females, experience sexual victimization has been suggested by Finkelhor and Asdigian (1996). In addition to environmental and behavioral factors associated with adolescent sexual victimization, they stress the importance of “target congruence” or personal characteristics, like female gender or emotional deprivation of the adolescent. Moreover, youth is also related to beauty and budding

sexuality in American culture. Offenders are likely to view adolescents as desirable targets due to their smaller size, sexual naiveté, and inexperience in social situations, therefore adolescents may be seen as vulnerable and easily manipulated (Livingston et al., 2007). These personal characteristics can increase the vulnerability to sexual victimization despite routine activities of the individuals, because these characteristics are congruent with the needs and motives of the offender (Finkelhor & Asdigian, 1996; Livingston et al., 2007). The idea of target congruence is not solely applicable to adolescents, but adolescents may be at high risk of experiencing sexual victimization due to the interaction between high target congruence and environmental factors, such as reduced supervision and increased socializing outside of the home.

Although during adolescence one moves closer to adult roles and activities, adolescents are still considered minors who lack social and legal power. That is, they do not have the autonomy or experience in the eyes of society to make similar decisions as adults, since they are still in need of a caregiver to guide them. For this reason, engagement in risky activities, such as drinking or having sex with multiple partners, may make them more vulnerable to sexual victimization compared to adults who engage in the same activities because adolescents need the guidance of adults and lack the experience to protect themselves in social situations. In addition, adolescents are more physically vulnerable compared to adults, due to their smaller size and social inexperience, which can increase target congruence (Livingston et al., 2007). Therefore, the interaction between risky activities and target congruence function in distinct ways compared to adult sexual victimization which contributes to the high target vulnerability

among the adolescent population. Future research should investigate this interaction between target congruence and risky activities.

Second, maternal social support decreases vulnerability to sexual victimization. Although adolescents spend a substantial amount of time at school, some studies indicate that family support factors are more salient in protecting against sexual victimization (Gover, 2004; Richards & Branch, 2001; Schreck & Fisher, 2004; de Graff et al., 2010; Tschumper et al., 1998) As such, the finding that school factors are not salient in the risk of sexual victimization may not be surprising. Furthermore, since the majority of the sample was female, this finding may suggest that there is something unique and important about the relationship between a mother and daughter that can protect a female adolescent from experiencing sexual victimization.

Past research has supported this finding. Several components of the mother-daughter relationship are salient for sexual victimization. For example, sexually victimized adolescent females tend to have mothers who are absent either physically or emotionally. Girls who live without their mother are three times more likely to experience sexual victimization than girls whose mother is present (Finkelhor, 1980; Faust, Runyon, & Kenny, 1995). The reason for this is unclear, but it may be due to the lack of adequate supervision. Moreover, an absent mother may be unable to protect her daughter from harm (Faust et al., 1995).

Having a mother who is absent also makes it more likely that there is a lack of communication between the mother and daughter. A mother who is present and communicates with her daughter is able to alert her child to potential dangers in the environment. Daughters with absent mothers are also more likely to have unmet

emotional needs (Finkelhor, 1980), which can contribute to their vulnerability to offenders. Having a need to fulfill emotional needs does not mean that adolescents seek out victimization, but rather they are more open and susceptible to the advances of a sexual offender. Their need of emotional fulfillment makes them conspicuous to offenders as a potential victim (Finkelhor, 1980).

In addition, a mother's own victimization experience can contribute to her daughter's risk of experiencing sexual victimization. A study conducted by Testa, Hoffman, and Livingston (2011) showed that a mother's sexual victimization experiences significantly increased the likelihood that her adolescent daughter would experience sexual victimization. Also important, a mother's sexual victimization experience has an indirect effect on her parenting style. Sexually victimized mothers were more likely to be permissive, less aware of their daughter's activities, and more approving of sexual activity, which in turn increased the risk of their daughter experiencing sexual victimization (Testa et al., 2011).

The types of sexual messages a mother sends to her daughter can also potentially place a girl at risk of sexual victimization. For example, victimized girls are more likely to have mothers who are very punitive about sexual matters (Finkelhor, 1980). These mothers warn, scold, and punish their daughters for having questions about sex, masturbating, and looking at sexual pictures. Girls with sexually-punitive mothers have been found to be 75% more likely to experience sexual victimization compared to girls without such mothers (Finkelhor, 1980). The findings reviewed here indicate the risk of sexual victimization is heightened by a non-supportive relationship with the mother. The

findings from the current study also suggest that non-supportive relationships between mother and child increase the risk of sexual victimization.

Whatever the precise mechanism may be, there is little doubt about the importance of a mother in an adolescent girl's life. All of the above factors ultimately affect the mother's social support capacity, which suggests that the mother can play an integral role in the prevention of adolescent sexual victimization. Given this information, it is not surprising that in the current study, maternal social support was protective against sexual victimization. In the future, researchers should work to understand the exact dynamics between a mother and daughter that are protective against adolescent sexual victimization and whether the same is true for males. Most studies do focus on females, but males experience sexual victimization as well and research must determine if a mother's support is just as important for males as it seems to be for females.

Third, friends caring somewhat decreased the odds of sexual victimization. It was surprising that this item was significant. It is more logical to suspect that friends caring quite a bit would lower the odds of sexual victimization, but the findings do not indicate this relationship. Previous literature on friend social support and sexual victimization is mixed. Some research has found that friend social support is a risk factor (Feiring et al., 1998; Boa et al., 2007) and others have found it to be a protective factor (Branch, 2005). The findings here support the idea that a minimal amount of friend care is enough to protect an adolescent from sexual victimization. It may be that too much friend social support can act as a risk factor, as some research has suggested (Feiring et al., 1998; Boa et al., 2007). That is, individuals who feel that their friends care somewhat are not fully entrenched with their friends. Being fully entrenched with friends may put one at risk of

being victimized because other forms of important social supports are minimized. The adolescent may feel that their friends are all they need and parents then may play a smaller role in the child's life. It also may be that a lack of important forms of social support, such as maternal support, were absent from early on. Thus the adolescent relies on friends for social support, which may not always be protective (Feiring et al., 1998). Therefore, having friends that care somewhat may allow other forms of social support (e.g., maternal social support) to carry more weight in their life, which can help lower the risk of sexual victimization (as the findings suggest), or it may be an implication that strong social supports from other areas were present early on.

Fourth, delinquent behavior increased the risk of adolescent sexual victimization. This finding implies that certain risky activities do indeed place an individual at a high risk of experiencing sexual victimization. There is ample evidence that supports the link between delinquent behavior and victimization. Adolescents who engage in deviant lifestyles have an increased risk of victimization (Chen, 2008; Shrier et al., 1998) and are more likely to be in close proximity to motivated offenders. Delinquent behavior, such as fighting, has been found to place adolescents at risk for sexual victimization (Champion et al., 2004). Although the measure in the current study did not include fighting, other delinquent activities were related to an increase in the odds of experiencing sexual victimization. This finding suggests that delinquent behavior in general perhaps places a person at risk of being in close proximity to motivated offenders. For example, maybe girls participate in delinquency with boys who sexually victimize them.

Fifth, delinquent peers were found to be a protective factor against sexual victimization, although it was expected that delinquent peers may be an indication of



proximity to motivated offenders. Traditionally within the field of criminology, having delinquent peers has been found to increase the risk of delinquency and victimization (Boa et al., 2007). There may be instances, however, in which delinquent peers can be protective against sexual victimization. For example, they may function as capable guardians when the adolescent is not under the supervision of their parents. The delinquent peer measure was created with questions that gauged whether a respondent's friends smoked, drank alcohol, and used marijuana. These are risky behaviors, but it does not necessarily mean that peers who engage in these activities cannot be capable guardians. Furthermore, most people in the sample indicated that they had delinquent peers. As such having peers who participate in low levels of deviance is normal in this sample. Perhaps if a measure that reflected having peers who engage in serious forms of delinquency was included, it would have been found to be related to sexual victimization. Future research should explore this possibility.

Sixth, there was no evidence that risky activities mediated the relationship between social support and sexual victimization. At the bivariate level, there were risky lifestyle measures from Wave I and II that were related to sexual victimization, but there was no evidence that risky lifestyles mediated the relationship between social support and sexual victimization. In support of this finding, some researchers have argued that the focus on risky or delinquent activities to explain adolescent victimization comes with some limitations (Finkelhor & Asdigian, 1996; Livingston et al., 2007) and lifestyle effects may be independent of family climate (Schreck & Fisher, 2004). Previous research has found that adolescents are indeed at risk of sexual victimization when they are in unsupervised contexts and engage in risky activities. There is evidence, however, to

suggest that the occurrence of adolescent victimization is not solely limited to these types of situations. Seemingly safe situations such as babysitting or playing video games with a friend can place adolescents at risk of experiencing sexual victimization as well (Livingston et al., 2007). A study conducted by Livingston and colleagues (2007) found that in many instances of sexual victimization, adolescent girls were in contexts that seemed fairly safe and familiar. Moreover, they also found that feelings about social norms, the male's feelings, and the desire of social acceptance put females at risk of experiencing sexual victimization.

In addition since adolescents are more likely to be victimized by relatives or acquaintances compared to adult women (Peipert & Domaglaski, 1994), the importance of routine activities may not be as relevant to adolescent sexual victimization. In the current study, however, the relationship between the victim and the offender could not be determined, thus future research should focus on this relationship as it is important to the study of adolescent sexual victimization.

Nevertheless, there was little evidence to suggest that routine activities influenced the risk of adolescent sexual victimization in the current study, except the Wave I measure of delinquent behavior and delinquent peers. For these adolescents, it may have been that they were victimized by relatives or acquaintances. Future research should include measures of risky activities, non-risky situations in which sexual victimization may occur, and questions about social norms and desires.

## **Limitations**

As with all research, there are some limitations of the current study. First, the social support measures did not capture all four types of social support. As previously mentioned, the four different types of social support are: emotional, instrumental, informational, and appraisal. The measures used for the study, however, only measured emotional and instrumental social support. Measures of informational and appraisal social support were not included in the Add Health data. Although emotional social support has been found to be the most important type of social support, each type of social support is thought to have a different and important function (Branch, 2005). Previous criminological research on social support does not tend to focus on all aspects of social support. Instead, most of the attention is given to emotional support (Cullen, 1994; Branch, 2005). Nevertheless, a full measure of the concept may have yielded greater insight into how social support affects sexual victimization risk.

In addition, there were also some limitations in the measures used. The measure of paternal social support used in the study was not as rich as the measure for maternal social support, since many persons did not live with their biological father, thus prohibiting sufficient data on measures regarding paternal social support. Future research should consider the role of the father in terms of social support. The measure for delinquent peers was also limited. Respondents were asked whether their friends smoked cigarettes, drank alcohol, and used marijuana. Even though these activities are illegal for adolescents, this scale did not capture the full extent of delinquent peer behaviors. A full measure of delinquent peers should include questions about violence, sexual activities, and the like. By overlooking many other delinquent activities, the current measure of

delinquent peers may not have been truly reflective of peer delinquency, and as a result, its relationship with sexual victimization. Furthermore, the measure of adolescent sexual victimization did not include experiences with a parent or caregiver. Excluding parent or caregivers from the questions may have affected the estimates of the extent and this may have been why the extent in the current study was lower than previous studies of sexual victimization.

The findings are also only generalizable to a certain population. The sample is school based, so it should be noted that the findings cannot be generalized, to a non-school based sample. There were also considerably more females in the sample and it is unclear if these findings can be generalized to males.

In addition, mean replacement was used to address some of the missing data issues. Values were mean replaced on the independent variables. Analysis of data (using t-test and Pearson chi-square) revealed that individuals who were not included in the study were different than those who were in the analysis. Missing individuals scored lower in family social support, higher in friend social support, and were more likely to have a father present compared to individuals who were included in the analysis.

In terms of risky lifestyles, there was a significant mean difference between groups for number of sexual partners and depression. Individuals who were missing had a greater number of sexual partners and were more depressed compared to those who were included in the analysis. Missing individuals were also lower in delinquency, binge drinking, and drug use. The difference between the missing individuals and the included individuals may have slightly affected the results of the current study. Perhaps other social support measures, such as presence of a father figure, would have been significant

in predicting sexual victimization if the missing individuals were included in the analysis. Since missing individuals were also higher in the number of sexual partners and depression, their exclusion may have been why these variables were not related to sexual victimization in the full model. The amount of missing data, however, could not have been avoided given the age parameters set around the dependent variable. Also the dependent variable was measured at Wave IV and there was missing data on the dependent variable at this point in the study.

Also since the L/RAT measures were used from both Wave I and Wave II, the mediation analysis was conservative. It examined whether social support was related to the change from Wave I to Wave II in risky lifestyle, rather than examining whether social support at Wave I influenced risky lifestyle at Wave II, independent of Wave I risky lifestyle levels. Examining mediation this way may have been why these variables did not mediate social support and sexual victimization.

## **Conclusion**

Despite the limitations of the current study, the findings provide a unique and important contribution to an issue that is pervasive but not well understood. The policy implications from the study point to the importance of family, especially the presence of the mother. Prevention programs can teach mothers how to communicate with and support their children, while still providing a healthy amount of structure and discipline. Similarly, intervention programs can help mend broken relationships between mothers and daughters in hopes that they form relationships that are loving and protective against sexual victimization. Parents can also be educated on the risk factors of adolescent sexual victimization within risky and non-risky contexts. Although there was no evidence

of which type of context was related to sexual victimization in the study, previous research has pointed to both being related to sexual victimization.

When mothers realize what an active and integral role they can play in preventing sexual victimization of their children, they can help empower their own children to take self-protective measures. Educating a person so they feel confident to protect themselves from sexual victimization may be an effective way to reduce the incidence of sexual victimization. Self-protective measures can help prevent an initial sexual victimization experience. Moreover, a victim of rape who uses self-protective measures is less likely to be victimized again compared to rape victims who do not take such measures (Fisher, Daigle, & Cullen 2010). Adolescents should also be educated on the increased risk of sexual victimization if they engage in delinquent behavior. Since delinquent peers were found to be a protective factor against sexual victimization, adolescents need to be taught how to be capable guardians in any situation. Engaging in delinquent activities like smoking marijuana and drinking alcohol does not necessarily mean that adolescents cannot be capable guardians for their peers. Peers, whether they are delinquent or not, can be taught to recognize behavior that is not pro-social and to be able to intervene as a bystander. Research has shown this is an effective means of sexual violence prevention (Banyard, Plante, & Moynihan, 2004). Adolescent sexual victimization is a topic that should be openly discussed within families and in schools. By doing so, the hope is to lower the incidence rate and prevent future adolescents from experiencing something that can often carry both short and long term consequences (Erickson & Rapkin, 1991; Rhodes, Ebert, & Meyers, 1993; Tschumper, et al., 1998).

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