

**Does Experiencing and Witnessing Violence Negatively Impact Delinquency
throughout the Life Course?**

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Abstract

At some point in an individual's life, there will be some type of exposure to violence whether direct or indirect. Also described as victimization, this takes place when there is a change in three main assumptions: belief in personal invulnerability, the perception of the world as meaningful, and self-positivity (Janoff-Bulman and Frieze, 1983). There is no specific answer for the cause of delinquency, but many factors that work together (Shader, 2001). The risk factors for delinquency and victimization have been shown to be the same creating an overlap. This study focuses on whether witnessing or experiencing violence can result in delinquent behavior throughout the life course. It will help provide insight of predictors and risk factors of delinquent behavior to increase the chances of them being caught early on. Using a Multivariate Binomial Regression Analyses, it was found that victimization was associated with criminal behavior at every wave and low self-control in every wave except the third. It was also found that drug use, age, and being a male was related to the likelihood of one committing crime in all four waves.

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Nearly every child or adolescent has had some type of experience with direct exposure to violence, whether they were a spectator or a participant (Nofziger & Kurtz, 2005). In some of these cases they may have been specifically targeted or singled out in their own home or out in the community. Also known as victimization, this is something that can occur anywhere and has unfortunately become a part of many children's lives (Hurt, Malmud, Brodsky, & Giannetta, 2001). According to Janoff-Bulman and Frieze (1983), victimization occurs when there is a change in three main assumptions: belief in personal invulnerability, the perception of the world as meaningful, and self-positivity. It can result in long-lasting effects for the person because of the negative experience they encounter, including psychological distress and a greater risk of displaying symptoms related to trauma (Hughes, 1988). According to Kaminski and Fang (2009), there is a growing rate of depressive and suicidal behaviors as a result of peer victimization incidents. The damage of being victimized can negatively affect a person can lead to feelings of powerlessness and diminished self-esteem. In instances where an individual is stuck in the environment where they are being victimized, the feelings of powerlessness can be even stronger. In some cases, an individual being victimized can develop negative emotions and anger that result in the impulse for corrective action to take place (Kaminski and Fang, 2009) Although corrective action does not have to involve criminal behavior, Agnew (2001, 2002) argues that adolescents seldom have access to non-criminal ways of coping, leading them to engage in delinquency. Due to the lack of unattainable resources, the association between victimization and delinquent behavior only gets stronger (Cullen et al., 2008).

According to Cohen and Felson (1979), there must be an alignment of a victim, willing offender, and perfect location for a crime to actually occur. Finding oneself in a situation similar to this could raise questions on how they got there in the first place. Engaging in a risky lifestyle

or routine activities is very important in increasing the chances of being victimized (Azimi & Daigle, 2020). They argue that with lack of support, individuals will get involved in risky criminal behaviors which means they become more vulnerable for victimization. In another study, Chen (2008) introduced the idea that offending can place individuals in proximity with motivated offenders, most likely in a perfect location without guardianship. This creates the crossover between going from an offender to becoming the victim.

When it comes to the relationship between victimization and delinquency, Agnew (2002) argues that victimization acts as a strain that leads to the delinquent behavior. The stress that occurs from failure to achieve goals or from negative impulses are all considered strains that can affect a person's life. This also relates to the most known and shared idea of success in the world, which is achieving the "American Dream". According to Merton (1968), the "American Dream" is the idea for individuals to achieve economic well-being, but in doing so provides a motive in the occurrence of crime around the world. In some situations, the inability to be able to acquire this "American Dream" can create a strain within the person because they are now trying to discover a new, possibly illegal way, to reach this shared success (Merton, 1968).

There have been many studies that discovered a particularly strong relationship between victimization and criminal offending and how they heavily impact each other (Baron & Hartnagel, 1998; Jensen & Brownfield, 1986; Sampson & Laub, 1990). There has always been the question for how people and other variables such as mental health and personality, can either strengthen or weaken the relationship between the two although the outcomes have always remained consistent. Kim and Lo (2016) found an increase in delinquent activities when controlling for how often an individual experienced violence. In other words, the more violent events one faced in their lifetime increased their chances of exhibiting delinquent behavior. For

someone who may have only been in a couple violent situations, they would be able to refrain more from criminal behaviors.

Many studies have found emotional consequences as a short-term result for violent child victimization (Adamson & Thompson, 1998; Hughes, 1988; Martinez & Richters, 1993), but Norrington (2020, 2021) argues that the effects can easily linger into the adult life and still have a heavy impact on mental health. Physical and psychological victimization have both been linked to health-risk behaviors in adulthood for many people (Cerezo & Perez-Garcia, 2019). According to Macmillan (2006), early childhood victimization has been linked to not only mental strain, but financial issues as well. Due to those negative experiences, educational goals are put on hold leading to income losses in the individuals' adulthood.

In this paper, a discussion of violent victimization will be provided along with its short and long-term effects. Following will be a breakdown of the previous literature done on effects of violent victimization and how the current study will add to it. Included in this, is a conversation over the similarities between risk factors for criminal behavior and victimization will occur followed by a brief introduction to the victim-offender overlap. Then, an overview of various theories and how they aid in predicting victimization and offending. Succeeding this is the shared risk factors for victimization and offending such as, low socioeconomic status, drug and alcohol use, delinquent peers, and parental permissiveness. A discussion of the victim-offender overlap will also be provided.

Literature Review

In order to increase the chances of preventing criminal offending, one must first understand what causes the delinquent behavior (Farrington, 2000). The attempt to understand delinquency has been very widely studied with not one specific answer, but a variety of several

factors that can work together (Shader, 2001). Farrington (2000) introduces the “ risk factor paradigm” as the basis of identifying the predictors for offending and finding ways to reverse it. A risk factor is typically defined as “those characteristics, variables, or hazards that, if present for a given individual, make it more likely that this individual, rather than someone selected from the general population, will develop a disorder” (Mrazek and Haggerty, 1994, p. 127). Risk factors are never contained to only one type of delinquency. Shader (2001), for instance, observed that they are more likely to be found in all levels of delinquent individuals. This means, that an individual committing petty thefts will show risk factors just the same as an individual who may have committed aggravated assault. For example, they would both be more likely to show a history of low socioeconomic status or a poor parental relationship. He also made it important to note that while risk factors may be found in many youth offenders, not every individual who exhibits them will go on to commit crime or violent acts.

Risk factors also play an important role in the victimization of an individual. Research has shown that there are specific targets when it comes to who becomes a victim (Lauritsen, Sampson, & Laub, 1991). Through individual and situational variables, a criminal will choose their victims in a way that benefits them and keeps them from causing attention. When looking at the risk factors for victimization, studies have found an association between these victims and offenders with delinquent characteristics (Schreck, Miller, & Gibson, 2003). Levels of parent guardianship, demographic patterns, and peer friend groups are all some of the commonalities between victimization and delinquency. As a result of so many common characteristics, it makes it easy for victims and offenders to develop an overlap in which role they play. This period of crossover, called the victim-offender overlap, originated with Hentig (1948) who believed that persons involved in crime fell into one of three class: pure offenders, pure victims, and victim-

offenders. This relationship is important because it gives some insight into how victimization can affect a youth in the latter part of their life.

According to McDougall and Vaillancourt (2015), victimizations, especially that from peers, are very severe and can have a heavy impact into the adulthood. It can occur directly or indirectly, but both can have lasting effects on the people involved. For example, direct contact would be the individual being targeted, while indirect contact would be the bystander that observes the whole incident take place. In both instances, Camodeca and Nava (2022) found that direct and indirect victimization were negatively associated with emotion regulation. This means, the more violent incidents one is faced with, the more challenging it will be for them to control their emotions which can lead to other mental disorders (Boney-McCoy & Finkelhor, 1995).

Victimization can have short-term effects as well as life-long disorders. Posttraumatic stress disorder, also known as PTSD, is one of the disorders often seen as a result of experiencing violent events as a child (Boney-McCoy & Finkelhor, 1995). According to the American Psychiatric Association (2013), posttraumatic stress is triggered when an individual witnesses or experiences a traumatic event that is too much to cope with. Depression has also been found to be linked with violent victimization over time because an individual begins feeling helpless and not being able to cope or process the traumatic event (Bargai et.al., (2007). Learned helplessness is seen a lot in the criminal world and is a big reason why many individuals feel like they may be stuck in their current positions (Pugh, Li, & Sun, 2021).

Theories and Shared Risk Factors

Criminal behavior can be affected by a multitude of risk factors. These are often things that can increase the occurrence of a behavior including the frequency, duration, or persistence (Burton & Marshall, 2005). There are many factors that can be seen as a risk for criminal

offending, but there are some more heard of than others. Majority of research has found that individuals with a greater risk of offending include: youth whose parents do not play an important role or more of a relaxed, permissive role (Greennerger et al., 1998; Burton & Marshall, 2005), those who spend a lot of time hanging with delinquent peers (Andrews, 1995; Beinhart et al., 2002; Farrington, 1996), those who participate in drug and alcohol use (Barnes, Welte, & Hoffman, 2002), and individuals who come from low ses neighborhoods. (Wright et al., 1999). Although all can be risk factors in themselves, it is very easy for crossover between one another to take place.

Self-control Theory

Self-control theory (Gottfredson & Hirschi, 1990) is a micro-level, social selection theory created with the purpose of proving how the source of control originated within the individual. As one of the most influential theories of crime (Tittle, 2011), the authors' main argument is that lower levels of self-control caused higher levels of crime, delinquent behavior, and failed social interaction. According to Gottfredson and Hirschi (1990), offenders were people who demonstrated six specific characteristics they called the "elements of self-control". These included risk-taking, impulsive, physical, shortsighted, insensitive, and nonverbal. They believed that although criminals do not purposely create opportunities for crime, they do have a hard time exercising self-control to refrain from committing them. Their focus was more on the fact that criminal behaviors are considered natural human tendencies and the use of self-control is required to keep away from those delinquent activities. In other words, delinquent acts are mostly the result of an individual's inability to resist immediate gratification (Gottfredson & Hirschi, 1990).

In response to this self-control theory, Gottfredson and Hirschi (1990) received an overwhelming amount of empirical support. Many of these studies have backed the idea that low self-control is associated with a variety of criminal acts, carelessness, and criminal opportunity (Grasmick, Tittle, Bursik, Arneklev, 1993; Lagrange & Silverman, 1999; Paternoster & Brame, 1998). In another study, Gottfredson and Hirschi (1993), clarified that they were not arguing self-control as the only cause of crime because other constructs can come into play as well. According to Lynam et al.(2000) and Pratt et al. (2004), impulsivity in boys was found more strongly associated to juvenile delinquency in poorer neighborhoods, while non-impulsive boys had about the same likeliness in poor and affluent neighborhoods.

Low Socioeconomic Status

Socioeconomic status (SES) has always been in question when discussing levels and explanations for delinquency (Merton, 1938; Shaw & McKay, 1942). Findings have shown that exposure to violent events are not random, but occur in specific areas (Spikes, Willis, and Koenig, 2010). They believed that low socioeconomic areas may have certain characteristics that contribute to increased violence exposure for the individuals residing there. When looking at the comparison between high and low SES neighborhoods, Beyers et al. (2001) found that adolescents in higher SES areas were significantly less likely to participate in violent delinquency than those in low SES communities.

It has also been argued that low socioeconomic status can contribute to higher levels of delinquency, but there have also been some weak correlations that challenge that statement (Wright et al.,1999). According to Hirschi (1969), the real, negative effect of low socioeconomic status and delinquency come from a third variable. With this in mind, Wright et al. (1999) expanded on this research and discovered some consistencies with the previous studies. They

found no true empirical relationship with socioeconomic status and delinquency but were able to identify eleven social-psychological characteristics that tend to act as mediators for the association between the two (Wright et al., 1999). For example, Mason et al. (2010) proposes that youth from lower income areas may lack the resources need to combat other risk factors, such as substance abuse which increases chances of delinquency.

Drug/Alcohol Use

As youth began to age, there comes a time when they are distancing themselves more from their parents, leaving them less supervised. According to Crawford and Novak (2002), early high school is that key time when youth get into substance use because of this newfound independency. Introduced as developmental pathways (Krueger et al.,2002), there were three main ways the relationship between drinking and delinquency influenced youth: adolescent drinking precedes delinquency, delinquent behavior precedes adolescent drinking, and they both join to make one another worse. Young and colleagues (2018) examined this theory and found that delinquent behavior was a major benefactor to an adolescent's overconsumption of alcohol.

Although there has not been a clearly stated relationship between substance use and criminal offenses, evidence has shown some association between drug use and offenders (Fonseca & Bejarano, 2012). It has also been observed that offenders begin their experimentation with drugs much earlier in their lifetime than non-offenders. For instance, Huang et al. (2001) discovered that youth drinking alcohol around the age of 16 began to develop more aggressive behavior once they were 18 years old.

Delinquent Peers

The influence of peer relationships arises very heavily in adolescence years due to youth spending less time with parents and siblings, and more time around friends (Crawford & Novak,

2002). They also expose the individual to novel ideas, behaviors, attitudes, and circumstances (Akers, 1998). As one of the strongest associations with delinquency, peer relationships constantly appear at the top of the list (Haynie, 2002; McGloin & Shermer, 2009; Pratt et al, 2010; Sutherland, 1947; Warr, 2002). As a result of the many forms criminal behavior can take, Warr (2002) argues that peer relationships should not only determine the frequency of delinquent behavior, but the qualitative form as well. In other words, an individual's crime specialization will be limited to what their friend specializes in or introduces them to. For example, an individual will mainly focus on committing car thefts if they associate with a peer who does mostly the same. Although there are many individuals who will stick to their specialization in one specific offense (Thomas, 2013; 2015), there are others who will choose to venture out into other types of crimes (Nieuwebeerta et al., 2011).

Since criminal offending is mostly a social behavior, many offenders are somehow implanted in a social network full of other crime seeking acquaintances (Warr, 2002). Though this can help predict crime patterns (Thomas, 2013;2015), newfound delinquent peers can result in a change in behavior (Wellman, 1983). For instance, Haynie (2001) discovered that the more delinquent peers in an individual's social network, the more likely they will engage in even more delinquent behavior. Like prior research, Rees and Zimmerman (2016) found that having one extra friend that participates in a specific behavior can increase the overall chances of an individual also engaging in that behavior as well. For example, having a friend that smokes, increases the chances the individual will smoke or continue to smoke.

Rees and Zimmerman (2016) also found some significant patterns when controlling for race and gender differences. When it came to fighting, they discovered that males were more likely to get into physical altercations than females but smoking and drinking did not change

across sex. They also observed a higher likelihood of black males to get involved in fighting than white males, but a higher chance of white youth to participate in smoking and drinking (Rees & Zimmerman, 2016). Since much of an individual's learning comes from peers and imitating their behaviors, this will allow researchers to focus on the specific behaviors when trying to prevent future delinquency (Akers, 1998; Warr, 2002).

Parental Factors

According to Greenberger et al. (1998), parental permissiveness has a negative effect on youth males. If the parent appeared to be more involved in illegal or negative behavior, then the young child would mimic those behaviors as well. As a very important person in the youth's life, the parent plays a vital part in the development of their child and downplaying that role can be a risk factor for criminal offending (Burton & Marshall, 2005). Research has also shown that non-parental, very important people can have a positive effect in replace of a neglectful parent. This could be any other adult that is looked at as a positive role model in the child's life (Beam et al., 2002).

Parental guidance is not only important in the younger years, but as the child begins to navigate their young adult stage as well (Mallet et al., 2019). In a recent study, Mallet et al (2019) looked at the fall semester during a college students' first and fourth year to see the effects of parental permissiveness on alcohol and drug use. They found evidence for the importance of effective parenting throughout out the young adults college career. They also discovered associations between parental permissiveness and substance use that led to more risky behaviors and consequences (Mallet et. Al., 2019). Parents who are permissive about certain behaviors in their children can increase the chances of risky lifestyles, but in some cases it can be dependent upon the maternal or paternal figure.

According to Becona et al. (2013), there was significant influence found in maternal permissiveness but not paternal permissiveness. In other words, ineffective parenting from only the mother or both parents can lead to drug and alcohol use, but not from only the father. Interestingly, youth drinking in the presence of their parents were more likely to have fewer alcohol-related problems in adulthood (Trujillo, Perez, & Scoppetta, 2011). This led the researchers to believe that these instances of drinking with family or as part of family functions were not perceived as permissiveness from their parents.

Victim-Offender Overlap

First introduced by Hentig (1948), the victim-offender overlap was essentially a period of crossover between offenders and victims. This brought about three main categories of individuals involved in criminal activities: pure offenders, pure victims, and persons who were considered “one-and-the-same”—or in other words, victim-offenders (Bailey, Harinam, & Ariel, 2020). Although the scientific meaning behind the victim offender overlap is still unclear (Berg & Mulford, 2020), many theorists have proposed their arguments for the reasoning behind this phenomenon. One of these theories include the dynamic causal perspective that argues when the chances of becoming a victim increase, it can cause an immediate response of committing a criminal offense (Diagle & Muftic, 2019). On the other hand, Ousey et al. (2011) brought the population heterogeneity perspective into question. They argued that victimization and offending do not have a causal relationship but are both caused by stable personality traits and environmental factors (Ousey, Wilcox, & Fisher, 2011).

In a similar study on the victim-offender overlap, Bailey, Harinam, and Ariel (2020) dug deeper into the concern of knife crime. They found that although knife crime was only a small proportion of crime, it is widely associated with violent offense. Due to the likelihood of knife

offenders and victims both having criminal records, Bailey, Harinam, and Ariel (2020) suggests that prevention tactics should focus on violent offenders or repeat victims that are known to the legal system. Even though gangs are widely named in research for the victim-offender overlap (Melde et. al., 2009), research shows that police records are the place to look when it comes to preventing knife crimes. Even then, the only true way to prevent any crime is working their way up because the idea of knife crime is only increasing through peer and social networks (Marshall, Webb, & Tilley, 2005).

Current Study

The relationship between victimization and delinquency has been established, but there is still much that researchers have to learn about the impact of victimization on criminal behavior throughout the life course. In order to even begin trying to understand delinquency, one must first be aware that there is no one cause, but several factors that work together (Shader, 2001). For example, an individual with low self-control may not be able resist immediate gratification resulting in the need to commit crimes. In addition, Cohen and Felson (1979) argues that for a crime to take place there must be a willing offender, the perfect location, and lack of guardianship. Whether it be an instable personality trait or an environmental factor, there are a variety of predictors that can help one prevent future escalation of crime rates.

As literature has shown, in order to reduce offending, it is important to know what causes it in the first place. This research will add to the literature by revealing factors in one's childhood that can help predict adult delinquency. Understanding and identifying these predictors will allow children to receive the help they need early on before they enter the world of offending. It will also aid future researchers in finding what can be done to avoid some factors that are controllable, such as environmental factors. If children feel discouraged because of a lack of

resources, then maybe there can be a plan in place to make sure every community is given the same opportunity for some for some of the same resources. In order to decrease the crime, there must be action against what initially causes it. With this in mind, the current study will test the following research question: Does experiencing and witnessing violence negatively impact delinquency throughout the life course?

Four specific hypotheses will be tested:

Hypothesis 1: Experiencing/witnessing violence in Wave 1 will increase the risk for delinquent behavior in Wave 1.

Hypothesis 2: Experiencing/witnessing violence in Wave 1 will increase the risk for delinquent behavior in Wave 2.

Hypothesis 3: Experiencing/witnessing violence in Wave 1 will increase the risk for delinquent behavior in Wave 3.

Hypothesis 4: Experiencing/witnessing violence in Wave 1 will increase the risk for delinquent behavior in Wave 4.

Method

Data

The data used in the current study were obtained from The National Longitudinal Study of Adolescent Health. Add Health is longitudinal study consisting of a nationally representative sample of youth in the United States that were in grades 7-12 during the 1994-95 school year. After narrowing the results down to 132 schools, the sample of 90,118 students completed a 45-minute self-report questionnaire. These questions covered the participants home life, school life, relationships with parents and siblings, delinquent behaviors, peer relationships. Over 20 years of

data have been collected at different times, which includes the participants, their peers, parents, and siblings. They broke each time period down and combined them into Waves 1-4.

Wave 1 in-home data consisted of the 7-12 graders from the 132 middle, junior high, and high schools that were chosen. For the in-home survey, 20,745 students were included and asked about their relationships, activities, health, and home life. They also interviewed 17,670 parents where they included questions about the family composition and adolescent's health. Wave 2 in-home data were drawn from the original wave 1 with the exclusion of the 12th graders because they had surpassed the age eligibility requirement. There were no parent interviews during this wave, but it did include a small number of new participants that were not in the first wave. Wave 3 in-home data included 15,170 of the original participants from wave 1 with 27 extra special gene respondents, resulting in a total of 15,197. They also introduced 1,507 romantic partners of the Add Health participants to be interviewed in this wave. The partners had to be 18 or older, of the opposite sex, and in the current relationship for at least three months. This interview also included questions about contact with school friends and sibling relationships. Lastly, wave 4 in-home data that took place in 2008 consisted of all the participants from wave 1 that were now in the age group of 24 to 32 years old. They had a 92.5 percent location rate and an 80.3 percent response rate. It included a 90-minute computer survey and 30-minute biomarker collection that measured anthropometrics, blood pressure, blood spots, and saliva. The overall total for this wave was 15,701.

Measures

Dependent Variables

Delinquency Wave 1. This variable was constructed from the wave 1 in-home interviews which included questions about the participant's engagement in delinquent activities within the

past 12 months. They were asked if they had ever painted graffiti, damaged property, lied to their parents or guardians, stolen from a store, injured someone to where they needed medical care, took a car without permission, stolen something over 50 dollars in value, stolen something less than 50 dollars in value, broke into a house, participated in a group fight, used a weapon to get something from someone, sold drugs, participated in a group fight, or been loud or rowdy in a public place. The questions were coded so that 0= never, 1=1 or 2 times, 2= 3 or 4 times, 3= five or more times.

Delinquency Wave 2. This variable was pulled from the wave 2 in-home interviews that consisted of the same questions from wave 1. These were all coded so that 0= never, 1=1 or 2 times, 2= 3 or 4 times, 3= five or more times. They were also asked about the number of times they used a weapon in a fight and carried a weapon in school. These 2 additional questions were coded with 0= no and 1= yes.

Delinquency Wave 3. The third dependent variable was taken from the wave 3 in-home interviews with most of the same questions including whether they had sold drugs, stole a car, fought, carried a weapon, and stolen something worth less than 50 dollars, and stolen something worth more than 50 dollars. There were a few exceptions due to age differences and the new questions included the participants involvement in using another person's credit card without their knowledge and writing bad checks. These variables were coded so that 0= never, 1=1 or 2 times, 2= 3 or 4 times, 3= five or more times.

Delinquency Wave 4. The last dependent variable was obtained from the wave 4 in-home interviews. Participants were asked within the last 12 months had they: damaged property, stolen something less than 50 dollars in value, stolen something worth more than 50 dollars, stolen from a house or building, used a weapon to rob somebody, sold drugs, participated in group

fights, bought or sold stolen property, used someone else's bank card, written a bad check, been involved in a serious fight, or injured someone enough that they needed medical attention. These variables were all coded so 0= never, 1=1 or 2 times, 2= 3 or 4 times, 3= five or more times.

Independent Variable

Victimization Wave 1. Victimization was measured by asking participants whether they had seen someone shot or stabbed, had a knife or gun pulled on them, been shot, been cut or stabbed, and jumped. These answers were coded 0= never, 1= once, 2= more than once.

Covariates from Wave 1

Low Self-Control. Low self-control was captured via a 23-item scale available at wave 1. Individual items captured a range of concepts indicative of low self-control. For example, participants were asked if they made decisions without thinking too much about the consequences, went out of their way to avoid dealing with difficult problems, and whether they try and think through multiple solutions to a problem. Items were coded such that higher values reflected lower levels of self-control when combined into a scale.

Low SES. Low ses was measured by asking participants whether or not their mother or father received any public assistance such as welfare. The variable was coded 0= did not receive welfare and 1= did receive welfare.

Drug/Alcohol Use. The wave 1 in-home interviews included questions about the respondents' tobacco, alcohol, and drug use. For example, respondents were asked about their use of beer, wine, or liquor and whether they had tried illegal drugs. All variables were coded 0= no and 1= yes.

Delinquent Peers. Participants were asked about the activities of their closest friends in order to measure peer delinquency. These questions asked how many friends smoked a cigarette

a day, drank at least once a month, or used weed once a month. They were coded 0= no friends, 1= 1 friend, 2= 2 friends, and 3= 3 friends.

Parental Permissiveness. This variable was measured by asking participants about their level of independency given by their parents. A few questions asked included whether they make their own curfew on weekend nights, make their own decisions about what they wear, and how much or what tv programs they watch. They were coded 0= no and 1= yes.

Parental Attachment. Parental attachment was measured by asking participants about their relationships with their mother and father. For example, they were asked how close they felt to each their mother and father and how much they felt each parent cared about them. Each item was coded so that 1= not at all, 2= very little, 3= somewhat, 4= quite a bit, and 5= very much.

Controls

Age. Age was measured by asking participants when their birthdate and year was during the first wave.

Black. Race was determined by asking participants what their ethnicity. This was coded 0= non-black and 1= black.

Male. Sex was measured by collecting the participant's sex during the first wave interview. This was coded 0= female and 1= male.

Table 1. Descriptive Statistics (n=7,227)

	Mean	SD	Min.	Max.
<i>Dependent Variables</i>				
Delinquency Wave 1	4.25	5.23	0	47
Delinquency Wave 2	3.21	4.39	0	47
Delinquency Wave 3	0.74	1.86	0	24
Delinquency Wave 4	0.39	1.32	0	20
<i>Independent Variables</i>				
Victimization	0.43	1.05	0	10
<i>Covariates</i>				
Low self-control	29.13	7.73	3	71
Mom's welfare	0.09	0.28	0	1
Drug use	1.47	1.36	0	6
Delinquent peers	2.27	2.54	0	9
Maternal attachment	9.41	1.09	2	10
Parental permissiveness	5.05	1.53	0	7
<i>Control Variables</i>				
Age	15.20	1.57	11	20
Race (black=1)	0.19	0.39	0	1
Sex (male=1)	0.44	0.50	0	1

Note: SD = Standard Deviation

Plan of Analysis

This research will be conducted using multivariate negative binomial regression analyses to observe the impact the independent and dependent variable have on each other—net the influence of additional covariates. The key independent variable will be victimization wave I. The dependent variables will include delinquent behavior wave I, delinquent behavior wave 2, delinquent behavior wave 3, and delinquent behavior wave 4. Lastly, I will control for race, sex, age, delinquent peers, parental relationships, drug/alcohol use, self-control, self-esteem, and low socioeconomic status.

Results

Looking at model 1 (i.e., the impact of wave 1 victimization on wave 1 delinquency), a one unit increase in victimization leads to a 22 % increase in the rate of delinquency (IRR=1.22, $p < .05$). A one unit increase in self-control leads to a 4 % increase in rate of delinquency (IRR=1.04, $p < .05$). A one unit increase in drug use leads to a 34% increase in the rate of delinquency (IRR=1.34, $p < .05$). A one unit increase in delinquent peers leads to a 3% increase in the rate of delinquency (IRR= 1.03, $p < .05$). A one unit increase in maternal attachment leads to a 95% decrease in the rate of delinquency (IRR=0.95, $p < .05$). A one unit increase in age leads to a 94% decrease in the rate of delinquency (IRR=0.94, $p < .05$). A one unit increase in being black leads to a 16% increase in the rate of delinquency (IRR= 1.16, $p < .05$). A one unit increase in males lead to a 32% increase in the rate of delinquency (IRR= 1.32, $p < .05$).

In wave 2, a one unit increase in victimization led to a 16% increase in the rate of delinquency (IRR=1.16, $p < .05$). A one unit increase in low self-control led to a 3% increase in the rate of delinquency (IRR= 1.03, $p < .05$). A one unit increase in drug use led to a 27% increase in the rate of delinquency (IRR=1.27, $p < .05$). A one unit increase in delinquent peers

led to a 2% increase in the rate of delinquency (IRR=1.02, $p < .05$). A one unit increase in an individual's age led to 88% decrease in the rate of delinquency (IRR= 0.88, $p < .05$). A one unit increase for a male led to a 26% increase in the rate of delinquency (IRR=1.26, $p < .05$).

In wave 3, a one unit increase in victimization led to an 8% increase in the rate of delinquency (IRR=1.08, $p < .05$). A one unit increase in drug use led to a 25% increase in the rate of delinquency (IRR=1.25, $p < .05$). A one unit increase in maternal attachment led to a 91% decrease in the rate of delinquency. A one unit increase in age leads to a 77% decrease in the rate of delinquency (IRR=0.77, $p < .05$). A one unit increase in being black leads to a 28% increase in the rate of delinquency (IRR= 1.28, $p < .05$). A one unit increase in males lead to a 31% increase in the rate of delinquency (IRR= 3.31, $p < .05$).

In wave 4, a one unit increase in victimization led to a 9% increase in the rate of delinquency (IRR=1.09, $p < .05$). A one unit increase in low self-control led to a 2% increase in the rate of delinquency (IRR=1.02, $p < .05$). A one unit increase in drug use led to a 30% increase in the rate of delinquency (IRR=1.30, $p < .05$). A one unit increase in age led to a 79% decrease in the rate of delinquency (IRR= 0.79, $p < .05$). A one unit increase in being black led to a 62% increase in the rate of delinquency (IRR=1.62, $p < .05$). A one unit increase in males led to a 4% increase in the rate of delinquency (IRR=3.04, $p < .05$).

Table 2. Experiencing violence and youth delinquency (n=7,227)

	Model 1		Model 2		Model 3		Model 4	
	IRR	SE	IRR	SE	IRR	SE	IRR	SE
<i>Independent Variables</i>								
Victimization	1.22*	0.02	1.16*	0.02	1.08*	0.03	1.09*	0.05
<i>Covariates</i>								
Low self-control	1.04*	0.00	1.03*	0.00	1.01	0.01	1.02*	0.01
Mom welfare	1.03	0.06	0.94	0.07	0.87	0.10	1.14	0.15
Drug use	1.34*	0.02	1.27*	0.02	1.25*	0.05	1.30*	0.06
Delinquent peers	1.03*	0.01	1.02*	0.01	0.98	0.02	1.04	0.03
Maternal attachment	0.95*	0.01	0.97	0.01	0.91*	0.03	0.98	0.04
Parental permissiveness	0.99	0.01	1.02	0.01	1.03	0.03	1.05	0.03
<i>Control Variables</i>								
Age	0.94*	0.01	0.88*	0.01	0.77*	0.02	0.79*	0.03
Black	1.16*	0.05	1.00	0.05	1.28*	0.14	1.62*	0.21
Male	1.32*	0.04	1.26*	0.05	3.31*	0.28	3.04*	0.33

* $p < .05$, (two-tailed tests); Note: IRR = Incident Rate Ratio; SE = Linearized Standard Error.

Discussion

In previous studies, there has been an observation that criminal behavior increased as the amount of violence witnessed increased (Kim and Lo, 2016; Mallet, 2014). The current study sought to discover whether experiencing and/or witnessing violence negatively impacts an individual throughout the life course. This study is important because it can provide insight into risk factors that predict delinquent behavior, allowing them to be caught early on. Indeed, this study focuses primarily on important factors in a child's development such as peers, neighborhoods, parental attachment, and parental permissiveness. Studying the impact of these specific factors allows for researchers to be able to maybe put things in place for the younger generation instead of waiting until the teens when a "criminal attitude" may be more ingrained in the individual.

When analyzing the results, I find that victimization was related to criminal behavior in each of the four waves. Low self-control was also found to be associated with criminal behavior in all waves except the third wave. Like victimization, in all four waves drug use, age, and the individual being a male was found to be related to an individual's likelihood to commit crime.

There may be several reasons for these findings. According to Hirschi (1969), having the right personal bonds can strengthen an individual's attachment to society resulting in a decrease of delinquent behavior. The four types of bonds include: attachment, commitment, involvement, and belief. When a young child develops these positive, personal, and intimate bonds, it allows them to be held accountable thus helping them engage in more prosocial activities (Hirschi, 1969). This can also take place during the learning stages as a child is imitating their social settings. Akers (1998) social learning theory supports these findings by showing how individuals learn through their interactions with other people. Thus, associating with the wrong people will

get them wrapped in the wrong crowd. When looking closely at victimization and its impact across all four waves, it should be noted that violent victimization can be traumatizing. In some situations, being victimized led to a more deviant lifestyle due to the negative emotions that caused a change in the individual's usual behavior (Zhang et. al, 2001). This change is not always temporary, but sometimes follows an individual throughout their adulthood.

The current research suggest that delinquency can began at a young age when children witness violence in and outside of their home. As many prevention programs are targeted towards the teenage years when delinquency is at its peak, it may be more useful to start prevention programs at a younger age. Other programs that may be more effective at a younger age include bullying prevention, afterschool programs, and even classroom and behavior management. It is important to note that these prevention programs are good, but by starting them a tad bit earlier they may become even better.

As always, there are certain limitations that pertain to the current study. There could be other factors or variables not included that would also have lasting effects on delinquency throughout the adulthood. Also, recent events like the Covid-19 Pandemic could have impacted an individual's normal routine. As the world shut down, there were many businesses that were no longer open decreasing the access delinquent youth may have had to specific things. Young children and teens were enrolled in virtual schools, entertainment centers and parks were closed, and the world stood still. Due to this event, individuals were not interacting with friends or even family as normal. Despite these limitations, this study used a nationally representative data sample and controlled for many factors thought to be related to victimization and offending.

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