

ANALYZING THE EFFECTS OF CHILDHOOD TRAUMA EXPOSURE AND JUVENILE
DELINQUENCY

by

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ABSTRACT

JENNA-MAE PAZ. Analyzing the effects of childhood trauma and juvenile delinquency. (Under the direction of DR. MAISHA COOPER)

Juveniles who find themselves committing delinquent acts often reside in an environment where they are frequently exposed to trauma. This typically occurs within their own households, as being abused or neglected during childhood can leave detrimental effects that will follow them throughout their course of life. However, there are conflicting findings on the effects of childhood trauma and juvenile delinquency, as youth offenders are beginning to get more involved in activities that could lead them to serious crimes. Additionally, little is known about the relationship between such exposure to these stressful events and future offending. Using data from National Longitudinal Study of Adolescent to Adult Health (Add Health), this study aims to predict the extents to which experiencing childhood trauma contributes to delinquency and future offending. Findings from logistic regression and zero-inflated binomial regression analyses suggest that though emotional neglect is a significant type of trauma to predict juvenile offending and future offending, more research is necessary. Significance and limitations, as well as policy implications and directions for future research, are discussed.

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CHAPTER 1: INTRODUCTION

Crimes that are reported in the United States are commonly perpetrated by young offenders, specifically those who are in adolescence or transitioning into young adulthood. In 2019, there were approximately 696,620 arrests of those under the age of 18, and an estimated 772,600 cases were processed through juvenile courts (Hockenberry & Puzzanchera, 2021). Juvenile delinquency is an issue that needs adequate prevention strategies to decrease the rates significantly. Between 2018 and 2019, the number of youths who were apprehended for committing property crimes decreased by 6.9% (FBI, 2020). However, violent crimes perpetrated by youths increased by 1.2% during this time period (FBI, 2020). Not only do their delinquent acts can turn into serious offenses, but they are also likely to re-offend (Fox, Perez, Cass, Baglivio, & Epps, 2015; Wright, Turanovic, O'Neil, Morse, & Booth, 2019). This puts them at risk of being tried as adults before they reach the age of 18 if they continue to participate in delinquency. Furthermore, it may also begin their pathway to adult offending.

The literature on juvenile delinquency has scrutinized those who have resided in an environment with relentless exposure to trauma throughout their childhood. Some examples of trauma that children are victims of are maltreatment, exposure to violence, and substance use (Dierkising, Ko, Woods-Jaeger, Briggs, Lee, & Pynoos, 2013). Experiences with child abuse and neglect are common amongst young offenders, yet these events rarely get reported (Zettler, 2021). Not getting treated after undergoing these stressful events invites more victimization, which will eventually increase their likelihood of offending as a form of coping. Researchers have investigated trauma and delinquency to determine the factors contributing to youths' decisions to participate in deviant activities before reaching adulthood (Farrington, 2012). These behaviors can be linked to the same kind of attitudes that individuals expressed when they were

treated harshly at home when they were younger, as their traumatic experiences can teach them how to negatively cope and ultimately make them resent authoritative figures (Pechorro, DeLisi, Abrunhosa-Gonçalves, & Oliveira, 2021). However, mixed findings have not clarified what type of deviant acts they prefer to commit, and the correlation to future offending remains unclear (Kingree, Phan, & Thompson, 2003). This hinders the process of administering the appropriate rehabilitation to help youths overcome the barriers associated with both trauma and offending.

The approach to this thesis is to investigate the link between childhood trauma and juvenile delinquency. Variations in offending throughout an individual's life-course are dependent on the severity and frequency of their experiences with such stressful events, so it is important to have a proper understanding of their history. The central research question will explore the extent to which being exposed to childhood trauma contributes to youth offending. Specifically, this thesis will determine if child abuse and neglect are strong trauma predictors of delinquency and future offending. What will also be investigated is whether there are any racial, ethnic, and gender differences among traumatized youths in predicting juvenile delinquency. The current study will add to the existing literature by bringing awareness to how being persistently exposed to troubling situations can lead youths down a path to crime. Findings for this relationship will additionally be informative about what type of interventions or policies need to be administered to prevent the likelihood of future offending or transitions to adult offending.

CHAPTER 2: LITERATURE REVIEW

2.1. Overview of Trauma Exposure

Effects of Experiencing Trauma

Trauma is generally interpreted as any experience that has a detrimental effect on an individual's ability to function both at home and in the community (Farina, Holzer, Delisi, & Vaughn, 2018). Chronic exposure to it can lead to negative outcomes for individuals as they progress throughout life. Specifically, trauma affects youths' mental state since those who were harmed from these events can end up learning from their experiences. For example, children who have been exposed to such distress find themselves developing antisocial behaviors during youth and adolescence. Lansford and colleagues (2007) reported that those with a history of trauma "were more likely to display overt, disruptive, delinquent behaviors and conflict with authorities" (p. 234). A possible reason for why traumatized individuals find themselves in problematic situations is because they have not acquired prosocial strategies to cope with the aftermath of their experiences (Lansford, Miller-Johnson, Berlin, Dodge, Bates, & Pettit, 2007; Pechorro et al., 2021). This could be due to limited access to proper intervention programs or a lack of effort to reach out for help. Regardless, those who have been exposed to stressful events during their youth have an increased likelihood of engaging in delinquency before reaching adulthood. In addition to their mental state, some may use their trauma as a justification for their behavior towards members of society. Gold and colleagues (2011) observed that traumatized youths convert the shame they feel from their experiences into blames onto others, meaning that they refuse to accept the effects that may occur in the aftermath and instead use them to act hostile towards others. Individuals, especially at a young age, tend to feel like they are at fault for not meeting up to anyone's expectations, particularly parents or guardians if they are the ones

inflicting trauma. Furthermore, they may utilize their experiences to question their worth and identity. In the context of crime, this would heavily affect their decisions to fall into delinquency, as they may target others in order to make them feel the same pain they had to tolerate while growing up in a hostile environment.

Prevalence

Trauma can happen at any time, but it has the most significant effects within the early stages of life (Mersky, Topitzes, & Reynolds, 2012; Sweeten, Piquero, & Steinberg, 2013). The age in which such events occurred is considered to be an essential factor. Mersky and colleagues (2012) suggested that trauma that occurs during childhood is more likely to have consequences that persist to adulthood than those that occur during adolescence. Children who have yet to reach puberty are at a higher risk because they are still developing compared to teenagers. The earlier these experiences happen in their lives, the more difficulty they will have to recover. The literature has also denoted racial differences among traumatized youths (Johnson, 2018). One study found that when compared to other racial groups, Blacks are more likely to be exposed to traumatic events in childhood (Johnson, 2018). This finding can be linked back to the societal factors (i.e socioeconomic status, neighborhood context) associated with these stressful events, as minorities tend to reside in areas where they are frequently exposed to both trauma and crime. Finally, previous research has indicated variations in gender (Asscher, Van der Put, & Stams, 2015; Vitopoulos, Peterson-Badali, Brown, & Skilling, 2019). Females generally have higher rates of trauma than do males, but these statistics vary by trauma type. According to prior studies, female youths experience multiple forms of maltreatment and adversity than male youths, yet the latter is predicted to be more violent than the former due to their history with any kind of abuse (Asscher et al., 2015; Vitopoulos et al., 2019). Understanding these differences in

relation to age, race, and gender can indicate how trauma affects youth offenders and their ways of managing it.

Types of Trauma: Child Abuse and Neglect

Research on trauma exposure during childhood has collectively utilized abuse and neglect, as they work both separately and in tandem to produce the same effects on an individual's behavior and development (Benedini & Fagan, 2018). However, it is crucial to note the key distinction between the two terms. According to Hockenberry and Puzanchera (2021), abuse is primarily conceptualized as the harms that a youth has endured by the parent or guardian, while neglect occurs when the primary caregiver intentionally ignores or does not attend to a child's needs. Criminologists often group abuse and neglect together because they share the same consequential outcomes as individuals grow older. According to Kingree and colleagues (2003), those who have been victimized by some form of trauma "often become perpetrators of crime themselves" (p. 624). The literature has shown that additional outcomes may result from being exposed to it continuously, such as falling into substance use, having a low school performance, and coping with severe depression and anxiety issues (Farrington, 2012). In the context of abuse and neglect, youths may exhibit the same antisocial behaviors that were inflicted on them (Kingree et al., 2003). This could lead to delinquency, so it is important to pinpoint the stage in life where they begin to react to their trauma by exhibiting antisocial behaviors or deviant attitudes.

The maltreatment forms of trauma can happen in various ways, but the most common forms they happen in is through physical and emotional means. In regard to child abuse, physical abuse is often experienced where there is body contact inflicted on the child by an adult (i.e. being hit, kicked, thrown), while emotional abuse occurs in ways where youths' self-worth are

undermined by their caregivers (i.e. verbal threats, gaslighting) (OJJDP, 2020). Sexual abuse is another category that is also explored in modern research, as young offenders who come in contact with the juvenile justice system have stated to experience sexual misconduct by an adult during childhood. The literature has indicated child abuse in general as a predominant trauma predictor of juvenile offending. Particularly with violent offending, youths' experiences with either physical, emotional, or sexual abuse are severe enough to where they favor violence over status offenses (Currie & Tekin, 2018; Plummer & Cossins, 2018). Regarding child neglect, physical and emotional neglect are also forms of maltreatment among at-risk youths and juvenile offenders. The former occurs when a caregiver disregards a youths' basic needs to survive (i.e. no supervision, lack of care for nutrition and hygiene), and the latter involves the lack of concern for youths' emotional needs (OJJDP, 2020). Unlike child abuse, child neglect is often overlooked in the literature. According to Kazemian and colleagues (2011), not much is known about both short-term and long-term effects on delinquency even though it has "a significant impact on internalizing problems" (p. 66). More research is needed on this matter since continuous ignorance of a youth's needs has the potential to lead to serious acts of offending.

The literature has generated discussions about the risk factors contributing to abuse and neglect. A major mechanism to influence these forms of traumatic victimization is growing up with caregivers who lack the adequate parenting skills needed to enhance a youth's development. It has been shown that individuals who were raised in a dysfunctional environment with poor parenting are at an increased risk of committing violent offenses as they grow up (Gover, 2002). From a social bonds perspective, youths who do not have a stable familial relationship due to a lack of attachment can affect the way they respond to their environments inside and outside the home. This would ultimately lead to negative outcomes such as delinquency. Youths may also

experience trauma due to how broken their family structure is, as they may feel the strains their caregivers have projected onto them. Robertson and colleagues (2008) noted that children are abused or neglected because their parents do not have “the capacity to effectively provide supervision” (pp. 757-758). This finding suggests that the lack of availability due to hardships within the household leaves them more exposed to maltreatment, which can cause them to develop disruptive behaviors. In conjunction with important development milestones, the deficits of parental caregiving skills may drive youths to their involvement in juvenile delinquency.

Adverse Childhood Experiences

Because trauma accumulates many risk factors, it is complicated to assess, especially when focusing on youths. Unlike juvenile delinquency, abuse and neglect are not easily quantifiable and are not usually reported until later in life (Fox et al., 2015; Perez, Jennings, & Baglivio, 2018). Therefore, researchers have examined methodologies used in the literature to measure these experiences, as well as deduce how accurate these measurements are. The Adverse Childhood Experiences (ACE) scores is a questionnaire frequently used across the literature to assess individuals’ experiences with trauma and the effects they left on them. The tool was originally designed to find the relationship between childhood trauma and poor mental health outcomes. In particular, the first study that administered it investigated whether being exposed to such distress at a young age is correlated to the cause of death during adulthood in the United States (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, & Marks, 1998). It has since been used to measure criminal behavior, and recent studies are beginning to incorporate it more into research on serious forms of delinquency. Juvenile offenders score at least once ACE compared to the youth population (Baglivio, Wolff, Piquero, & Epps, 2015; Muniz, Fox, Miley, DeLisi, Cigarran II, & Birnbaum, 2019). However, coming in contact with the juvenile justice

system does not alleviate the effects their trauma has left on them. The ACE questionnaire is a first step in guiding researchers to find preventative measures that would reduce the chances of serious and violent delinquency from happening, as well as allowing youths to seek the help they need.

The ACE score comprises of a questionnaire that asks about trauma exposure that occurred during childhood. Since its creation in the late 1990s, it has been expanded to list two distinct categories of trauma. This includes various forms of abuse and neglect (physical abuse, emotional abuse, sexual abuse, physical neglect, and emotional neglect), domestic violence towards mother, substance abuse, mental illness, parental separation and divorce, and family incarceration (Craig, Trulson, DeLisi, & Caudill, 2020; Garbarino, 2018; Robinson, 2020; Wolff & Baglivio, 2017). Respondents answer for every type they were exposed to at least once, and their score is calculated based on how many out of ten were marked. Studies across the literature use the ACE questionnaire to expand the current understanding of childhood trauma and juvenile offending. Generally speaking, there is a strong association between those who have experienced at least one form of ACE and delinquency (Muniz et al., 2019). Research has also shown evidence that traumatized youths with more than one ACE are more likely to participate in serious forms of violent offending (Fox et al., 2015; Perez et al., 2018). This is telling of how impactful trauma can be, as it can lead to behavioral outcomes that align with juvenile crimes. However, there are currently mixed findings on the relationship between the ACE score and future offending. Craig and colleagues (2020) failed to find in their study any significant correlation between the ACEs and rearrest for both any offense and a felony. Further research would need to be done in order to clarify the impact of trauma on youths who find themselves

participating in delinquency again since their experiences could be severe enough to continue their involvement.

Despite being an appropriate assessment to determine trauma and juvenile offending, the ACE score comes with a few limitations. A common drawback is that it primarily analyzes whether respondents experienced any of the ten events listed instead of how often they experienced it. Craig and colleagues (2020) assert that their study would give a clearer indication of the significance between trauma and recidivism had the questionnaire considered “relevant factors like the timing, duration, frequency, and intensity” of such exposure (p. 1035). Because of how the ACE questionnaire is formatted, it is correlative rather than causative. In other words, it does not indicate any context behind their trauma, nor does it suggest how youths’ experiences with it provokes them to fall into juvenile offending. Another factor regarding the assessment that has sparked controversy among researchers is concerned with selection bias. According to Currie and Tekin (2012), associated abuse and neglect with offending among delinquents does not imply that the ACEs “causes risky behavior... and would indicate that the effect is estimated with bias” (p. 512). Experiences with trauma and offending differ across individuals. Without any environmental context or other intervening factors behind one’s ACE score, any antisocial behavior exhibited by traumatized offenders may be perceived as a risk for delinquency.

2.2. Trends in Juvenile Delinquency

Though juvenile crime has declined throughout the years, youth offenders have begun to fall into other serious forms of deviant activities before reaching adulthood (Ryan, Williams, & Courtney, 2013). Researchers have investigated the link between trauma and juvenile crime. The literature shows that a percentage of those who are contributing to the juvenile delinquency rates are adolescents who have grown up in an environment where there is a history of violence, as

well as with parents or guardians who were abusive or neglectful. Fox and colleagues (2015) found that serious, violent, and chronic offenders were more likely to experience such stressful events during their childhood as compared to “one and done” offenders (p.169). Being exposed to traumatic events, especially in abuse and neglect cases, continuously puts them at high risk, and since there are little reports of their victimization after it occurs, a handful of them have a hard time coping with it. These trends also indicate how committing crimes early in life follows abused or neglected individuals into adulthood. According to Milaniak and Widom (2014), the arrest rates for juveniles “more than doubled from 8.5% to 18%” during the transition from adolescence to adulthood (p. 247). The variations in these statistics may depend on the severity of the individual’s trauma, the type of crime that is committed, and who is deemed as the target. Nevertheless, this is a result of traumatized offenders dealing with their victimization with malicious intentions, which include getting involved with the criminal lifestyle.

Reasons for Offending

The effects of experiencing trauma during childhood have been discussed, and consistent exposure to it has been shown to have a significant link to juvenile delinquency. However, what needs to be scrutinized more in depth is why individuals choose to go down this route after they tolerate abuse or neglect throughout their life-course, let alone how they find themselves committing crimes at such a young age. Understanding the reasons why traumatized youths turn to the deviant lifestyle before adulthood will provide an explanation for the statistics that support the relationship between trauma exposure and crime among young offenders. One of the main conclusions researchers came to is that youth offenders learn from growing up with caregivers who do not demonstrate much concern in their development. Drawing from social learning theory, a finding indicated that those who were traumatized early in life by their parents or

guardians mirror their actions by “simply reenacting some version of the behavior to which they fell victim to” (Herrenkohl, Huang, Tajima, & Whitney, 2003, p. 1190). If at-risk youths find themselves in this position daily, they will eventually grow to accept it. Individuals who hold onto the emotions because of their experiences may project them in a harmful way, such as resorting to violence or disobeying authority. Therefore, the offending rates tend to be higher among maltreated delinquents since little is done to treat their victimization and mediate subsequent deviant activities. Another explanation can be linked to a young individual being surrounded by an antisocial group of friends. Maschi and colleagues (2008) discovered that having delinquent peers causes an indirect effect on the relationship between trauma and juvenile offending. To cope, most youths try to distance themselves from the negative environment they reside in and turn to their peers as trustworthy companions. However, it could have some repercussions if they associate themselves with a predominantly deviant group. The negative behaviors they still hold onto in the aftermath of their trauma could be negatively reinforced upon interaction with deviant peers, which would further entice their willingness to offend.

Future Offending

The chances of committing a crime again in general after completing a sentence is always present, but this probability is considerably higher for offenders under the age of 18 (Kingree et al., 2003; Wolff & Baglivio, 2017). However, when traumatized youths are the focus, the literature indicates conflicting results when future offending is examined, despite the fact that there is a strong correlation between childhood trauma exposure and juvenile delinquency. Wolff and Baglivio (2017) concluded that there is a direct and indirect effect on different types of abuse and reoffending rates; specifically, they found that recidivism is common in juveniles who have been directly exposed to abuse and have also negatively interacted with their surroundings

(Wolff & Baglivio, 2017). It should be noted that they utilized a much broader definition of abuse than with neglect. However, Kingree and colleagues (2003) found that those who recidivate tend to be neglected rather than abused. When measured separately, less is known about the impact neglect has on juvenile reoffending rates compared to abuse alone. Their finding is crucial to the literature because it found significant effects between physical and emotional neglect and future offending that were not considered when the two types of maltreatment were combined.

The variations in future offending among juveniles can be predicted when differences among traumatized youths are examined. An interesting trend in the literature posits that recidivism rates differ tremendously when gender is considered. As illustrated in one study, abuse and neglect were more common in female juvenile offenders, but only male delinquents who experienced these forms of trauma were more likely to reoffend (van der Put & de Ruiter, 2016). It is important to note that men are more likely to be aggressive than women and therefore are more likely to commit crime, but their responses to trauma are dependent on what type they suffer from. For instance, boys tend to experience physical forms of trauma, while girls are more likely to be subjected to trauma that is emotional or sexual in nature. Overall, those who were abused or neglected while growing up tend to reoffend before they reach adulthood, regardless of outside influences.

2.3. Theoretical Framework

Developmental and Life-Course Theories

Developmental and life-course theories provide justification for the criminal behaviors that evolve while an individual is growing up. Early versions of these explanations, such as Hirschi and Gottfredson's (1983) age-crime curve debate, did not elaborate on the likelihood of

offending during life transitions, especially the period between adolescence and young adulthood. This led modern researchers over time to establish criminal patterns to represent these variations (Sweeten et al., 2013). Some examples include Moffit's (1993) classification of adolescent-limited and life-course persistent offenders with her developmental taxonomy and Loeber and colleagues's (1993) overt, covert, and authority conflict pathways, which "point to distinct, and potentially intersecting, trajectories towards... a risk for escalating offending behavior" (Akers, Stellers, & Jennings, 2021 p. 314). In addition to age, both of their typologies emphasized on the life events that occurred, and this additional factor sets up the foundation for the frameworks to focus on the context of the experiences throughout an individual's development in order to denote their association with crime (Sweeten et al., 2013).

Explicating juvenile delinquency as a result of being traumatized during youth requires looking into the events that occurred when moving from one stage of life to another. Developmental and life-course theories take life transitions into consideration when formulating criminal patterns to determine the variations in behavior with age as a factor. The aftermath of trauma has substantial effects that do not go away instantly, which could be a disadvantage to one's growth (Stewart, Livingston, & Denninson, 2008). These frameworks can indicate how traumatic events follow the young victims from childhood to adolescence and thus increase their risk of engaging in delinquent and deviant behaviors. In the context of abuse and neglect, it has been demonstrated that juveniles were more likely to offend if their maltreatment trajectories persisted into their teenage years than if they were confined in the early years (Stewart et al., 2008). Their development would be disrupted if their abusers or neglectors continue to inflict harm on them while growing up. To overcome barriers associated with their trauma, they would need to find other ways to occupy themselves away from that environment.

A concept that became prominent from applying developmental and life-course components on traumatized delinquents is the cycle of violence. There are two crucial factors contributing to this notion: the first being that youths who are considered high-risk in childhood are likely to become perpetrators starting in adolescence and young adulthood, and the second being that not all at-risk youths will go on to commit future violence (Benedini & Fagan, 2018; Wright et al., 2019). Researchers have referred to this model to describe crime in relation to childhood trauma because of its depiction on the advancement of behaviors that follow. Particularly when paired with Sampson and Laub's (1993) age-graded theory of informal social control, it includes many risk factors that are favorable to delinquency (Benedini & Fagan, 2018). The early time period is already considered high-risk since there are significant changes made in the biological composition, including the cognitive processes. One who is transitioning from a child to an adolescent is expected to undergo a deviant phase if they accept their maltreatment as part of their personality. However, the cycle of violence can be broken if the trauma-inducing activity does not persist throughout the life course. Even if it does cease, though, the efforts to change disruptive behaviors will be gradual, making delinquency still probable (Wright et al, 2019). This is because individuals have distinct traumatic experiences, therefore will experience the cycle of violence differently than others (Wright et al., 2019). Developmental and life-course elements outline the types of pathways associated with the sequence of crime based on various circumstances. Applying these approaches to traumatized youth offenders gives a stronger interpretation of how their experiences can influence their decision to either stay in or break away from the cycle of violence.

Persistent exposure to childhood trauma is deemed to be a significant indicator of juvenile crime, but it can also be helpful in analyzing the effects these traumatic events have on

ending youths' involvement in deviant activities. One pivotal point criminology emphasizes from developmental and life-course theories is that certain offenders experience a turning point that will desist them from future offending. Participation in offending does not last forever, which can be due to some influence that change the outlooks on their future. The peaks in crime gradually decrease with growth, as individuals begin the desistance process from "a relatively early age" (Capaldi, Kerr, Eddy, & Tiberio, 2016, p. 787). Having an intervening mechanism can help juvenile offenders let go of their trauma as they begin to realize how turning to delinquency early in life is a counterproductive way to cope. Moreover, choosing which pathway to undergo in the aftermath will dictate how their future will be laid out. One factor that has shown to help traumatized offenders desist from delinquency before it gets worse is the ability to build resilience. Researchers who apply development and life-course theories on abuse and neglect have associated resilience as a sign of recovery from prolonged adversity the trauma has produced (Fougere & Daffern, 2011). For juvenile offenders, their trajectory to future offending will become non-existent if they limit their offenses to only adolescence. However, this can only be achieved with a turning point that will assist them in overcoming the aftermath of their trauma. Allowing these experiences to put distress on them, even if years have passed, would inhibit the desistance process and therefore transition their delinquency into serious crimes.

CHAPTER 3: METHODS

3.1. Research Questions and Hypotheses

This thesis aims to answer the multiple questions about the relationship between childhood trauma and delinquency. The first topic of inquiry investigates whether being exposed to trauma as a youth contributes to the juvenile delinquency rates and if so, whether variations in type of trauma experienced at a young age predicts the type of offense later in life. The other inquiry being tested indicates whether experiencing trauma leads to future offending. While examining these research questions, the study distinguishes the racial, ethnic, and gender differences in the effects of trauma on juvenile offending. To answer these questions, the following hypotheses are tested:

H1: Experiencing childhood trauma will be positively associated with juvenile offending.

H1a: Being exposed to childhood trauma will be positively associated with non-violent delinquency.

H1b: Being exposed to childhood trauma will be positively associated with violent delinquency.

H2: Youths who were exposed to trauma during childhood are more likely to have higher future offending rates than those who were not.

3.2. Data

Analysis for the current study is conducted using data from the National Longitudinal Study of Adolescent to Adult Health, also known as Add Health. The data consists of in-home questionnaires administered in five different waves between 1994 and 2018. Demographics are provided throughout all Add Health datasets to indicate participants' racial and ethnic groups,

gender, and age. Additionally, it asks questions about individuals' interactions with family and peers, as well as their history in school and the community. This thesis primarily utilizes information gathered from Waves I, II, and III. Wave I reports the grade level participants were in during the 1994-1995 school year. Wave II includes self-reports of delinquency, which is broken down to types of acts committed (i.e., property, violent, drug, minor, and status offenses) and how often they occurred. This is also present in Wave III, but delinquency was measured based on their involvement within the last twelve months at the time the in-home questionnaire was administered. Wave III also comprises of information that indicate situations where maltreatment, such as abuse and neglect, occurred before the sixth grade. The Add Health data is publicly available, and all identifying information is kept confidential with a unique identifier for all respondents.

Data cleaning process

Initial data cleaning took place using R software. After downloading the Add Health data and importing it to R's memory, the different datasets were merged into one working data frame. Since Harris and Udry (2021) originally performed the study in five waves, there are separate files holding information collected from their respective time periods to represent participants' transition from adolescence to adulthood (for Waves I, II, and III, data collection took place between 1994 and 1995, throughout 1996, and between 2001 and 2002, respectively). Combining these waves together in one cohesive dataset makes analysis more efficient than retrieving information from their own spreadsheets. After the merging process, the sample was narrowed down to ninth and tenth graders. A subset of the merged data was created by compiling information from all ninth- and tenth- grade respondents from Wave I and dropping the remaining respondents who were not in this desired grade range. Another subset of the data also

containing the ninth and tenth graders from Wave I but only includes those who have been traumatized was created for the hypothesis predicting future offending. Missing data was also managed to ensure that they would not affect the frequency distribution of the predictors being tested.

To ensure that the cleaned dataset will allow R to run analyses without error, all the necessary predictors were managed. First, dummy variables were created for trauma, delinquency, and future offending predictors. Rather than using the same categorical measures used in the Add Health study (i.e. how often did respondents experience maltreatment or participated in juvenile offending), recoding these predictors into a yes-or-no format would best answer the research questions, as well as provide the frequencies and the percentages they make up in the sample. The demographics (with the exception of age in Wave I) were also converted into dichotomous variables. Second, both the delinquency variables and the fighting and violence variables present in Wave II were unified into two distinct measures: non-violent and violent. The same process was also done for creating the future offending variable using delinquency committed within the last 12 months in Wave III (unlike Wave II, the in-home questionnaire in Wave III merged delinquency and fighting and violence into one section). The trauma predictors were also created based on the maltreatment questions asked in Wave III, which resulted in five different variables: physical abuse, sexual abuse, physical neglect, emotional neglect, and polyvictimization.

3.3. Sample

Data collection in Wave I was performed on a nationally representative sample of seventh- through twelfth-grade adolescents in the United States during the 1994-1995 school year, and these respondents were followed through the subsequent waves. Collecting this sample

required researchers to utilize a stratified sampling design (Harris & Udry, 2021). Based on stratas such as region, urbancity, school type, ethnic mix, and size, a total of 80 high schools and 52 middle schools were randomly selected (Harris & Udry, 2021). The questionnaire was then administered to students who met the criteria for the study within these schools. For the current study, ninth and tenth graders are gathered from Wave I, producing a sample size of 1,513 respondents. Proceeding data collection was done at different time frames throughout their transition from adolescence to adulthood. They were examined in Waves II (when they were still in adolescence) and Waves III (when they were in young adulthood). The additional dataset containing only traumatized youths was narrowed down to 712 participants. The sample characteristics for the key variables are provided in Table 1.

Table 1: Sample Characteristics of Key Variables (n = 1513)

Variable	Frequency	% of Sample
<i>Demographics</i>		
Race – White	944	62.4%
Race – Black	331	21.9%
Race – American Indian	21	1.4%
Race – Asian	44	2.9%
Race – Other	80	5.3%
Race - Multiracial	88	5.8%
Ethnicity - Hispanic	183	12.1%
Gender – Male	696	46.0%
Gender – Female	817	54.0%
<i>Childhood Trauma</i>		
Trauma	712	46.9%
Physical Abuse	134	8.6%
Sexual Abuse	7	0.5%
Physical Neglect	15	1.0%
Emotional Neglect	272	18.0%
Polyvictimization	284	18.8%
<i>Juvenile Offending</i>		
Non-Violent Delinquency	1,063	70.2%
Violent Delinquency	631	41.7%
Future Offending	699	46.2%

3.4. Measures

Dependent Variables

The dependent variables that are used for this analysis are juvenile offending and future offending. Juvenile offending is measured using the delinquency variables created. Non-violent delinquency measures whether respondents participated in any of the 14 categories of delinquent offenses listed in Wave II the Add Health Study, and its Cronbach's alpha of 0.79 indicates great reliability. Violent delinquency, on the other hand, measures respondents' involvement in any of the 16 categories of fighting or violence. The Cronbach's alpha of 0.85 also indicates great reliability. Future offending captures the frequency of whether youths committed any of the 25 categories of non-violent or violent acts listed in Wave III within the last 12 months. is measured with the future offending scale, and its Cronbach's alpha of 0.79 indicates great reliability.

Independent Variables

The independent variable is childhood trauma, which is conceptualized by whether adolescents were exposed to forms of abuse or neglect before reaching the sixth grade. Abuse is operationalized by whether participants were mistreated by an adult caregiver through either physical abuse or sexual abuse. Neglect is measured by whether their needs were not taken care of by an adult caregiver, either by physical neglect or emotional neglect. An additional variable, labeled as polyvictimization, was created to measure respondents who experienced more than one type of trauma during childhood. The Add Health study tested these predictors individually on a categorical scale. To best denote any correlations for the hypotheses, they were first dichotomized and then binned into one unified trauma variable.

Control Variables

The control variables for this study include race, gender, and age. Race is classified by the participants' background as White, Black, American Indian, Asian, other racial group, or multiracial. Originally, the Add Health study categorized this as individual variables and measured them by whether participants marked one or more races (Harris & Udry, 2021). To efficiently test any racial differences, these groups were merged into one unified race variable. Ethnicity is dichotomized as participants identifying whether or not they are Hispanic or Latino. Gender measures the breakdown of males and females in the sample. Age controls for the sample of ninth and tenth graders between 12 and 19 years old at the time of Wave I's in-home interviews. The descriptive statistics for age are listed in Table 2.

Table 2: Descriptive Statistics for Age (n = 1513)

Variable	Min.	Mean.	Max.	Std. Dev.
Age in Wave I	12.000	14.789	19.000	0.848

3.5. Analytic Plan

The objective of this study is to analyze the effects of childhood trauma on delinquency and future offending. The following analyses are performed to answer the research questions mentioned previously. The first hypothesis argues that a youth who was exposed to trauma during childhood will contribute to juvenile offending. This was broken down into two sub-hypotheses to reflect the predictions in non-violent and violent delinquency separately. The various types of trauma (physical abuse, sexual abuse, physical neglect, emotional neglect, and polyvictimization) are the independent variables, and the two types of delinquency (non-violent and violent) are the dependent variables in their respective models. Race, ethnicity, gender, and age variables are also included as control groups, with participants who classify themselves as white, non-Hispanic, or males excluded as reference groups. Because both set of predictors are binary measures, two logistic regressions tests were conducted. To better comprehend this, the

slopes were measured to indicate the changes in the logit values of the dependent variables for every one-unit change in the independent variable (Schumaker, 2015). The odd ratios were additionally calculated to give the percent change in juvenile offending for every one hundred percent change in childhood trauma since they are dichotomous measures (Schumaker, 2015). These set of analyses give a better indication of the probability of delinquency happening after being exposed to trauma during childhood..

The second hypothesis contends that experiencing childhood trauma will lead youths to reoffend more than those who were not exposed. A zero-inflated binomial regression was performed for this research question to account for the excess zeros in the outcome measure (Beaujean & Grant, 2016; Long, 1997). Moreover, any indication of category values skipped with the dependent variable clarifies how likely the independent variables are to jump from zero to one when predicting the outcome (Beaujean & Grant, 2016; Long, 1997). Using the subset of the data that solely consists of traumatized youths, non-violent and violent delinquency serve as the independent variables, and future offending is the dependent variable.

CHAPTER 4: RESULTS

4.1. Logistic Regression Models

The first hypothesis posits that being exposed to trauma during childhood positively predicts juvenile delinquency. Two logistic regression models were estimated using non-violent and violent delinquency as the dependent measures, respectively, and the trauma predictors (physical abuse, sexual abuse, physical neglect, emotional neglect, and polyvictimization) as the independent variables. Race, ethnicity, gender, and age during data collection in Wave I (when participants were in adolescence) were utilized as control variables with white, non-Hispanic, and male groups excluded as the reference categories in both models.

Table 3 presents the results for the sub-hypothesis regarding non-violent delinquency and trauma. To determine any significance, the Wald test was performed. Both physical and sexual abuse, physical neglect, and polyvictimization did not produce any significance, and this indicates that they have a zero effect on non-violent juvenile offending. However, emotional neglect was shown to be statistically significant, as it has a coefficient of 0.67993 and a p-value of less than 0.0001. To further support its importance, the odd ratios was calculated using the following formula: $[\exp(\chi) - 1] * 100$ (Schumaker, 2015). The odd ratios for emotional neglect is 1.9737407, meaning that a one hundred percent increase in emotional neglect will be predicted to create a 97.4% increase in the odds of non-violent delinquency. Based on these findings, it can be concluded that out of all the trauma predictors, emotional neglect is shown to have a non-zero effect on the log odds of non-violent delinquency.

Table 3: Logistic Regression Model Predicting Non-Violent Delinquency (n = 1513)

Predictors	Coefficient	χ^2	Pr(> z)	Standard Error
Physical Abuse	-0.00818	0.001521	0.968848	0.20945
Sexual Abuse	-0.19557	0.2098	0.647175	0.42729
Physical Neglect	0.10797	0.09242	0.761101	0.35511
Emotional Neglect	0.67993 ***	12.6807	0.000369	0.19092
Polyvictimization	0.17955	0.2704	0.603264	0.34549
Black	-0.22016	1.8036	0.179265	0.16393
American Indian	-0.27120	0.3226	0.569796	0.47717
Asian	-0.07710	0.3423	0.852925	0.41588
Other	0.32346	0.5640	0.452887	0.43093
Multiracial	0.29140	0.4007	0.526974	0.46062
Hispanic	-0.26194	0.7413	0.389277	0.30425
Female	0.09428	0.4264	0.513821	0.14440
Age in Wave I	-0.08615	1.0363	0.308842	0.08465
(Intercept)	1.96098	2.3809	0.122858	1.27098

*** -2LLR = 31.95718

*** Statistically significant at 0.000 p-value

Considering the second sub-hypothesis, Table 4 represents the results of the logistic regression model regarding the relationship between violent delinquency and trauma. Similar to the trauma and non-violent delinquency logistic regression model, the Wald test was conducted to determine whether any of the coefficients are statistically significant. Emotional neglect was, again, the only trauma predictor that is statistically significant with a coefficient of 0.42033 and a p-value of 0.0116. However, female respondents were shown to be significant in predicting violent delinquency, as this group has a coefficient of -0.77294 and p-value of less than 0.001. Calculating the odd ratios produced a result of 1.5224703 for emotional neglect and 0.4616538 for females. In other words, a one percent increase in emotional neglect will be predicted to create a 52.2% increase in the odds of violent delinquency. For females, a one percent increase in trauma experienced by females will be predicted to create a 53.5% decrease in violent delinquency. These findings, thus, demonstrate that emotional neglect is shown to have a non-

zero effect on the log odds of non-violent delinquency, and female traumatized youths have a non-zero effect on the log odds of violent delinquency compared to males.

Table 4: Logistic Regression Model Predicting Violent Delinquency (n = 1513)

Predictors	Coefficient	χ^2	Pr(> z)	Standard Error
Physical Abuse	0.22328	1.2388	0.2659	0.20068
Sexual Abuse	0.54411	2.0192	0.1553	0.38288
Physical Neglect	0.36892	1.5104	0.2191	0.30022
Emotional Neglect	0.42033 *	6.3655	0.0116	0.16658
Polyvictimization	-0.34522	1.3294	0.2490	0.29949
Black	-0.11951	0.5776	0.4474	0.15729
American Indian	0.74074	2.8629	0.0906	0.43776
Asian	-0.58869	2.4336	0.1189	0.37749
Other	0.45520	1.4280	0.2322	0.38100
Multiracial	0.52217	1.6384	0.2005	0.40789
Hispanic	0.18900	0.4583	0.5048	0.28338
Female	-0.77294 ***	33.0280	9.07e-09	0.13449
Age in Wave I	0.12610	2.5027	0.1136	0.07971
(Intercept)	-2.03258	2.8934	0.0890	1.19512

*** -2LLR = 71.83757

***Statistically significant at 0.000 p-value

* Statistically significant at 0.01

4.2. Zero-Inflated Binomial Regression Model

The second hypothesis argues that traumatized youths will have a higher likelihood of future offending. Table 5 presents the results of the zero-inflated binomial model, which manages the excess zeros when predicting future offending. Using the subset of the sample only containing those respondents who experienced some form of trauma, non-violent and violent offending are the independent variables, and future offending is the dependent variable. Race, ethnicity, gender, and age in Wave I were, again, used as control variables with whites, non-Hispanics, and males excluded as the reference categories. To better interpret the model, the percentage counts are calculated. This was done by exponentiating the coefficients, as shown in

Table 5, and then calculating the percentage counts using the following formula: $100 * [\exp(\chi) - 1]$ (Beaujean & Grant, 2016; Long, 1997).

Results from the count model show that both non-violent offending and violent offending are statistically significant, as they have a p-value of 0.048215 and 0.000196, respectively. What this indicates that among youths who experienced trauma, committing a non-violent act increases the higher odds of skipping a category with future offending by 26.227%. Additionally, for those who commit a violent act, there is a 39.258% higher odds of skipping a category for future offending. For the zero-inflated model, females were a more significant group than males, as it produced an exponentiated coefficient of 3.15813. This demonstrates that female traumatized youths who get involved in either form of delinquency increase the higher odds of skipping a category value as compared to male traumatized youths by 215.813%.

Table 5: Zero-Inflated Model of Delinquency Committed by Traumatized Youths and Future Offending (n = 712)

Predictors	Exp. Coefficients	z-value	Pr(> z)	Standard Error
<i>Count Model</i>				
Non-Violent Delinquency	1.26227 *	1.975	0.048215	0.11790
Violent Delinquency	1.39258 ***	3.725	0.000196	0.08891
(Intercept)	1.35002 **	2.586	0.009700	0.11604
<i>Zero-Inflated Model</i>				
Black	0.86414	-0.488	0.652	0.29821
American Indian	0.57496	-0.824	0.410	0.67160
Asian	1.31478	0.488	0.625	0.56049
Other	1.04937	0.074	0.941	0.65294
Multiracial	1.11041	0.167	0.867	0.62586
Hispanic	0.73088	-0.587	0.577	0.53369
Female	3.15813 ***	4.276	1.91e-05	0.26895
Age in Wave I	1.12217	0.788	0.431	0.14622
(Intercept)	0.04954	-1.377	0.168	2.18193

*** Statistically significant at 0.000 p-value

** Statistically significant at 0.001 p-value

* Statistically significant at 0.01 p-value

CHAPTER 5: DISCUSSION

5.1. Primary Findings

This thesis aimed to answer whether experiencing various forms of trauma has a positive effect on juvenile delinquency, as well as test if exposure to it increase the potential for future offending. Additionally, it attempted to denote any racial, ethnic, and gender differences among traumatized youths in predicting delinquency. The analyses were performed using a set of logistic regression and zero-inflated binomial regression models to test physical abuse, sexual abuse, physical neglect, emotional neglect, and polyvictimization on non-violent offending, violent offending, and future offending. The results produced give a unique depiction of what the relationships look like, which can be informative of trends found and the direction future research can take.

The first hypothesis tested for any correlations between trauma and juvenile offending. Two logistic regression tests were performed to reflect any predictions in non-violent and violent delinquency in their respective models. An interesting finding in this study is that out of all forms of trauma respondents were exposed to during childhood, emotional neglect was statistically significant in both models of juvenile delinquency. In other words, those who experienced emotional neglect are positively correlated to both non-violent and violent offending. This can be beneficial in clarifying the debate in the literature about which type of maltreatment is more prominent among youth offenders. Abuse and neglect are often tested as one unified trauma predictor, but most studies have garnered support for the former being the most common experience young individuals face during childhood (Dierkising et al., 2013; Plummer & Cossins, 2018). However, studies about child neglect alone are beginning to emerge, as little attention to youths' needs (especially emotional ones) can lead to poor behavioral

outcomes that can dictate their participation in offending (Kazemian, Widom, & Farrington, 2011). By understanding the consequences of ignoring youths' basic needs, especially emotional ones, this study can fill in the gaps within the literature about what behaviors they exhibit could be favorable to juvenile offending.

In terms of control groups, the second sub-hypothesis regarding trauma and violent delinquency indicated a gender difference. Though the first logistic regression model regarding non-violent delinquency did not product any significant findings, the second logistic regression model regarding violent delinquency showed female traumatized youths being a significant group. However, they are shown to have a negative coefficient in the table, indicating a negative association. To put it differently, females who were exposed to trauma overall have a negative association with violent offending. This supports the argument that they are less likely to commit serious forms of delinquency than their male counterparts. Since emotional neglect is a significant predictor in the logistic regression model of violent offender, it can also be inferred young girls are more prone to face emotional forms of trauma than young boys. On the other hand, those who do participate in deviant activities, they are shown to have higher probabilities of future offending. This can be informative of how female response to trauma, as those who fall into a pathway of offending could be reacting negatively but through emotional means.

The final significant finding that is very important to address is the correlation between childhood trauma and future offending. Results from the zero-inflated model indicate that those who have committed a non-violent or violent act are significantly associated with future offending. Previous studies have produced mixed results about those who go on to commit a delinquent act again, but this may be because they have included both traumatized and non-traumatized groups for comparison. The analysis performed on this research question only used

data on traumatized youths while the non-traumatized youths were excluded as a reference category. Knowing that traumatized offenders are likely to reoffend can provide any clarification on this debate that currently exists in the literature. This finding can also infer about what type of trauma is likely to result in continuous acts of delinquency, especially violent ones. Since emotional neglect is a significant trauma predictor in the logistic regression models, the occurrence of future offending can highlight the effects child neglect alone has on juveniles who continue to commit delinquent acts.

Despite these findings, the remaining forms of trauma and polyvictimization did not produce statistically significant results, meaning that there is little correlation between them and juvenile delinquency. This conflicts with the existing literature because previous studies have found empirical evidence that physical abuse, sexual abuse, and physical neglect are associated with offending. This is not to minimize the importance of emotional neglect, but rather bring awareness on why this was not the case for the other types of trauma and polyvictimization, which can be linked back to descriptive factors (i.e. the conceptualization and operationalization of measures) and methodological factors (i.e. skewness). Regardless, this study did demonstrate that trauma needs to be considered when examining juvenile offenders, as they experienced at least one form of it.

5.2. Limitations

Study Design and Sampling

At a first glance, the link between trauma exposure during childhood and juvenile delinquency may seem like a simple relationship to investigate. However, this study does not go without limitations, even though it produced unique results. An issue with quantifying both trauma and juvenile offending is the type of data being used to examine this relationship. A

major concern with using self-reported data to measure the predictors is linked back to the retrospective nature of the information can be (Bachman & Schutt, 2017). The longitudinal design is valuable in pinpointing the risk factors characterizing the adverse behaviors that persist from adolescence to adulthood, yet it also excludes mechanisms contributing to their current state that could support the study. The Add Health Study asked respondents about their experiences with trauma, but these questions did not appear until data collection in Wave III occurred when they were entering adulthood. It is important to note that there was a five-year gap between Wave II and Wave III, which is enough time for those who participated to forget details about their experiences that may have been fruitful in understanding the impact trauma has left on them throughout their development.

Another methodological factor that may hinder full comprehension of the results is the sampling strategy. A stratified random sampling design alleviates any potential issues such as external validity that comes from convenience sampling, which is what early researchers used on this subject. However, the nature of collecting the sample for this study did not guarantee that respondents followed up throughout all three stages. Analysis for the first research question uses a subset of the original Add Health Study that consists of ninth and tenth graders, but this was collected based on grade levels during Wave I. Furthermore, a supplementary subset of the sample was used to test second and third research questions based on whether they experienced trauma (those who did not were excluded). Some participants did not follow up in Wave III, and even a small percentage also did not follow up in Wave II. This may explain the missing data in both subsets, as well as the skewness of the results.

Measures, Conceptualization, and Operationalization

A common limitation across the literature is the conceptualization of both trauma, delinquency, and future offending, which is an issue that is also present within this study. It is crucial to define what is considered trauma and the mechanisms that makes young individuals engage in delinquent acts so that all variables can be accurately measured. That being said, the broad spectrum associated with such experiences have led to interpretations that may conflict with previous studies (Davidson, Devaney, & Spratt, 2010). The trauma predictors used in this study are specific enough so that the results can be informative of abuse and neglect overall, as they ask whether caregivers inflicted certain actions that fall under these categories. Yet, generalizability and content validity issues may arise because of a variety of reasons: the measures may not cover all types, there are not enough details of both trauma and juvenile offending, or some details may be applicable to certain youths but not others. What further caused issues with measuring trauma is how narrow the definition came to be. The Add Health Study did ask questions about maltreatment that occurred, but they only indicated situations where the parents or guardians were inflicting abuse or neglect. Youths can experience any stressful events from other members of society, such as school teachers, community members, and even juvenile justice officials. Had more information been available regarding others, this study could have better indicated a general overview of the effects trauma has in predicting delinquency and future offending.

There were also drawbacks in the way the measures were operationalized. All trauma and juvenile offending variables were coded as dummy variables to better reflect whether these events occurred in a yes-or-no format instead of following the categorial format listed in the Add Health questionnaire. In doing so, it took away any indication of the severity and frequency of respondents' experiences. This is a common barrier evident in the literature, especially in studies

that utilized the ACE questionnaire. If this study were to be conducted again, a thorough data cleaning would need to be done to ensure that the measures will be inclusive of these crucial factors. Moreover, transforming the predictors into binary measures created an issue with skewness and outliers. Specifically for the future offending variable, the excessive zeros caused the frequency distribution to be positively skewed, which may have affected the way the results were interpreted. Figure 1 shows the frequency of distribution of future offending in the traumatized youths data subset, and it illustrates zero as being the most recurring value among participants. Though the zero-inflated model was designed to account for the excess zeros, the potential for skewness is a factor that the study still needed to be mindful of.

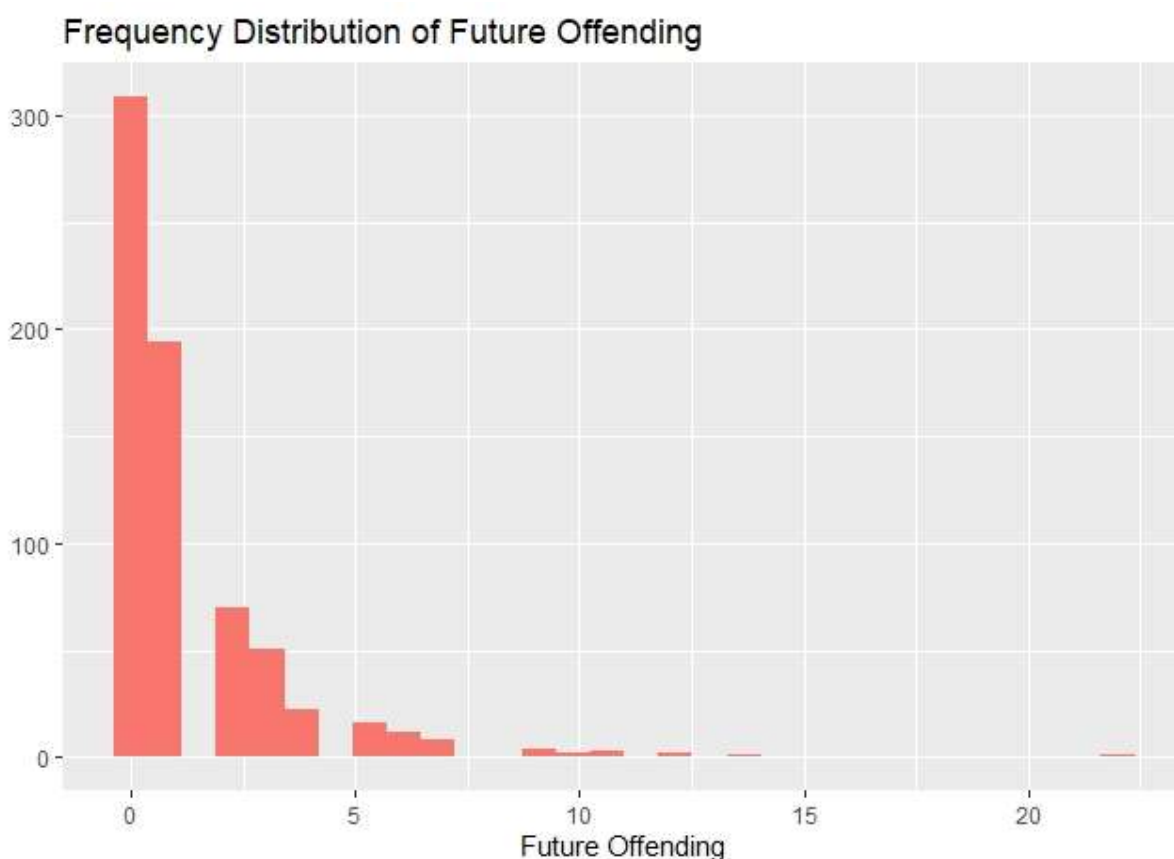


Figure 1: Frequency Distribution of Future Offending

Finally, this study would greatly improve if there were more variables to test on. For instance, the number of control variables was lacking, as they only pertained to race, ethnicity,

gender, and age. Some additional control measures that would better predict the likelihood of both delinquency and future offending are the region participants resided in and school type. Data collection for the Add Health Study was conducted on a national level, yet the questionnaire failed to address where in the United States youths were from and what type of school they attended. If information on whether they were from rural, suburban, or urban areas of the country, as well as whether they went to a private and public school, were available, the analyses could have provided more demographical context on trauma and juvenile delinquency. What was also not included was youths' prior history with offending. Both forms of delinquency and future offending originally derived from how often participated in specifics acts that fall into their respective categories. Without any knowledge on when they started offending (i.e., did they begin to participate prior to Wave I's data collection?), it affected the results in which the seriousness of their behaviors could have indicated how severe their trauma was early in life. Finally, there was no measure of whether they received any type of trauma treatment. This crucial factor would have been beneficial in predicting whether traumatized youths eventually desisted from crime after undergoing interventions, or if the lack of participation in them led them to continue their delinquency.

Ethical Limitations

One of the biggest considerations to take into account when analyzing trauma and delinquency is to make sure conducting such a study does not violate the ethical guidelines as stated in the Institutional Review Board. Secondary data obtained from the Add Health Study includes a unique identifier that is assigned to each respondent, yet since the focus is on youths, moral concerns have been brought to attention. Missing information on trauma can be attributed to the nature of the questions, as they can be perceived as difficult to answer by the subjects

(Brumley, Brumley, & Jaffee, 2019; Evans & Burton, 2013). Inquiries about these experiences should be asked with caution because they still have a triggering effect on young offenders, no matter what stage of life they are currently in. Another limitation that affected this study from an ethical standpoint is getting consent. It can be argued that examining youths overall is challenging because they have not been developed enough to make “fully autonomous decisions” (Wolbransky, Goldstein, Giallella, & Heilbrun, p. 457). Though the Add Health Study encourages voluntary participation, issues with consent may also contribute to the missing responses.

5.3. Policy Implications

It is evident that regardless of what juvenile offenders have been exposed to during their youths, trauma leaves adverse effects on them as they continue to grow. To prevent their delinquent tendencies from occurring after adolescence, any antisocial behaviors should be targeted as soon as juvenile offenders begin to react negatively to their trauma. Rehabilitation is a widely-known intervention that can be implemented early enough to alleviate the risk of youths falling further into delinquency and even adult crime. For those who have already come in contact with the juvenile justice system, it is crucial for justice officials in all areas (i.e. courts, law enforcement, and correctional facilities) to consider their history with trauma when determining the appropriate punishment. Below is a detailed explanation of what policies should emphasize more on.

Rehabilitative Strategies

Current Interventions for Trauma and Delinquency

When left untreated, trauma can cause at-risk individuals to negatively cope, which may lead them down a crime-committing path. Current rehabilitation efforts have alleviated the issues

that would typically motivate them to participate in delinquent activities as a coping mechanism, but adequate interventions and policies need to be implemented to further prevent juveniles from becoming involved with the deviant lifestyle before reaching adulthood. Cognitive-behavioral therapy is one treatment program that has shown to be effective among traumatized offenders (Brown, Wanamaker, Greiner, Scott, & Skilling, 2021; Olgahere, Wilson, & Kimbrell, 2021). This action-oriented approach, in conjunction with the utilization of modeling and reinforcement techniques, teaches participants how “the past can help explain current behavior or even be a barrier” to moving forward (Latessa, Johnson, & Koetzle, 2020, p. 111). Specifically with abuse and neglect, youths observe the behaviors that were inflicted upon them in their environments, which resulted in them learning delinquency. Undergoing this treatment prevents them from falling into the same thought patterns and behaviors they faced when they were growing up. A subcategory of cognitive-behavioral therapy has been classified as trauma-focused, which focuses solely on stressful experiences. Empirical research has proven its effectiveness in reducing related symptoms and behavioral problems among justice-involved youths ages thirteen to eighteen (Zettler, 2021). Considering the sensitivity of their history and their ages, juveniles who were exposed to trauma throughout their childhood are likely to participate in interventions similar to this as a means of expressing their experiences in the aftermath.

Other rehabilitation strategies have been utilized to treat traumatized youths who find themselves in the juvenile justice system. Since a number of incidents happen within the family context, particularly with parents and caregivers, researchers have recommended family interventions as a possible solution. Zettler (2021) commented on family functional therapy, which is a short-term program designed to focus on family dynamics of at-risk and delinquent youth. With further assistance from professionals, it has been proven to be effective in reducing

both offending rates and recidivism (Zettler, 2021). Having children participate in this therapy with their caregivers can help both youths and caregivers understand why maltreatment had originally taken place and facilitate cooperation to prevent future trauma, thus reducing the chances of committing crime. Other treatment programs have also been developed based on the risk-need-responsivity (RNR) framework. This is intended to be aimed towards mediating criminogenic needs (such as antisocial personality, attitudes favorable to crime, and problematic relationships with family or peers), and behaviors associated with them that are related to childhood trauma (Fritzon, Miller, Baragh, Hollows, Osborne, & Howlett, 2021). Such distress takes time to process, and youth offenders often do not know how to properly respond. Therefore, rehabilitation that implements the RNR model would teach youth offenders appropriate coping strategies. A final solution that can be taken as a rehabilitative approach are restorative justice programs, which are beginning to emerge as an effective way to deter traumatized youth offenders away from future offending. Based on findings from Bouffard and colleagues' (2017) study, restorative justice programming is shown to significantly reduce the likelihood of recidivating among juvenile offenders more than undergoing processing procedures in juvenile court. Having an interaction between the victim and the offender (either directly or with proxies) can be beneficial for traumatized delinquents, as participating in these programs can help them understand how their actions have affected their targets. Moreover, it will allow them to come to terms with how leaving their trauma untreated affects their decisions to offend.

Limitations of Current Practices

Targeting behaviors associated with trauma would be the most effective way to prevent delinquency if they are recognized at the earliest sign of individuals exhibiting them. However, these individuals are typically not treated until after a crime has occurred. Therefore,

improvements would have to be made on current interventions to ensure full effectiveness. One major limitation is that a handful of treatments used on delinquents are not trauma-informed. Ford and colleagues (2012) analyzed the current state of interventions that are being utilized in juvenile justice settings and commented on how tedious the recovery process is since not all youth offenders will experience the same effects while undergoing treatment. Using generic forms will not only make participants more hesitant to learn and trust those administering them, but also cause them to be more aggressive due to their refusal to participate (Ford, Chapman, Connor, & Cruise, 2012). It is then highly suggested to advocate for individualized therapy sessions instead of group sessions while also emphasizing a trauma-informed approach (Ford et al., 2012). Another problematic aspect of the current rehabilitation strategies is that they often use incorrect measurements for trauma and delinquency (Zelechowski, Cross, Luehrs, Freedle, Bruick, Harrison, Hayrynen, Herbie, Dibley, & Will, 2021; Zettler, 2021). When assessing youth offenders, most interventions do not cover all types of trauma or generalize them, which may lead to discrepancies in their responses and are therefore insufficient ways to properly treat them. Zelechowski and colleagues (2021) used screening tools, such as the Post-Traumatic Stress Disorder Reaction Index and Life Events Interview, to find that youths tend to disclose more information about their experiences when directly asked or with interpersonal assessments. This approach provides additional context into youths' history and assists in determining what kind of treatment should be provided to help them cope with their trauma while preventing delinquency.

Juvenile Justice System Policies

The current practices used within the juvenile justice system overall are controversial and need improvements. This is especially the case for traumatized youths who interact with justice officials after committing a serious offense. Initial contact with the system typically

occurs with law enforcement. Studies have shown that police officers are a major influence in determining the outcomes because they “exercise great discretion” while performing an arrest (Claus, Vidal, & Harmon, 2018, p. 1379). Because they base their observations on what one’s environment looks like, they may enforce stigmas on those who are caught. Young offenders who have been abused or neglected could face further victimization solely from being stigmatized, and they may end up being resistant to authority as a way to protect themselves from experiencing more trauma by police officers. One solution in juvenile justice policies can reduce the likelihood of bias against juveniles who have experienced trauma during childhood is by incorporating a community-oriented approach in law enforcement. Currently, juvenile justice reformers are advocating for more collaboration between police officers and the community to deter individuals from participating in delinquency (Goldman & Rodriguez, 2020). Encouraging community-based policing can allow law enforcement officials to understand the kind of environment traumatized youth offenders grew up in, and it will give them an idea of what more they need to do instead of relying on punitive measures.

In regard to juvenile courts, youths’ outcomes are heavily determined while going through the sentencing stage. Garbarino (2018) comments in his book, *Miller’s Children*, that those who received life without parole for committing a murder during their adolescence initially had their cases determined without consideration for their development. What this says about how juvenile courts handle serious forms offending is that trauma is often disregarded during the decision-making stage, which can cause young offenders to have a hard time adjusting, regardless of whether they get probation or sent to juvenile facilities. Additionally, current policies used in the processing stage determine outcomes based on how young offenders behaved during adolescence instead of how they can age out of future offending. Juveniles are vulnerable

to any childhood trauma they experienced, yet not getting the proper punishment after committing a delinquent act (whether it is non-violent or violent) leaves a stigmatizing effect that implies something is wrong with them (Robinson, 2020). It is imperative that juvenile courts does not resort to the labels already placed on these youths. For serious delinquency rates to decrease significantly, justice officials need to start incorporating trauma history when determining the outcomes not only so young offenders are not faced with further stigmatization, but they also learn prosocial strategies to overcome their experiences.

Finally, juvenile corrections must reshape their standards not only to reduce the likelihood of future offending after release, but also to get young offenders placed there the help they need to overcome their traumatic experiences. These facilities have been heavily criticized because they often use punitive measures (i.e., abuse of authority, solitary confinement) to punish juvenile offenders into correcting their behaviors (Bernstein, 2014). This puts traumatized youths at a disadvantage since they tend to have negative interactions with both staff members and other inmates, which can heighten the effects they experienced with their trauma. A factor contributing to this is that not much funding is being allocated to hired licensed professionals, meaning that correctional workers are the ones who have to administer treatment programs. Many reported being unprepared to deliver any form of interventions due to the fact that their role as “rule enforcers” come first (Sanfoka, Cox, Fader, Inderbitzin, Abrams, & Nurse, 2018, p. 1775). To put it differently, they are faced with the difficulty to balance the purpose of corrections in protecting the community from further delinquency and ensuring the safety of juveniles. Not having the qualifications to effectively change disruptive behaviors can pose as a barrier that affects youths, as it may validate any feelings that they deserved to be abused or neglected by anyone. Juvenile justice policies should implement some form of training that will

allow staff members in correctional facilities to serve as an alternative in delivering interventions. This will be a step towards drifting away from harsher punishments, and it will allow young offenders to be treated for their trauma without experiencing more victimization during their time in these settings.

5.4. Direction for Future Research

Based on the findings discovered in this thesis, the patterns between childhood trauma and juvenile delinquency should continue to be investigated. The question as to whether traumatized youths continue to commit non-violent acts or if they get involved in serious forms of delinquents needs further clarification. Especially for those who were subjected to emotional neglect, understanding the severity and frequency of their experiences will provide a better understanding on what kind of offending they lean towards. This can be achieved by narrowing down which specific acts they are more likely to participate in. Figures 2 and 3 shows the decisions trees created for trauma and both forms of juvenile delinquency to depict what activities youths who were exposed to trauma were involved in. After adjusting the diagrams to avoid overfitting, emotional neglect and polyvictimization are the most recurring categories youths are likely to experience. Each category splits off various types of delinquent acts that were included in the non-violent and violent dummy variables, and wherever the pathways end are the activities young offenders tend to settle on based on what trauma they have endured. These figures can serve as a guidance in determining if serious and violent offending is indeed becoming prominent among traumatized youths.

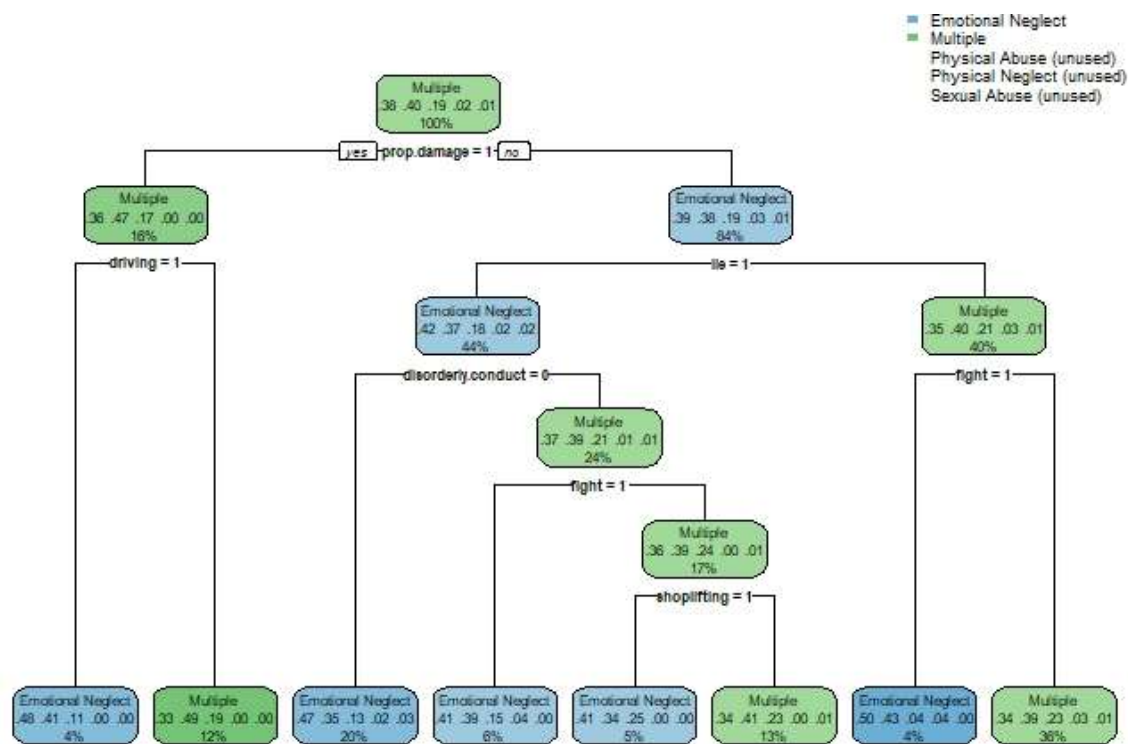


Figure 2: Decision Tree of Trauma and Nonviolent Delinquency (minsplit = 68)

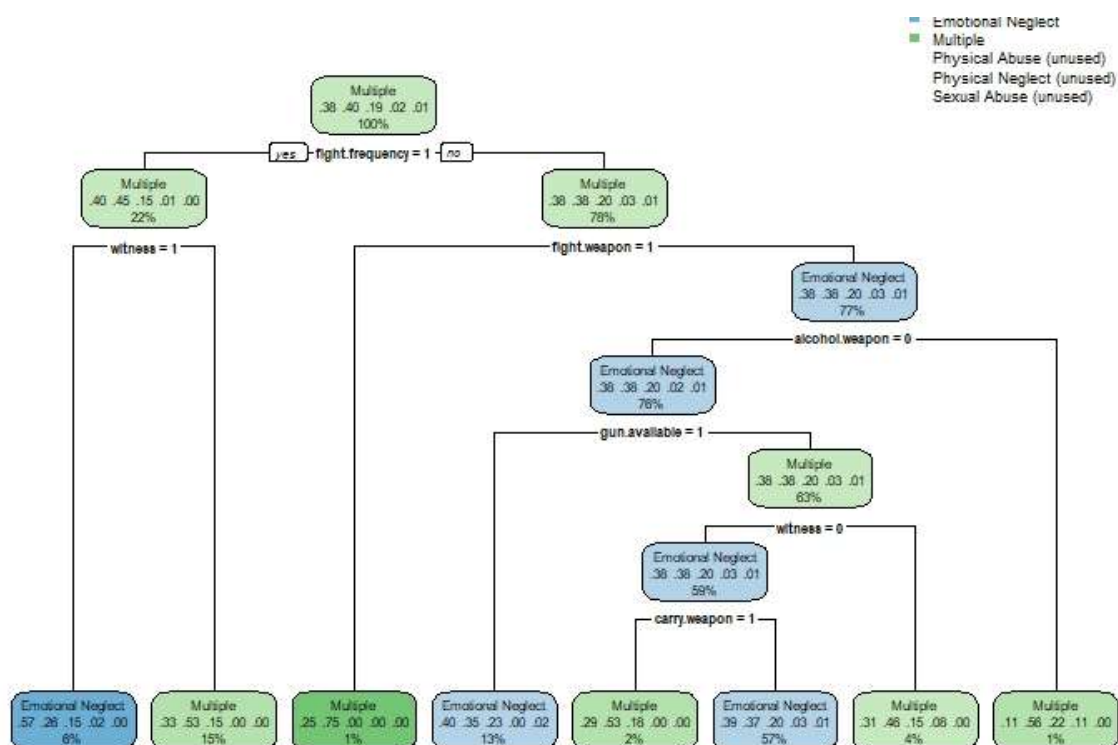


Figure 3: Decision Tree of Trauma and Violent Delinquency (minsplit = 25)

Another area that future research can expand on is if any other forms of trauma are correlated with juvenile delinquency and future offending. For the sake of brevity, abuse and neglect were the primary focus of this study. However, expanding the definitions of trauma to include the remaining categories list in the ACE questionnaire (substance abuse, mental illness within the household, domestic violence, parental separation and divorce, and family incarceration history), as well as post-traumatic stress disorder and adversity, could also offer predictions that can provide more insight into this relationship. Previous studies have generally supported these additional types as being risk factors to juvenile offending, yet they are often tested separately. Including them in subsequent research can be informative of whether they predict delinquency and future offending if paired with maltreatment.

CHAPTER 6: CONCLUSION

Understanding childhood trauma is significant in reforming juvenile justice, as young offenders who come in contact with the juvenile justice system have been exposed to some form of abuse and neglect. There are many takeaways from this study that can guide future research on this subject. This study demonstrates that out of the various forms of trauma and polyvictimization, emotional neglect is most likely to contribute to both non-violent and violent offending. Specifically for the latter type of delinquency, it has also been suggested that female traumatized youths are less likely to participate in such acts. Finally, traumatized youths who do commit non-violent or violent juvenile crimes are likely to offend again as they make important life transitions, specifically from adolescence to adulthood. Not only does this study confirm trauma overall as a strong predictor of juvenile offending, but it also sets up the foundation for resolving the debate about those who go on to offend in the future.

Moving forward, childhood trauma research can reshape the current practices in the juvenile justice system. One recommendation that needs to be emphasized more is the use of trauma-informed rehabilitation strategies and restorative justice approaches instead of punishment. Most youths go on to offend because they have not undergone the appropriate steps to get treated. The more severe their traumatic experiences are, the more serious their offenses will be. Additionally, this increases their likelihood of future offending, so it is essential for them to participate in trauma-focused interventions for the cycle to violence to break. Another suggestion that can improve juvenile justice is for all areas (law enforcement, courts, and corrections) to incorporate one's history of trauma in the decision-making process. Young offenders are often subjected to detrimental outcomes because their exposure to abuse and neglect during childhood are disregarded. Future research should also consider how severe their

trauma is, as it influences what kind of offenses they are likely to participate in. By becoming more mindful of the impact these experiences have left on youths, the juvenile crime rates will begin to decrease, and justice officials will better decide outcomes that will encourage them to seek the help they need.

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