

Adverse Childhood Experiences and Interactions with The Criminal Justice System

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Abstract

The connection between childhood traumas and subsequent detrimental adult behavioral issues has been well documented. In recent times, both the medical and psychological fields have turned their attention toward specific criteria of childhood traumas labeled Adverse Childhood Events, or ACEs. A threshold of ACE factors shows a significant connection to the later physical and mental health of individuals who have participated in such studies. Due to the connection between childhood traumas, mental health, and interactions with law enforcement, this study attempts to define the relationship, if such a relationship exists, between ACE factors and interactions with the criminal justice system. This study combines original research compiled through an anonymous self-report containing qualitative and quantitative data and archived data about prior research concerning ACE factors and the criminal justice system. Findings in this study do indicate a relationship between a higher sum of ACE factors and involvement with the criminal justice system, however, ACE factors alone do not guarantee continued interactions with the criminal justice system. Further research connecting individuals directly to perceptions of trauma and later involvement in the criminal justice system are needed in order to further identify this connection.

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Introduction

Adverse Childhood Experiences (ACEs) are at the forefront of modern trauma research. Recent research surrounding ACEs indicates that developmental traumas are significant contributors to adult mental health disorders and other significant physical, mental, and behavioral issues. A link between behavioral and mental health challenges and more frequent interactions with law enforcement has been established in prior research. Current research focuses largely on the rate of ACE factors regarding longevity and quality of life. These physiological factors better inform healthcare. Additionally, studies concentrate on the effect of childhood traumas on later behavioral and mental disorders, not necessarily on how those traumas interact with the criminal justice system through diagnosable mental illness or behavioral disorders. Establishing a link between a threshold of ACEs and interactions with the criminal justice system could potentially inform mental health and criminal justice practices much as ACEs inform physical health practices.

Delinquency and Career Criminality

Delinquency, most notably referred to in the context of juvenile offending, or juvenile delinquency, is a common occurrence in the United States. Roughly 2 million juveniles are arrested in the United States each year, and of those, over 1.5 million juveniles are adjudicated in a juvenile court. While it is possible for juveniles to be referred to and tried in an adult court, this is a rare occurrence (Paretta, 2018). The juvenile justice system runs counter to the adult system in its practices and formalities. Juvenile courts are reluctant to label juveniles as offenders and are much more likely to choose alternative sanctions such as house arrest, substance abuse counseling programs,

and community service (Kavish et al., 2016). Adult sentencing structures are much more severe and much more prone to incarceration in sentencing.

A "career criminal" is a criminal justice term referring to the continuance of interactions between an individual and the criminal justice system throughout their juvenile and adult lives. While the vast majority, between 40-60 percent, of juveniles who have been adjudicated delinquent end their delinquent behavior in adulthood, however, some juveniles continue their delinquent behavior well into adulthood (Rhoades et al., 2016). The likelihood for persistent offending is directly linked to the onset of delinquent behavior before the age of 12, while the peak of juvenile delinquent behavior is typically between the ages of 15-19. Violent behaviors are highly associated with gang involvement, typically subsiding by the time the individual reaches their mid-twenties (Krona et al., 2021). Individuals in their mid-twenties are more likely to have found a steady relationship, may have dependents, and are likely seeking more stability and gainful employment. This association with the community and social ties often leads an individual to social conformity and out of a pattern of delinquency.

According to Pierce and colleagues (2021), career criminals are most often involved in offenses involving drugs. Possession and drug trafficking, along with public disorder and property offenses, are the most common juvenile offenses and are also the offenses most likely to follow an individual into adulthood. Additionally, while the perception of a career criminal is often related to violent crime or crimes against persons, these crimes often peak between the ages of 16-24. While violent offenders often find their delinquent beginnings before the age of 12, most offenders are incarcerated for multiple drug offenses, not for violent crime (Pierce et al., 2017). There is a wide gap in

research data involving factors that increase the likelihood of criminal persistence in adulthood. While situational factors, such as inner-city gang affiliations, homelessness, and inadequate access to employment, do influence criminality in adulthood, it is unclear whether factors that influence juvenile delinquency, such as childhood traumas, are linked to an overall increase in the propensity for career criminality.

Interventions

The gap in research regarding career criminality and juvenile delinquency has a direct bearing on the effectiveness and availability of early intervention services. Without research indicating the link between childhood traumas, juvenile delinquency, and ultimately career criminality, it is difficult to target intervention services effectively (Elliott et al., 2020). Social services offered in communities where juvenile and adult crime rates are high must show effectiveness to receive funding. Without proper research studies showing need, cost-effectiveness, and overall positive outcomes, the demand for such programming remains low.

As the future of criminal justice reform relies heavily on evidence-based programming, the need for research targeting the reduction of criminal behaviors through early intervention services has increased. The areas in which crime rates are highest also have limited access to proper nutrition, proper prenatal services, sufficient healthcare, legal services, educational assistance, behavioral therapies such as ABA, and other services which may ultimately be linked to the reduction of future criminal behaviors (Knight et al., 2018).

Original Research

This research intends to target the effect of childhood traumas on the criminal justice system through both quantitative and qualitative analysis. Data mining will focus on current research and compiling data regarding statistical recordings of ACE factors on self-reports, diagnosable disorders in children who report a threshold of ACE factors, and statistics concerning those individual's interactions with police, rehabilitation facilities, courtrooms, and other criminal justice realms. Through meta-analysis, these studies can provide a solid foundation of data on which to base original research. Original research will consist of self-report surveys, carefully constructed in questionnaire format, to record the number of ACE factors an individual records in combination with later reports of drug use, interactions with police, including minor interactions, courtroom appearances-adult, juvenile, or drug, and whether the individual has ever been diagnosed with a mental or behavioral disorder. Defining a link between traumatic childhood experiences and the criminal justice system helps better target policies and public policy research toward root causes.

Research Questions

Using a mixed-method approach, the research explores the following questions:

(a) How do Adverse Childhood Experiences, or ACE's, affect the interaction between an individual and their environment? (b) More specifically, how do these ACE factors influence and affect the interactions between an individual and the criminal justice system? (c) Does the data show an increase or decrease in interactions? (d) Do such factors influence whether any interactions are perceived as negative or positive? (e) Can

ACE factors be targeted by research and policy to improve outcomes? And (f) do Positive Childhood Experiences lead to different associations and interactions?

The sample population for this study includes individuals between the ages of 18-65. A random sample was used for this study due to the comparison pool needed in order to establish whether ACE factors contributed to certain identifiable associations. Due to research suggesting that even those who report one ACE factor are more prone to at-risk behavior, those who report at least one ACE factor will be grouped separately than those reporting no known ACEs in their self-report questionnaire. Qualitative and quantitative methods were used in conjunction to answer research questions.

Methods

Quantitative methods included gathering recent relevant data that has been published within the last five years. In order to answer research questions, both quantitative and qualitative data are applied to each question. Self-report surveys are invaluable to the reporting of ACE factors, as well as to subjective experience with law enforcement and other factors of the criminal justice system. As is true of most criminal justice research, quantitative and qualitative research give the most well-rounded approach to a subject due to the "dark figure of crime" or the research gap in reported crime statistics. Further elements of the research will seek to discover if any applicable relationship can be manipulated through policy design in order to benefit the outcome of individuals who report ACE factors and interactions with the criminal justice system.

Much of the research concerning ACEs is largely concentrated on preventative health measures. The body of research linking ACEs to strictly medical and physical maladies is both vast and comprehensive. A clear association between early childhood

traumas and later deterioration of physical health has been established. Though links between ACEs and later mental and behavioral issues have been tentatively established, the body of research does not clearly indicate whether these links are associated with other issues concerning an individual's social ties and interactions with law enforcement. Research does establish a link between mental disorders and a higher rate of interactions with the criminal justice system; however, it cannot be inferred that ACEs, in particular, contribute to this phenomenon. Additionally, interactions between the mentally ill and law enforcement are more likely to involve the use of force or deadly force, an important finding and one that must be explored in relation to ACE factors and interactions with law enforcement.

Psychology and the Criminal Justice System

The United States criminal justice system is complex, with each component of the system working in concert with one another. From the first interaction with law enforcement to the potential subsequent interviews and legal processes, sentencing, and possible incarceration, individuals are processed as efficiently as possible. Due to the current focus on crime control methods, the system seems an incredibly high amount of traffic, which ultimately affects the outcome of individuals who find themselves involved with the criminal justice system, whether as offenders or victims. As outcomes suffer and recidivism data show little effectiveness from current sentencing methods, criticism regarding the system has been increasing. Recent research by Goshe (2019) and Baumle (2018) has targeted the need for an increase in alternative sentencing and treating the source of crime at the roots. Unfortunately, targeting the root issue of crime is complicated, and root causes are difficult to identify.

Identification of root causes in crime, while flawed, typically contains a biopsychosocial outlook. Many different factors influence an individual's life, including their biological and physiological makeup, their psychological profile, and their societal and environmental influences. Of these factors, the psychological profile of an individual as they develop has been the most neglected in terms of research, likely due to the relatively new association between psychology and the social sciences in the study of criminology. Racism, classicism, and eugenics have further stunted the ethical approach to the study of psychology and criminal behaviors. As the criminal justice system and the field of psychology continue to evolve, the methods, practices, and overall efficacy of the system must rely on targeted research and the effective application of research-based practices.

Forensic psychology as a predictive science is still a work in progress. Some methods, science, and practices are still too new and lack sufficient data to be properly applied or admissible in a court of law. Brain scans, lie detector tests, and psychological profiles are often not admissible or lack the results to be considered credible. Though psychological evaluations should not be considered subjective, they often seem so due to the varied responses from professionals who evaluate offenders. Psychologically informed pre-sentencing investigation reports, victim statements, and psychological evaluations of offenders for other purposes are beginning to become more commonplace, and research shows that when criminal justice professionals, including police officers, judges, and lawyers, are informed of recent psychological and social science research, outcomes are often better for both the victim and the offender.

Implications

As psychology begins to inform criminal justice practices, the implications for trauma research are inherent. The data that exists surrounding childhood traumas and the latent manifestation of mental and behavioral disorders indicates that preventative approaches may be of interest to social programs and funding. Further research is needed in order to attach preventative methods to the concept of curbing interactions with the criminal justice system without assumption. Research clearly links mental and behavioral disorders with a higher rate of interactions with law enforcement, as well as a higher rate of negative interactions resulting in the use of force or use of deadly force. However, without targeted research linking ACEs directly with higher rates of interaction with the criminal justice system, this assumption can only be inferred.

Linking ACEs to a higher rate of interactions with the criminal justice system, if such a link occurs, has several implications for both the criminal justice system and the social sciences. First, an established link justifies the need for further research and targeted funding. Social programs in relation to the prevention of childhood traumas prevent not only the medical costs of latent physiological issues but also the mental and behavioral costs that burden the healthcare system. Even without a link to the criminal justice system, ACEs research benefits not only children, families, and those suffering from physical and mental illnesses but also the greater societal framework. Second, research that targets the criminal justice system must account for the dark figure of crime, or those statistics that are never reported regarding crime and are therefore not a part of the official criminal justice statistics recorded by law enforcement. These statistics often involve familial associations and facets of childhood traumas. Linking these associations

will have profound effects on further research. Finally, trauma-informed practices in law enforcement and the criminal justice system can better equip the police and criminal justice professionals in their fields. The system can better treat the whole offender, rather than simply punishing a crime, resulting in a more adaptable system and a better reintegration process. Prevention of trauma at its source better the outcome of individuals regardless of their associations with the criminal justice system and therefore better society as a whole.

Literature Review

There has been a recent uptick in research data surrounding childhood traumas and their implications for adult mental and physical health. Additionally, as mental health moves to the forefront of public discussion, many questions surrounding mental health and the criminal justice system have been raised. The link between ACE factors and the criminal justice system has only been casually explored, and the link is more inferred than linked by a plethora of research findings. Additionally, much of the research concentrates on juvenile offending rather than career offending or offenses that reach into adulthood specifically. While the collection of data surrounding juvenile offenses has established a link between ACEs and involvement in juvenile crimes, this link has not been sufficiently followed into adulthood, and the research data surrounding how many juveniles go on to become career criminals remains unclear.

Juvenile Offending

Research surrounding juvenile offenses and childhood traumas indicates that even through indirect exposure of trauma in the home, including physical abuse, neglect, or violence, there is sufficient evidence that a link between trauma and chronic juvenile

offending exists. Juveniles involved in a study concerning chronic offending and childhood traumas showed a relevant association with psychopathic tendencies, which further related to a tendency toward violent crime. Additionally, juveniles who experienced direct association with physical abuse in the home showed an increased rate of desensitization toward physical violence (Baglivio et al., 2020). The age range constituted individuals up to the age of 18 but did not include adults who had aged out of the system and therefore did not include the rates of diagnosis for true mental or personality disorders. It should be noted that psychopathy, or those disorders in direct relation to it, such as narcissistic personality disorder, are not readily diagnosed in individuals under the age of 18. Developmental patterns are not considered permanent for such a diagnosis until the individual has reached a sufficient age for diagnosis per the most current edition of the DSM. Due to this, it is relevant to associate the psychopathic tendencies in juveniles as they relate to the diagnosis or continuation of these findings into adulthood (Basto-Pereira et al., 2016).

Conversely, an association between positive juvenile experiences and learned resilience as a consequence of ACE factors has been linked to a low rate of interaction with the juvenile justice system. Positive childhood experiences, or PCEs, are the addition of positive social ties or familial experiences which are considered cumulatively beneficial to a child's development. Rather than the removal of an adverse experience, they are the addition of a positive experience and can affect the latent effects of an adverse childhood experience, or ACE. Though ACE factors may still be present, PCE factors may negate the potential negative effects of the ACE throughout the journey of the individual. Research indicates that these protective factors reduce recidivism, rates of

offense, and interactions with the justice system in juveniles at rates hovering between 20-25% (Baglivio & Wolff, 2021). Further research directed towards PCEs as protective factors into adulthood is needed to indicate a latent correlation or lack thereof. Rates of offending fall drastically as individuals age due to influencing factors such as marriage and gainful employment; therefore, it is difficult to assess the protective factors of PCEs into adulthood.

Preliminary research investigating the link between PCEs, ACEs, and internal resiliency indicates that when balanced with adequate interventions, supports, and other PCE-adjacent experiences, individuals may, in fact, benefit from the associated learned resiliency. Juveniles exposed to psychological trauma, in particular, showed the most benefit from targeted protective programs and policies, showing overall adaptability and confidence in their problem-solving abilities (Clements-Nolle & Waddington, 2019).

These findings stand in contrast to the concept of learned helplessness, in which the individual finds their situation inescapable and expected. Learned helplessness is highly associated with ACE factors and latent effects in adulthood. This further indicates that social programs and policies targeted towards particular risk factors regarding ACEs may be beneficial in the long term and may ultimately reduce interactions with the criminal justice system. More research into the link between such factors and those over 18 is needed in order to establish any correlation (Logan-Greene et al., 2020). In addition, studies targeting social programs as protective factors for high-risk juveniles must be followed into adulthood to determine whether such programs have holding effects for those over the age of 18 and who have aged out of said protective programs. The sustained longevity of benefits is not well documented.

Consideration of Race and Gender

Fully comprehensive compilations of data that concern the criminal justice system should contain some factors regarding race and gender. Historically, the criminal justice system contains a disproportionate number of minorities but does not contain a sufficient amount of data concerning those minorities. In addition, research is often targeted towards males rather than toward females or those who identify as gender fluid. Experiences of the criminal justice system and of ACEs can vary drastically in these groups in comparison to those of the stereotypical white male. Minorities and juvenile females are disproportionately affected by incarceration, poor socioeconomic stability, and single-parent homes, all of which contribute to the ACEs as well as interactions with law enforcement.

ACEs Regarding Female Populations

ACE factors in females disproportionately include sexual abuse traumas. While sexual abuse traumas do frequently occur in males, their effects on the criminal justice system are more highly linked in females. Sexual abuse in childhood and well into adulthood is correlated highly with concurrent PTSD or PTSD-like symptoms, often co-occurring with another form of mental illness. Females who are sexually abused in childhood are more likely to be the victims of sexual and physical violence as adults. Due to the complex risk of secondary victimization, young girls and women are not likely to report sexual abuse, especially if the abuser is a relative or close family friend (Terry & Williams, 2021). Sexual traumas and PTSD are often self-medicated through the use of drugs, often leading to addiction and alcohol abuse issues. Research indicating multiple ACE factors still increased the risk of later involvement in juvenile crime; however, the

single most isolating factor of career criminal involvement and incarceration was sexual abuse (Schick et al., 2020).

Female populations carry a significant differential component than their male counterparts in the assessment of generational childhood traumas. During pregnancy, women who are addicted to drugs or alcohol and continue the use of those substances during pregnancy run the risk of multiple congenital disabilities and neurological issues involving the fetus. ACE factors are highly associated with health issues, both mental and physical, and drug and alcohol addiction. When targeting ACE factors, sufficient attention must be given to the generational factors that continue a cyclical downside in communities (Goshe, 2019). Without the assessment of healthy pregnancies and mothers, which may include sufficient and necessary access to abortion and birth control, the reduction of childhood traumas is limited.

Studies show that male and female juveniles are exposed at near the same rates to domestic violence and spousal abuse (Terry & Williams, 2021). Behaviorally, however, it has been shown that boys and girls are affected differently by witnessing such abuse. Boys often become defensive, angry, and heightened, while girls are often reacted with extreme fear states, such as crying, momentary paralysis, and hiding. This is likely due to the physiological responses that occur naturally during the fight or flight response (Wagers et al., 2021). The activation of adrenaline and cortisol in males and females subsequently activates survival hormones. The long-term effects of such heightened trauma states often leave males more prone to aggression in later life and adulthood and females prone to situations in which self-protection has been diminished, i.e., scenarios involving sexual assault or domestic abuse (Leban, 2021).

Apart from the physiological nature of trauma and abuse, the simple behavioral effects of modeling abuse reflect to children the functional components of a relationship. If physical abuse is normalized in a home, research indicates it will become cyclical in nature. Gender roles play a strong part in childhood traumas, often contributing to the acceptance of abuse due to dependence, amongst other complex factors. In some cultures, aggression and hyper-masculinity from males may be encouraged and appreciated, perpetuating traumas and stigmatization (Wagers, 2021). Modeling from direct caregivers within the home, especially for young children, is a strong predictor of future behaviors in adulthood.

Race

Of the plethora of research into ACEs, much directly indicates the disproportionate effect on black or indigenous people of color (BIPOC). Native American, African American, and Hispanic-identifying populations showed the highest rate of increased alcohol abuse in association with ACEs, between 3-11 times the rate in Caucasian populations (Lee & Chen, 2017). Childhood traumas such as sexual abuse, death of a parent, single-parent households, and drug abuse by one or both parents in the home are more common primarily in households with low socioeconomic standing but are also statistically more common in BIPOC households.

Alcohol abuse, in particular, shows a high instance of occurrence with ACEs in Native American and Alaskan Native communities. In Alaskan Native communities, it is difficult to find someone in the village who has not been affected by alcoholism or sexual abuse (Segal, 1998). ACEs profoundly affect the way BIPOC communities approach physiological health concerns, as does the history of systemic racism in healthcare within

the United States. African American, Native American, and Alaskan Native women are three times more likely to die of pregnancy-related causes than are Caucasian women, and the infant mortality rate in those populations stands at 10.8 per thousand, in comparison to 4.6 per thousand in white-identifying populations (CDC).

Women of color remain the most vulnerable to trauma in the majority of studies. They are the group most likely to experience domestic and sexual violence and are the most likely to experience long-term PTSD associated with severe childhood traumas. They are also the group most likely to be imprisoned for first-time drug offenses and are victimized at much higher rates than other groups (DeLisi et al., 2017). Both men and women of color are much more likely to be victimized, incarcerated, and arrested than their white counterparts. Childhood traumas that manifest in males are more often associated with aggression than in female populations (Perez et al., 2020).

While the consequences of childhood traumas manifest differently in genders, this is most likely due to societal and gender norms than due to physiological components. Some research does indicate the adrenaline response in males driving a heightened testosterone state well into adulthood, but this has not been isolated in the current research (Wagers et al., 2021). Violent and aggressive responses are associated with the theory of modeling, long a component of psychological research dating back to the famous Bobo Doll experiment enacted by Albert Bandura and his team. Both male and female children have been shown in subsequent research to model aggressive responses when seen in adults (Jones et al., 2020). Importantly, gender modeling, in which boys and girls model more closely the behaviors of their associated gender examples, contributes significantly to the generational adherence to gender roles and institutional racism.

Current conversations regarding race and the criminal justice system concentrate heavily on institutional racism and the climate within police departments and courtrooms. While this is fueling effective research toward reform, it leaves a noticeable gap in the literature surrounding abstract, research-based approaches to curbing the roots of institutional racism and the criminal justice system (Johnson et al., 2021). Baumle (2018) constructed a study surrounding the association between trauma, girls of color, and interactions with the criminal justice system. Interestingly, Baumle found that not only were girls of color more likely to experience trauma, but the pipeline from interpersonal trauma to entrance into the juvenile justice system indicated the direct need for intervention services. Nearly 90% of the subjects had experienced interpersonal traumas in the past year, and of those repeat juvenile offenders, 96% had experienced prolonged and ongoing interpersonal traumas, including sexual abuse. Baumle's study did not follow the girls into adulthood, a much-needed association in order to link adult offending with interpersonal childhood traumas, as the majority of female juvenile offenders do not continue offending in adulthood. However, the study does clearly indicate the need to filter childhood traumas through early intervention and therapeutic services, especially in the case of juvenile females, rather than processing through the juvenile justice system.

While the juvenile justice system in the United States does take great care not to label juveniles as criminals, the system is not without its critics or its problems. No criminal justice system affiliate in the United States properly deals with childhood traumas in order to curb interactions with the criminal justice system, nor offers adequate access to mental health services (Webb, 2016). Further research investigating whether this association has latent effects pursuant to adulthood will provide indicators toward

how best to curb individuals away from the criminal justice system and into the proper mental health or therapeutic-based interventions.

ACEs in Association with Physical and Mental Health

The link between ACEs and physiological health is well documented; however, the link between physiological health and mental health is still under intense research through the medical and mental health communities. Links between gut flora and bipolar disorder, as well as links between autoimmune disease and childhood traumas, have been established. The comprehensive and well-rounded health of a child should be assessed and understood in order to fully understand the complex factors that contribute to generational poverty, mental and physical health issues, interactions with the criminal justice system, and incarceration. In order to understand the latent effects of trauma, a complicated removal process must deconstruct the composite adult back into the abstract child (Leitch, 2017). All biopsychosocial factors involved in the formation of the individual contributes in some way to the ultimate outcome. Each separate component must be researched, indicated, targeted, and treated per the best evidence-based practice.

Implications for Life Expectancy

Jia and Lubetkin (2020) studied the association between life expectancy and the rate of childhood traumas. Traumas reported occurred before the age of 18, and participants were ages 18 and older. Those who reported three or more ACE's were found to have a 9.5-year decrease in lifespan, in accordance with gender, race/ethnicity, and age group. The impact was nearly 3-fold greater in women. Females averaged a 13-year decrease, while males averaged a 5-year decrease. Interestingly, those who reported 1-2 ACEs were shown to have no significant decrease in overall lifespan after the age of 18;

those who were 18 at the time of the study showed a marginal rate of decrease. Jia and Lubetkin conclude that comprehensive preventative measures should be taken to curb the rate of childhood traumas due to the clear association with a decrease in lifespan and overall quality of life. These preventative measures include a reduction in risky behaviors associated with those who have experienced three or more ACE factors.

Neurodevelopmental Comorbidity and ACEs

Studies done indicating ACEs in neurodevelopmental disorders are difficult to place and isolate, as neurodevelopmental disorders and delays have complex causes, which are not easily identifiable or traceable. A 2019 study by Kambeitz et al. links ACEs to an increase in comorbid neurodevelopmental disorders in individuals who were diagnosed with Fetal Alcohol Spectrum Disorder. Both FASD and subsequent exposure to ACEs indicate an increased risk for neurodevelopmental disorders, and research indicates that even a small effort in the prevention of exposure to ACEs can benefit the development or severity of a neurodevelopmental disorder.

Neurodevelopmental disorders increase an individual's rate of interaction with law enforcement, especially in low-income or racially diverse areas. Additionally, the comorbidity rate of neurodevelopmental disorders and mental illness is high, as is the risk of self-medicating an undiagnosed disorder through the use of illicit drugs (Kambeitz et al., 2019). Further research targeting the link between ACEs, neurodevelopmental disorders and comorbidity, and drug use in relation to interactions with the criminal justice system would help to narrow the window of targeted preventative programming. In nearly all cases involving evidence-based methods, the more specific and tailored the therapeutic method, the more successful the outcome.

ACEs and Mental Illness

Physical and mental health are often tied together, especially in research surrounding developmental aspects of human growth. Research into mental illness and quality of life factors show that even apart from suicide attempts, life expectancy remains lower for those individuals who have been diagnosed with depression. This link expands, and life expectancy decreases when major psychotic disorders, such as schizophrenia and bipolar I, are present. The link between childhood traumas and mental illness is well documented and extensive. ACE factors themselves include a category for the direct exposure of mental illness within the home during the course of a child's life. A genetic link marking the hereditary aspects of mental illness has not been identified, though precursors to identifying factors may have been isolated in schizophrenia (Mwachofi et al., 2020). Mental health cannot be reduced to single factors, but rather, research indicates that complex biopsychosocial factors contribute to the diagnosis and severity of mental health disorders.

It is important to distinguish the wide variety of mental health diagnoses according to the DSM-V. Of the major mental illnesses diagnosed within the United States, the vast majority include depression and anxiety, including major depression, panic disorder, and obsessive-compulsive disorder. Major psychotic disorders, such as schizophrenia and bipolar I, as well as some major depression diagnoses, are considered the most burdensome to the individual and to the families and are therefore considered the most serious and difficult to manage. Eating disorders, personality disorders, and PTSD are also common diagnoses in the United States, and an estimated 1 in 4 adults

suffers from a diagnosed mental health disorder (Stinson et al., 2016). The true rate of mental illness is likely much higher.

Studies conducted by Giovanelli and colleagues (2020) have shown that the reduction of ACEs could reduce the rate of depression in adults by over 40%. Additionally, though the genetic link connecting mental illness to hereditary influences has not been identified, research clearly indicates that ACEs are generationally passed through behavioral methods and through the cycle of abuse. Depression rates, suicides, risky behaviors, drug use, and other decidedly negative statistics are much higher in those reporting four or more ACE factors (Giovanelli et al., 2020). 5 of the top 10 leading causes of death are associated with ACEs, and over 50% of adults report experiencing at least 3 ACEs during their childhood. Those who reported four or more ACE factors that include physical and emotional abuse in the home also reported higher rates of police contact. If the police contact also occurred in adulthood, the individual was 50% more likely to have additional negative interactions with law enforcement (Merrick et al., 2017).

ACEs, Mental Illness, and the Criminal Justice System

Research indicates the link between ACEs and mental illness, and separately, the link between mental illness and the criminal justice system. Though indications through minor research have pointed directly to the link between ACEs and interactions with the criminal justice system, this research must be more narrow and more defined. It is clear that providing the proper interventions can curb the rates of depression and anxiety, but the rates of domestic violence, interpersonal aggression, and incarceration should also garner the proper attention (Craig, 2019). Research shows that those with mental illnesses

are significantly more likely to have an interaction with law enforcement, and for that interaction to include the use of force or deadly force. Additionally, mental health crises are evident in prisons, where the rate of severe mental illness is diagnosed at over 20%. Many incarcerated individuals suffer from a comorbid substance abuse disorder, which is not properly treated during the course of their incarceration (Edalati et al., 2017). Without the isolation and treatment of substance abuse disorders, the ultimate diagnosis and treatment of a comorbid disorder is impossible.

Childhood traumas are not the only factor influencing the development of subsequent mental illness in adulthood, but they are significant contributors. In the same way, childhood traumas are not the sole factor in an individual's propensity to commit a crime or engage in risky or illicit behaviors, but they significantly contribute to the process (Hilton et al., 2019). Studies indicate that ACE factors contribute directly to juvenile crime, especially for those juveniles who are BIPOC.

Engaging in risky behaviors and crime as a juvenile increases the risk of the continuance of those behaviors in adulthood. Illicit drug use before the age of 18 also carries significant risks, such as the development and severity of mental illness and the risk of addiction (Segeren et al., 2020). Furthermore, it is clear that the processing of childhood traumas often manifests in unhealthy coping mechanisms and survival instincts, such as aggression, avoidance, substance abuse, promiscuity, and other behaviors that may indicate the precursors of mental illness (Lindberg & Zeid, 2018).

In low-income communities, the resources pointed toward the beneficial guidance of processing childhood traumas are sparse or non-existent. Research that indicates the link between reducing criminal behavior through the reduction of ACEs is

crucial in order to target funding for evidence-based research practices (Van Duin et al., 2021). The reduction of crime is a sufficient motivator for public policy, politics, communities, the criminal justice system, and individuals.

Consolidation of Reviewed Studies

Literature pertaining to delinquency and continued involvement with the criminal justice system into adulthood often falls short in establishing a sequitur link between juvenile and adult criminal behaviors. While most juveniles do not continue delinquent behavior into adulthood, those that do often initiate delinquent behaviors before the age of 12. Studies showing the direct link between childhood traumas, juvenile delinquency, and continued patterns of adult criminal involvement are difficult to find, and much research is needed in order to target appropriate real-world responses.

Considerations surrounding race, gender, and socioeconomic standing must be made in a review pertaining to interactions with the criminal justice system. Marginalized groups are overall more likely to experience significant traumas. They are also more likely to have negative or non-typical interactions with the criminal justice system. Additionally, childhood and adult traumas are directly linked to some forms of mental illness, such as depression and anxiety, and are associated with other forms of psychological distress. Those who have mental illness are also more likely to have a negative interaction and adverse association with law enforcement.

The overall reduction of criminal activity by targeting root causes cannot be inferred from the current literature. The data that does exist posits a relationship between traumas and delinquency in juveniles, but it does not directly correlate this criminal activity into adulthood. The reduction of risky behaviors in juveniles does not directly

indicate a reduction in crime as an adult (Baglivio et. al., 2020). Reducing the propensity to offend at a young age, however, does reduce the likelihood that an individual will continue their criminal activity into adulthood.

Methodology

In order to obtain the most accurate data surrounding ACEs and interactions with the criminal justice system, mixed methods must be used through sources that include criminal just self-report surveys along with official criminal justice statistics. The main data collection methods pertaining to ACEs are acquired through medical record data and self-report surveys. Interactions with the criminal justice system are recorded mainly through official data. These methods of data collection in the criminal justice system are notoriously single-minded in that they do not account for the "dark figure of crime," in which a crime is committed but never brought to the official attention of any agency and therefore is never officially recorded. Through the use of self-report surveys, this missing data can be at least partially accounted for.

Approach

In order to sufficiently compile the most well-rounded information regarding ACEs and the criminal justice system, data from multiple sources were collected, to include original research in the form of a self-report survey. Any outside data compiled originated from scholarly studies, peer-reviewed journals, and other verifiable sources. Additionally, official crime-based statistics were utilized from the Uniform Crime Reports, or UCR, compiled by the Federal Bureau of Investigation and NIBRS, the National Incident-Based Reporting System, an addendum to the UCR which helps to facilitate the better understanding of criminal activity. In conjunction with these reports,

research and biodata linking ACE factors to risky behaviors help to draw an evidence-based connection between early traumas and interactions with the criminal justice system. Unfortunately, many gaps in the research exist in drawing conclusions between ACE factors and defined relationship with criminal activity, though risky behaviors and juvenile criminal behavior have been identified.

In addition to the compilation of outside research data and verifiable resources surrounding the definition and applicability of ACEs, original research was created in the form of a self-report questionnaire. This questionnaire posed minimal risk to participants in that it is anonymous and requires no self-identifiers. Due to the sensitive material within the self-report questionnaire and the potentiality for admission of criminal behaviors, it was decided that self-identifiers posed more risk and less benefit for participants. Participants would also be more likely to answer questions fully, honestly, and to the best of their ability if self-identifiers were not included in the survey. The survey included the demarcation of ACE factors within childhood along with the common ailments, both mental and physical, that have been solidly and scientifically identified as having direct links to childhood traumas. Both the collection of quantitative data, the number of ACE factors, and qualitative data, the effects of those ACE factors along with other childhood memories and experiences, were considered useful in this survey. Many of the issues that reach into adulthood are also tied to criminal activity, such as illicit drug use. The final questions in the survey establish the link, if any, to criminal activity both as an adult and as a juvenile.

Analysis

Data was analyzed first through the compilation of reputable sources and research. Peer-reviewed publications within the medical, psychological, legal, and criminal justice realms were all included within the data pool. The link between ACE factors and behaviors in adulthood crosses into several different fields of study, hence the inclusion of multiple fields of data. Sourcing included the operational definitions of childhood traumas in relation to ACE factors, the furtherance of study into medical maladies and ACE factors including heart disease, and the link between Black Indigenous People of Color (BIPOC) communities and the high rate of ACE factors and multigenerational traumas. Hundreds of sources were narrowed to fifty reputable and traceable studies, in addition to official statistics compiled through medical institutions and criminal justice agencies, such as the FBI. ACE factors and the rate of interaction with the criminal justice system have not been readily identified, so any sources compiled are meant to address the gap in research addressed by the original research included within this study. If prior research surrounded the issue even lightly, it was analyzed and included upon the confirmation of its applicability.

Analyzation of the original self-report questionnaire included the careful interpretation of both quantitative and qualitative elements within the survey. Certain ACE factors have been studied more in-depth than others, and some have been linked more fluently to surrounding data. By compiling the number of ACE factors an individual can record in their childhood, it indicates a baseline for future issues in adulthood. Childhood traumas have been shown to be fairly steady indicators of risky behaviors in adulthood. Both ACE factors and adult maladies linked to ACE factors were included in

the quantitative portions of the survey. However, in addition to the quantitative analysis, qualitative elements were included to give depth and nuance to the understanding of childhood traumas and their efficacy in producing risky behaviors past juvenile age and into adulthood. How an individual understands and identifies their own traumas, especially those experienced in childhood, help to indicate the amount of healthy process an individual may have done. These factors are all important in the understanding of why and how an individual becomes involved with the criminal justice system. Additionally, these qualitative factors help an individual to be more forthcoming with their involvement in a crime, as they may feel more in control of the explanation of their circumstances.

Peer-reviewed and sourced data included those studies that pertained to ACE factors in and of themselves, along with criminal justice data. Any links pertaining to the original research included in the study were theorized using specific data sets and suggestions from the authors of the research. Rather than a confirmation of the hypothesis, the data simply showed the science surrounding the study of ACEs, their contribution to adult maladies, both mental and physical, and the rate of risky and criminal behaviors that continue into adulthood. Data indicated such a link in a linear fashion, rather than simply confirming or denying the validity of the hypothesis as a whole. Research data was simply meant to bolster the scientific background of the material and subjects studied, not to indicate a partiality towards confirmation or denial.

The self-report questionnaire indicated a relationship between ACEs and the criminal justice system in so much as it solidified the importance of personal interpretations of traumas and the processing of such traumas in healthy and identifiable

ways. In this way, self-report questionnaires, which allow the subject's freedom to express the extent and personal relationship with their traumas, help to connect the adult behaviors with the inability to rectify or properly process childhood traumas.

Chosen Methods and Rationale

Peer-reviewed research, official statistics, and original research in the form of a self-report questionnaire indicate the most well-rounded approach to an issue as complicated and endemic as childhood trauma. Additionally, criminal justice statistics, though frequently studied and revised, have been notoriously problematic, both in collection methods and in terms of accuracy. Statistics are often skewed and improperly linked to identifying causes if they are even linked at all. By combining multiple sources and multiple methods, it is hoped that any gaps in research and data are sufficiently accounted for. By including peer-reviewed data, ACE factors and the complicated medical data surrounding them can be sufficiently linked to adulthood maladies.

In including criminal justice data and official statistics, the rate and incidence of certain crimes can be included in the rationale behind linking crime and childhood traumas. The inclusion of data in reference to juvenile crimes and the rate at which BIPOC communities experience traumas helps to link the overall skewed rates of BIPOC individuals' interactions with the criminal justice system, as well as incarceration. Self-report data helps to give context, depth, and nuance to the complicated issue of childhood traumas. Childhood traumas are more difficult to assess because they often result in coping mechanisms and improper behaviors as a result of the inability to properly process trauma and emotion.

Ultimately, the combination of mixed methods and original self-report questionnaires helps to give a verifiable perspective to an intricate and complex combination of issues. ACE factors alone require much research and application in order to further study and verifiably link adulthood maladies and issues. Criminal justice statistics are often difficult to decipher and must only be analyzed with the proper perspective and context. When linking the two issues, data must surround both in the most complete, accurate, and context-aware positioning possible. Criminal justice professionals are routinely aware that the cause of crime cannot be isolated to any one or two factors but must incorporate the complex and ever-changing social mores, norms, biopsychosocial development, and entirety of an individual.

Results

Analyzation of data from the original self-report questionnaire was done carefully. The small sample size allowed for mainly manual coding, but the use of Google spreadsheets and Excel assisted in the graphing and clean presentation of sorted data. Due to the nature of the responses, which contained both relevant quantitative and qualitative data, the supposed link between high ACE factors and an individual's responses could not be directly correlated to one individual. The importance of remaining anonymous when answering the sensitive subjects involved in the questionnaire were paramount, therefore, the importance of the bulk of the data outweighed the relevance of linking qualitative results to particular individuals. By assessing the data through the collective responses, the results can be more easily generalized and are therefore more valid and reliable.

Rate of Responses and Common Associations

As expected, there was some difficulty in securing responses. The questionnaire itself contained sensitive information regarding child abuse, childhood traumatic events, traumatic associations, and criminal behaviors. Many respondents did not reply in depth to the qualitative portions of the questionnaire and simply gave static responses.

Additionally, over the course of the 3 weeks dedicated to data collection, only 25 responses were recorded, the minimum number set for this study. Though the minimum number was expected due to apprehension from participants, the amount of time set for data collection was extended due to an initial lack of participation. The study was distributed through social media, and due to the public nature of such forums, this may have intensified the overall reluctance in participation.

Most of the participants indicated at least one ACE factor. Interestingly, the questionnaire was designed to include responses from a wide range of participants, including those who did not experience significant childhood traumas. The balance between responses helps to identify the hypothesized link between the presence of multiple ACE factors and criminal behavior. The majority of respondents, however, indicate significant emotional abuse. This could be reliant on participants only participating in the survey if it seemed relevant to them, or conversely it may indicate that significant traumas are more widespread than initially believed. This hypothesis lies outside of the borders of this research but may be relevant to further associations with this study in terms of criminal behaviors.

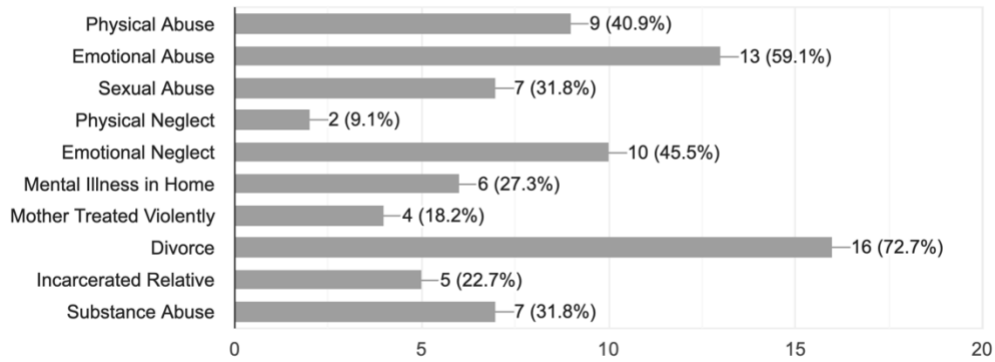
Findings and Relevance

Of the 25 respondents, the highest rate of ACE factors occurred in divorce (72.7%) and emotional abuse (59.1%). Qualitative portions of this study indicated that individuals who experienced these two factors in conjunction with one another experienced profound isolation as a direct effect. Additionally, the rates of emotional neglect (45.5%) and physical abuse (40.9%) were slightly higher than expected. Sexual abuse and substance abuse were both tallied at 31.8 percent, a relatively high number considering the overall average of sexual abuse as 1 in 4 children. It is thought that this average is likely much higher, given the low rate of reporting sexual abuse in minors. Mental illness in the home (27.3%) and an incarcerated relative (22.7%), along with mother treated violently (18.2%) and physical neglect (9.1%) were the least reported.

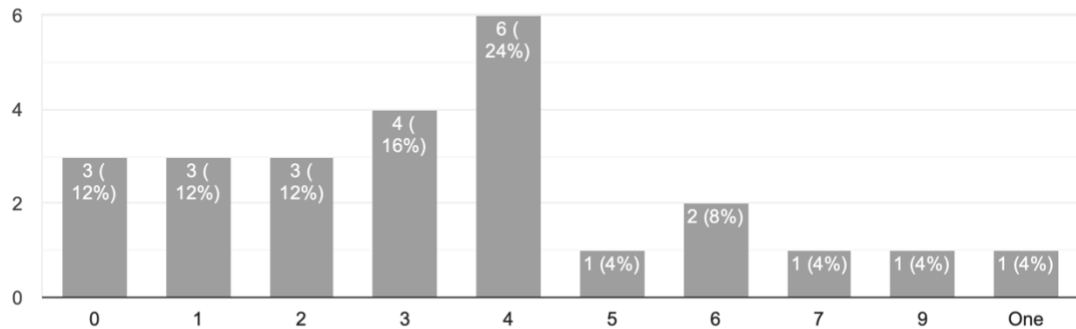
The average reported for combined ACE factors was four (24%), while the least reported were five, seven, and nine, respectively (4%). 16% of respondents indicated one and three ACEs, respectively, while 12% of participants indicated two or no ACE factors present. 8% of respondents indicated six ACE factors, and no respondents reported all ten

of the ACE factors listed.

A CDC-Kaiser study determined the following 10 Adverse Childhood Experiences (ACEs) that are universally accepted within current medical literat...xperiences in the underlined space marked "Total":
22 responses



Total
25 responses



Data Concerning Juveniles

Further qualitative analysis of childhood traumas outside of ACEs were indicated by participants. Bullying- both income and community based, colorism, racism, extreme expectations, lack of communication, lack of accountability, narcissistic behaviors in adults, community violence, family patterns of abuse- sexual, physical, and emotional,

and multiple marriages by one or both parents were indicated as mentionable perceptions of trauma in childhood. All but two participants reported their traumas as prolonged or ongoing.

No participants listed having sufficient access to positive role models or social ties. Participants also indicated that while they may have had access to some social programs through churches or other community-based facilities, they did not feel comfortable opening up within those environments. Only 16% of participants reporting being assigned a social worker or therapist, though the majority of those who responded and reported multiple ACE factors would likely qualify for some community-based intervention services.

Respondents reported delinquent activity in the following areas: speeding, other driving citations, assault, expulsion, removal to alternative learning facilities, running away from home, stealing, fighting in school, and underage drug and alcohol abuse. On average, juvenile delinquent activity was commonly reported, and respondents were typically not adjudicated. Reports were infrequently taken by the police for minor issues such as truancy, running away from home, and speeding infractions.

Data Concerning Adults

Participants reported adverse behavioral association in adulthood through missing work (70.6%), smoking (52.9%), lack of physical activity (47.1%), and alcohol and drug abuse (35.3%). 32 percent of respondents reported none of these factors, 24 percent experienced two factors, 16 percent experienced one and four factors, respectively, while 12 percent reported three factors.

85 percent of respondents reported experiencing depression in adulthood. 50 percent experienced STD's and broken bones, respectively, and 30 percent experienced at least one suicide attempt in adulthood. Additionally, 25 percent reported severe obesity, while 20 percent reported chronic lung disease. Only 5 percent of respondents reported heart disease, and there were no indicated responses for diabetes, stroke, and cancer. 24 percent of respondents reported 2 factors, 20 percent indicated no or only one factor, and 12 percent reported 3, 4, or 5 factors.

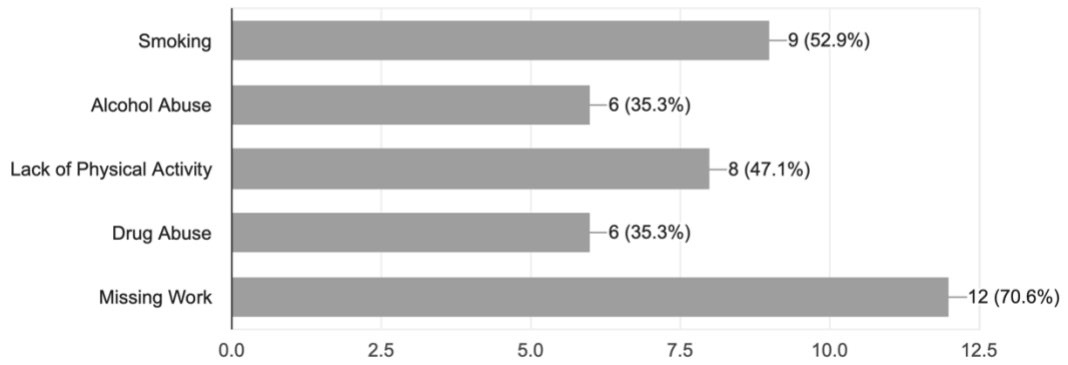
Through qualitative analysis, participants indicated significant mental diagnoses outside of the issues indicated in the quantitative portions of the study. Amongst those reported, bipolar (both I and II), anxiety, and PTSD were common. Some participants did not specify their diagnoses and no instances of schizophrenia were directly listed amongst responses.

Participants voluntarily provided descriptive instances of interactions with the criminal justice system that included initial interactions with law enforcement and criminal sentencing resulting in incarceration. Of those offenses listed, traffic citations, drug charges, and assault were included. Respondents indicated fines, community service, drug court, probation, and incarceration. Incarceration rates provided were 3 months, 3 years, and a total of 8 years.

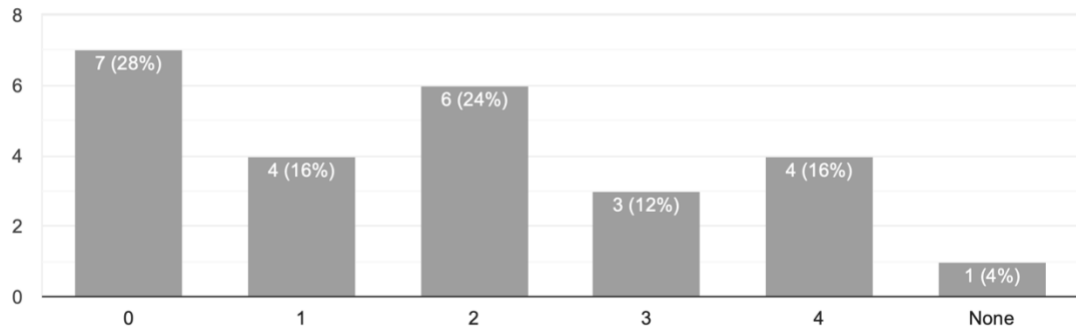
Admission of violent crime, to include murder, rape, and assault, included only reports of assault and domestic violence. No other violent crimes were indicated and all but four participants reported no violent crimes. Incarceration rates were directly tied to those respondents who indicated violent crimes and these crimes were repeated at least once before incarceration. Alternative sanctions and supports were offered to participants,

though some participants indicated that these options were not offered at sentencing or answered the question as not applicable.

In the following sections, please place a checkmark beside the behavioral, physical, and mental health issues you experience as an adult, ultimately...xperienced any of the following behavioral issues:
17 responses

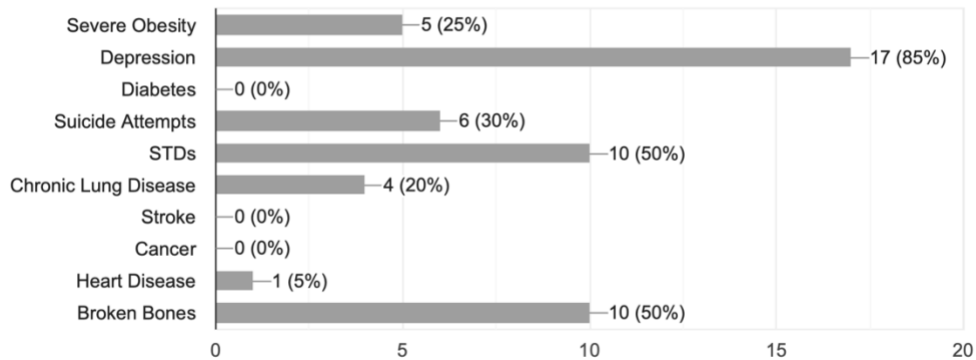


Total
25 responses



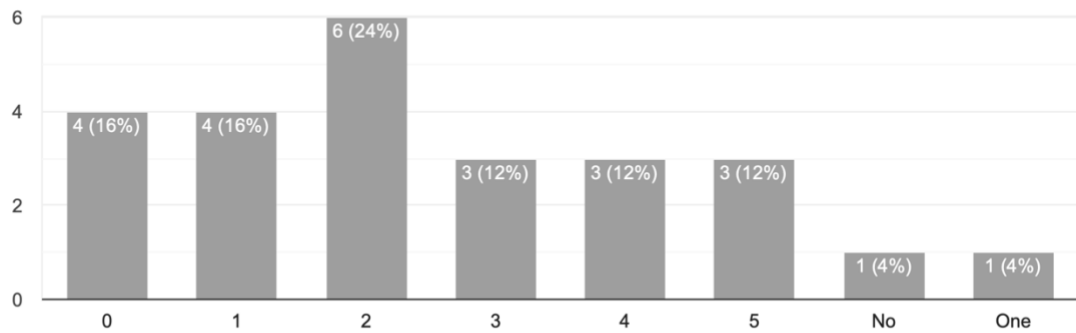
As an adult, have you experienced any of the following physical and mental health issues:

20 responses



Total

25 responses



Research Questions

This research sought to answer the following questions: (a) How do Adverse Childhood Experiences, or ACE's, affect the interaction between an individual and their environment? (b) More specifically, how do these ACE factors influence and affect the interactions between an individual and the criminal justice system? (c) Does the data show an increase or decrease in interactions? (d) Do such factors influence whether any interactions are perceived as negative or positive? (e) Can ACE factors be targeted by research and policy to improve outcome? And (f) do Positive Childhood Experiences lead

to different associations and interactions? Each of the posited questions was effectively identified and given sufficient response per the collected data.

Questions (a-b)

Regarding questions (a) How do Adverse Childhood Experiences, or ACE's, affect the interaction between an individual and their environment and (b) more specifically, how do these ACE factors influence and affect the interactions between an individual and the criminal justice system? The data showed a confluence of factors indicating a highly identifiable correlation between childhood traumas and how an individual interacts with their environment. While most individuals in this study did not indicate criminal activity, those who did indicate interactions with the criminal justice system were overwhelmingly minor incidents, such as traffic citations. Of the serious violations reported, assault and domestic violence were the only incidents included.

Nearly all reported incidents occurred while the individual was considered a minor. Additionally, qualitative portions of the study indicated that those who reported emotional abuse along with other ACE factors also had difficulties expressing their needs as children, often resulting in a perceived lack of support. This heavily affected the overall ability of the individuals to interact appropriately with their social environment as adults. Furthermore, only a small percentage (16%) of the respondents indicated the use of assigned social services, such as social workers or therapists, even though their reported needs qualified them for such services. The internalization of trauma combined with a lack of proper resources heavily affected the respondent's ability to process emotions as adults.

Questions (c-d)

Regarding questions (c) Does the data show an increase or decrease in interactions and (d) do such factors influence whether any interactions are perceived as negative or positive? The data does suggest a relationship between at least one ACE factor and delinquent behavior during adolescence. It is difficult to assess whether these associations continue into adulthood, due to the lack of identifiers, but the amount of ACE factors reported in relation to the crimes reported seems to confirm the relationship identified in prior studies. Foundational risk factors contribute significantly to career criminality, but the majority of juvenile offenders do not continue their offending into adulthood.

The perception of interactions as positive or negative was not wholly identified through this study. Respondents did not fully interact with their perceptions of the criminal justice system in the qualitative portions of the study. The majority of responses simply indicated the prolonged nature of traumas and the subsequent criminal activity, if any, that was associated with their experience. Participants indicated that most juvenile interactions with law enforcement were dealt with between the officer and the individuals guardians, or rather, that the presiding officer did not choose to pursue formal charges against the juvenile. Participants, however, did not indicate their overall perception of law enforcement or their perception of the criminal justice processes with which they were involved.

Questions (e-f)

Additionally, the study sought to answer whether (e) ACE factors can be targeted by research and policy to improve outcome and (f) can Positive Childhood Experiences

lead to different associations and interactions? The data suggests that ACE factors are paramount in the pursuit of research-based intervention programs. Though the ties between the criminal justice system and ACE factors need further research and must be broken down into progressive steps, results indicate that even those exposed to one ACE factor were significantly altered by their trauma. The developmental response to early trauma affects the interactions between the child and their social and emotional environment. Though the majority of individuals who experience trauma will not become delinquent in their adolescence, the majority of delinquent juveniles experience a high rate of childhood traumas. Though the majority of delinquent juveniles will not continue offending into adulthood, the majority of career criminals have experienced childhood traumas along with juvenile delinquency, especially those who engage in risky behaviors before the age of 12. Avoiding foundational traumas in childhood reduces the overall risk of exposure to and engagement in criminal behavior in adulthood.

Positive Childhood Experiences, or PCEs, are considered the balance opposition to childhood traumas. PCEs include positive role models and successful interventions. Respondents indicated a lack of access to positive role models along with an insufficient rate of assigned social workers or therapists for those who qualified for such services. While the study did not target PCEs and cannot sufficiently address the question of whether their presence acts in a reducing capacity, the data does suggest that insufficient access to support and positive experiences does have some effect on the internalization and further instigation of trauma.

Discussion, Limitations, Implications, Recommendations, and Conclusion

This study attempted to reveal, rather than isolate, specific connecting factors between childhood traumas and continued involvement in the criminal justice system. There were specific limitations within this study that helped to narrow the scope so as to better serve the focus of the study. However, these limitations should be explored in further research in order to better identify key issues and develop sufficient evidence-based policies and procedures.

Discussion and Limitations

Criminal justice research can often be difficult to translate into questionnaires, as terminology can often have multiple connotations when reviewed to the general public. For example, physical abuse may be concretely defined in criminal justice research but may be highly subjective when an individual rates their association with childhood traumas. While the qualitative portions of this study did seek to remedy and clarify these issues, loose definitions also provide a greater breadth of response in relation to reporting traumas. The perception of the individual in regard to their own individual traumas has direct bearing on their experience and choices, which ultimately has a direct association with the purposes of this study.

This questionnaire did not separate individuals by race, gender, or sexual orientation. Should the findings be applied to another study, these categories would further define the proper application of targeted programming for at-risk individuals and communities. The purposes of this study were to define a link between ACE factors and interactions with the criminal justice system, not necessarily define that link along the lines of race, gender, or sexual orientation. Other studies do find a correlation between

higher ACE factors within these groups, but any other association between the findings in this study and these identifiers must be indicated through research.

Implications

This study sought to define a link between early childhood traumas in the form of Adverse Childhood Events (ACEs) and interactions with the criminal justice system. No assumptions were made, but hypotheses were formed surrounding the reporting of childhood traumas and the subsequent involvement with the criminal justice system. As theorized, most participants reported at least one traumatic childhood experience. Participants also reported some juvenile delinquency, most often resulting in police involvement, but no further action. It was expected that much of the criminal activity reported in this survey would begin to taper off, and any serious misconduct would be rare.

Connecting career criminality to childhood trauma is exceedingly difficult for several reasons. First, this survey was not directed at an incarcerated population, but a general population. This allowed for a wider variety of responses and better balanced the data against a pseudo-control group. It did, however, limit the amount of serious criminal activity that could be reported. The individuals who did respond to the survey with reports of incarceration as a result of serious criminal offenses did not give excessive details surrounding their childhood traumas. In order to keep the anonymity of respondents, it was not possible to connect the specific traumas with the individual. This specificity may give greater insight into career criminality and childhood traumas and would be better suited to a prison population study.

Finally, the data clearly indicated a connection between trauma and emotional abuse. A large portion of respondents (59.1%) reported emotional abuse as a significant and prolonged contributor to both trauma in childhood and well into adulthood. Second only to divorce (72.7), emotional abuse was listed in nearly every explanation in the qualitative portions of the survey. Divorce was also mentioned, but only as a secondary factor and not the primary focus of the respondents' perceived trauma. Emotional abuse is clearly defined in mental health literature but was not clearly defined for the purposes of this self-report survey, as it relied heavily on the individuals' perception of trauma, rather than a clinical definition. A connection between emotional abuse and juvenile delinquency has not been isolated but could provide significant findings to research aimed at the reduction of childhood traumas.

Recommendations

The link between ACE factors and interactions with the criminal justice system is both identifiable and intensely complex. Data from this research indicates that the vast majority of individuals do experience at least one ACE factor during their childhood. Even one ACE factor, depending on its isolation and intensity, can significantly affect an individuals' capacity to process social and emotional interactions. On its own, this finding does not necessarily indicate that an individual will choose to commit a crime, but rather a confluence of factors indicates the relationship between ACEs and criminal activity. ACEs secure, at least in part, the foundation of future social and emotional health, and as a child develops, further traumas and interactions are filtered through the paradigm built during early development.

ACEs, combined with a host of other recent research models, are a necessity in future discussions surrounding effective, research-based policies and programs. A direct association between ACE factors and criminal activity is complex and requires an objective, wide-lens view. ACE factors significantly affect how a child develops and how they learn to interact with their environment. While most individuals who report one or more ACE factors will not commit a criminal act, a small portion do commit a crime, the majority of which occurs during juvenile years. Furthermore, while many juveniles do commit delinquent acts, the majority do not continue those behaviors into adulthood. However, committing repeated delinquent acts does increase the likelihood of continued criminal behavior as an adult, especially if those acts were committed prior to the age of 12.

The focus of criminal research aimed at reducing rates of crime must target the foundational risk factors that influence the overall outcome. The trajectory for most individuals, even for those considered high-risk, will not be aimed at career criminality. The data indicates that even filtered through multiple theories of crime, such as social-strain, rational choice, or biopsychosocial theories, criminal behavior is difficult to isolate. Most individuals will either not choose to engage in criminal or risky behaviors, or if they do, will opt out of those behaviors soon after entering adulthood. Research based practices and programs that are heavily aimed at reducing risk factors and root causes are likely the most effective options available to communities. By reducing the exposure to risk factors as early as possible in development, foundational outlooks and processing behaviors are significantly affected, altering an individuals' social and emotional success.

Conclusion

The collected studies regarding relevant research concentrate on the connection between juvenile delinquency and childhood traumas, as well as the connection between juvenile delinquency and career criminality. Much of the gap in research addressed in this study is aimed at the link between childhood trauma directly to career criminality. The foundational aspects of trauma in childhood are statistically higher in low income and BIPOC communities, who are traditionally less likely to have access to social resources. These communities often also see a high rate of criminal activity and a low association with social ties. Additionally, reviewed material addressed racial and gender issues which cannot be ignored in a discussion surrounding the criminal justice system. Statistics and research are often difficult to identify in these groups regarding criminal activity, but they are more likely to directly experience criminal events and trauma.

In relation to physical and mental health, ACEs have a keen connection to adult diagnoses. Those with higher ACE totals are more likely to experience serious physical and mental ailments, such as heart disease, cancer, and depression. Neurodevelopmental disorders are more highly diagnosed in individuals who have high ACE scores, as are severe mental illnesses, such as Bipolar I and II, major depression, and PTSD. Suicide rates are greater in those reporting high ACE scores and five of the ten leading causes of death are associated directly with high ACE scores. Lower life expectancy also correlates with these tallies.

As expected, research also indicates that those who have a mental health diagnosis or suspected mental health crisis are highly likely to have an adverse interaction with law enforcement. Over 20% of incarcerated individuals suffer from a

diagnosed mental disorder and the rates of mental illness within prisons are assumed to be much higher. The ripple effects of childhood traumas are seen in nearly every facet of the criminal justice system. Traumatic development in childhood changes the way a child interacts with their social and emotional environment in multiple ways, including through modeling, biological processes, and attachment.

Delinquency in juveniles has only recently become a topic of interest within the criminal justice system. Changes in juvenile court and adjudicative methods have been evolving over the last seven decades, especially as data continues to show a link between early criminal involvement and career criminality. It is commonly addressed within criminal justice research that while juvenile delinquency does not equal career criminality, career criminality finds its roots in juvenile delinquency. Therefore, the preventative focus of reducing juvenile delinquency has profound implications for the criminal justice system as a whole.

The original research contained within this study sought to explore the following questions through both quantitative and qualitative analysis: (a) How do Adverse Childhood Experiences, or ACE's, affect the interaction between an individual and their environment? (b) More specifically, how do these ACE factors influence and affect the interactions between an individual and the criminal justice system? (c) Does the data show an increase or decrease in interactions? (d) Do such factors influence whether any interactions are perceived as negative or positive? (e) Can ACE factors be targeted by research and policy to improve outcome? And (f) do Positive Childhood Experiences lead to different associations and interactions?

While the bulk of these questions are addressed within the body of results, as a summation, the data indicates that early intervention methods which are targeted at reducing traumatic events in children are deserving of further funding and research. The reduction of traumatic events in children addresses the lens through which children view the world and the ways in which they interact with their environments. While the reduction of childhood traumas cannot reduce all career criminality, it can affect the foundations on which career criminality builds.

References

Baglivio, M. T., & Wolff, K. T. (2021). Positive childhood experiences (PCE): Cumulative resiliency in the face of adverse childhood experiences. *Youth Violence and Juvenile Justice, 19*(2), 139-162. <https://doi.org/10.1177/1541204020972487>

Baglivio, M. T., Wolff, K. T., DeLisi, M., & Jackowski, K. (2020). The role of adverse childhood experiences (ACEs) and psychopathic features on juvenile offending criminal careers to age 18. *Youth Violence and Juvenile Justice, 18*(4), 337-364. <https://doi.org/10.1177/1541204020927075>

Basto-Pereira, M., Miranda, A., Ribeiro, S., & Maia, Â. (2016). Growing up with adversity: From juvenile justice involvement to criminal persistence and psychosocial problems in young adulthood. *Child Abuse & Neglect, 62*, 63-75. <https://doi.org/10.1016/j.chiabu.2016.10.011>

Baumle, D. (2018). Creating the Trauma-to-Prison pipeline: How the U.S. justice system criminalizes structural and interpersonal trauma experienced by girls of color. *Family Court Review, 56*(4), 695-708. <https://doi.org/10.1111/fcre.12384>

Clements-Nolle, K., & Waddington, R. (2019). Adverse childhood experiences and psychological distress in juvenile offenders: The protective influence of resilience and youth assets. *Journal of Adolescent Health, 64*(1), 49-55. <https://doi.org/10.1016/j.jadohealth.2018.09.025>

Craig, J. M. (2019). The potential mediating impact of future orientation on the ACE–Crime relationship. *Youth Violence and Juvenile Justice, 17*(2), 111-128. <https://doi.org/10.1177/1541204018756470>

DeLisi, M., Alcala, J., Kusow, A., Hochstetler, A., Heirigs, M. H., Caudill, J. W., Trulson, C. R., & Baglivio, M. T. (2017). Adverse childhood experiences, commitment offense, and Race/Ethnicity: Are the effects crime-, race-, and ethnicity-specific? *International Journal of Environmental Research and Public Health*, *14*(3), 331. <https://doi.org/10.3390/ijerph14030331>

Edalati, H., Nicholls, T. L., Crocker, A. G., Roy, L., Somers, J. M., & Patterson, M. L. (2017). Adverse childhood experiences and the risk of criminal justice involvement and victimization among homeless adults with mental illness. *Psychiatric Services*, *68*(12), 1288-1295. <https://doi.org/10.1176/appi.ps.201600330>

Elliott, D. S., Buckley, P. R., Gottfredson, D. C., Hawkins, J. D., & Tolan, P. H. (2020). Evidence-based juvenile justice programs and practices: A critical review. *Criminology & Public Policy*, *19*(4), 1305-1328. <https://doi.org/10.1111/1745-9133.12520>

Goshe, S. (2019). How contemporary rehabilitation fails youth and sabotages the american juvenile justice system: A critique and call for change. *Critical Criminology (Richmond, B.C.)*, *27*(4), 559-573. <https://doi.org/10.1007/s10612-019-09473-5>

Giovanelli, A., Mondì, C. F., Reynolds, A. J., & Ou, S. (2020;2019;). Adverse childhood experiences: Mechanisms of risk and resilience in a longitudinal urban cohort. *Development and Psychopathology*, *32*(4), 1418-22. <https://doi.org/10.1017/S095457941900138X>

Hilton, N. Z., Ham, E., & Green, M. M. (2019). Adverse childhood experiences and criminal propensity among intimate partner violence offenders. *Journal of Interpersonal Violence*, *34*(19), 4137-4161. <https://doi.org/10.1177/0886260516674943>

Jia, H., & Lubetkin, E. I. (2020). Impact of adverse childhood experiences on quality-adjusted life expectancy in the U.S. population. *Child Abuse & Neglect*, *102*, 104418-8. <https://doi.org/10.1016/j.chiabu.2020.104418>

Johnson, R. M., Hill, A. V., Jones, V. C., Powell, T. W., Dean, L. T., & Gilreath, T. D. (2021). Racial/Ethnic inequities in adverse childhood experiences and selected health-related behaviors and problems among maryland adolescents. *Health Promotion Practice*, 15248399211008238-15248399211008238. <https://doi.org/10.1177/15248399211008238>

Jones, M. S., Worthen, M. G. F., Sharp, S. F., & McLeod, D. A. (2020). Native american and non-native american women prisoners, adverse childhood experiences, and the perpetration of physical violence in adult intimate relationships. *Journal of Interpersonal Violence*, 886260519897328-886260519897328. <https://doi.org/10.1177/0886260519897328>

Kambeitz, C., Klug, M. G., Greenmyer, J., Popova, S., & Burd, L. (2019). Association of adverse childhood experiences and neurodevelopmental disorders in people with fetal alcohol spectrum disorders (FASD) and non-FASD controls. *BMC Pediatrics*, *19*(1), 498-498. <https://doi.org/10.1186/s12887-019-1878-8>

Kavish, D. R., Mullins, C. W., & Soto, D. A. (2016). Interactionist labeling: Formal and informal Labeling's effects on juvenile delinquency. *Crime and Delinquency*, *62*(10), 1313-1336. <https://doi.org/10.1177/0011128714542504>

Knight, A., Maple, M., Shakeshaft, A., Shakehsaft, B., & Pearce, T. (2018). Improving the evidence base for services working with youth at-risk of involvement in

the criminal justice system: Developing a standardised program approach. *Health & Justice*, 6(1), 8-9. <https://doi.org/10.1186/s40352-018-0066-5>

Krona, H., Anckarsäter, H., Nilsson, T., & Hofvander, B. (2021). Patterns of lifetime criminality in mentally disordered offenders - findings from a nationally representative cohort. *Frontiers in Psychiatry*, 12, 564171-564171. <https://doi.org/10.3389/fpsy.2021.564171>

Leban, L. (2021). The effects of adverse childhood experiences and gender on developmental trajectories of internalizing and externalizing outcomes. *Crime and Delinquency*, 67(5), 631-661. <https://doi.org/10.1177/0011128721989059>

Lee, R. D., & Chen, J. (2017). Adverse childhood experiences, mental health, and excessive alcohol use: Examination of race/ethnicity and sex differences. *Child Abuse & Neglect*, 69, 40-48. <https://doi.org/10.1016/j.chiabu.2017.04.004>

Leitch, L. (2017). Action steps using ACEs and trauma-informed care: A resilience model. *Health & Justice*, 5(1), 5-5. <https://doi.org/10.1186/s40352-017-0050-5>

Lindberg, M. A., & Zeid, D. (2018). Tests of the attachment and developmental dynamic systems theory of crime (ADDSTOC): Toward a differential RDoC diagnostic and treatment approach. *International Journal of Offender Therapy and Comparative Criminology*, 62(12), 3746-3774. <https://doi.org/10.1177/0306624X17750353>

Logan-Greene, P., Kim, B. K. E., & Nurius, P. S. (2020). Adversity profiles among court-involved youth: Translating system data into trauma-responsive programming. *Child Abuse & Neglect*, 104, 104465-12. <https://doi.org/10.1016/j.chiabu.2020.104465>

Merrick, M. T., Ports, K. A., Ford, D. C., Afifi, T. O., Gershoff, E. T., & Grogan-Kaylor, A. (2017). Unpacking the impact of adverse childhood experiences on adult mental health. *Child Abuse & Neglect*, *69*, 10-19. <https://doi.org/10.1016/j.chiabu.2017.03.016>

Mwachofi, A., Imai, S., & Bell, R. A. (2020). Adverse childhood experiences and mental health in adulthood: Evidence from north carolina. *Journal of Affective Disorders*, *267*, 251-257. <https://doi.org/10.1016/j.jad.2020.02.021>

Paretta, L. T. (2018). The impact of public policy decisions on juvenile recidivism in the united states: A retrospective examination. *International Journal of Criminal Justice Sciences*, *13*(1), 137. <https://doi.org/10.5281/zenodo.1403410>

Perez, N. M., Jennings, W. G., & Baglivio, M. T. (2018). A path to serious, violent, chronic delinquency: The harmful aftermath of adverse childhood experiences. *Crime and Delinquency*, *64*(1), 3-25. <https://doi.org/10.1177/0011128716684806>

Pierce, M., Hayhurst, K., Bird, S. M., Hickman, M., Seddon, T., Dunn, G., & Millar, T. (2017). Insights into the link between drug use and criminality: Lifetime offending of criminally-active opiate users. *Drug and Alcohol Dependence*, *179*, 309-316. <https://doi.org/10.1016/j.drugalcdep.2017.07.024>

Rhoades, K. A., Leve, L. D., Eddy, J. M., & Chamberlain, P. (2016). Predicting the transition from juvenile delinquency to adult criminality: Gender-specific influences in two high-risk samples. *Criminal Behaviour and Mental Health*, *26*(5), 336-351. <https://doi.org/10.1002/cbm.1957>

Schick, V., Roth, I., Link, A., & Welch, A. (2020). The nuanced relationship between adverse childhood experiences and recidivism risk scores among women leaving jail: A preliminary exploration. *Criminal Behaviour and Mental Health*, 30(5), 221-227. <https://doi.org/10.1002/cbm.2162>

Segal B. (1998). Drinking and drinking-related problems among Alaska natives. *Alcohol health and research world*, 22(4), 276–280.

Segeren, M., Fassaert, T., de Wit, M., Grimbergen, C., & Popma, A. (2020). The relationship between adverse childhood experiences and self-sufficiency problems in early adulthood among violent offenders. *Child Abuse & Neglect*, 101, 104354-104354. <https://doi.org/10.1016/j.chiabu.2019.104354>

Stinson, J. D., PhD, Quinn, M. A., DrPH, & Levenson, Jill S., LSCW, PhD. (2016). The impact of trauma on the onset of mental health symptoms, aggression, and criminal behavior in an inpatient psychiatric sample. *Child Abuse & Neglect*, 61, 13-22. <https://doi.org/10.1016/j.chiabu.2016.09.005>

Terry, A. N., & Williams, L. S. (2021). On the outside looking in: Rural girls, trauma, and involvement in the criminal justice system. *Journal of Aggression, Maltreatment & Trauma*, 30(3), 368-388. <https://doi.org/10.1080/10926771.2019.1652218>

Van Duin, L., De Vries Robbé, M., Marhe, R., Bevaart, F., Zijlmans, J., Luijckx, M. A., Doreleijers, T. A. H., & Popma, A. (2021). Criminal history and adverse childhood experiences in relation to recidivism and social functioning in multi-problem young adults. *Criminal Justice and Behavior*, 48(5), 637-654. <https://doi.org/10.1177/0093854820975455>

Wagers, S. M., Piquero, A. R., Narvey, C., Reid, J. A., & Loughran, T. A. (2021). Variation in exposure to violence in early adolescence distinguishes between intimate partner violence victimization and perpetration among young men involved in the justice system. *Journal of Family Violence*, 36(1), 99-108. <https://doi.org/10.1007/s10896-020-00170-4>

Webb, T. (2016). Children exposed to violence: A developmental trauma informed response for the criminal justice system. *Journal of Child & Adolescent Trauma*, 9(3), 183-189. <https://doi.org/10.1007/s40653-015-0069-5>

Appendix A

Title of the Project: Adverse Childhood Experiences and Interactions with the Criminal Justice System

Principal Investigator: [REDACTED]

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be between the ages of 18-65 and willing to answer questions pertaining to childhood traumas and interactions with the criminal justice system. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of this original research is to collect data pertaining to Adverse Childhood Experiences (ACEs) as well as data pertaining to later interactions with law enforcement and the criminal justice system.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:

1. Complete a survey which will take approximately 15-30 minutes, depending on the depth of your answers.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include better identification and social programs regarding risk factors for criminal activity, drug abuse, and victimization.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be anonymous.
- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with [REDACTED]. If you decide to

participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is [REDACTED]. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [REDACTED]
[REDACTED] You may also contact the researcher's faculty sponsor,

[REDACTED]

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional

Review Board, [REDACTED]

[REDACTED]

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by

student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of [REDACTED]

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of this document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.

Appendix B

Adverse Childhood Experiences and Interactions with Law Enforcement

Self-Report Questionnaire

The following self-report questionnaire is designed to collect data pertaining to Adverse Childhood Experiences (ACEs) as well as data pertaining to later interactions with law enforcement and the criminal justice system. No correlation between such data is assumed and all responses will remain anonymous.

Due to the nature of the questions involved in this questionnaire, participants are reminded not to share any personal identifiers such as names, addresses, previous addresses, or phone numbers in their responses.

A CDC-Kaiser study determined the following 10 Adverse Childhood Experiences (ACEs) that are universally accepted within current medical literature. Please place a check mark beside the factor(s) that you experienced in childhood, ultimately tallying those experiences in the underlined space marked "Total":

1. Physical Abuse _____
2. Emotional Abuse _____
3. Sexual Abuse _____
4. Physical Neglect _____
5. Emotional Neglect _____

6. Mental Illness in Home _____
 7. Mother Treated Violently _____
 8. Divorce _____
 9. Incarcerated Relative _____
 10. Substance Abuse _____
- Total: _____

Regarding the above listed factors, were there any additional factors that you believe contributed to childhood traumas (i.e., racism, bullying, or community violence)?

Regarding the above listed factors, were the majority of experiences prolonged in duration (i.e., the majority of childhood)?

As a child, did you feel that you had sufficient access to support programs, interventions, and positive role models (social ties)?

As a child, were you assigned a social worker, therapist, or other form of early/community interventionist?

As a child or juvenile, did you have any interactions with law enforcement or the criminal justice system, to include expulsion to an alternative learning center and speeding violations? Please provide details of the offense(s) and interaction(s), including any legal processes.

In the following sections, please place a check mark beside the behavioral, physical, and mental health issues you experience as an adult, ultimately tallying those experiences in the underlined space marked "Total":

As an adult, have you experienced any of the following behavioral issues:

1. Smoking _____
2. Alcohol Abuse _____
3. Lack of Physical Activity _____
4. Drug Abuse _____
5. Missing Work _____

As an adult, have you experienced any of the following physical and mental health issues:

1. Severe Obesity _____
2. Depression _____

3. Diabetes _____
 4. Suicide Attempts _____
 5. STDs _____
 6. Chronic Lung Disease _____
 7. Stroke _____
 8. Cancer _____
 9. Heart Disease _____
 10. Broken Bones _____
- Total: _____

As an adult, have you been diagnosed with any mental health issues other than those listed?

As an adult, have you had any interactions with law enforcement or the criminal justice system, to include drug court or drug offenses and traffic violations? Please provide details of the offense(s) and interaction(s), including any legal processes.

As an adult, have you committed a violent crime, regardless of victim report status or dismissal, to include assault, sexual assault and rape, or murder? All responses are considered anonymous, and not an admission of crime.

As an adult, have you been incarcerated for any period of time?

As an adult, have you been offered any mental or physical assistance in place of criminal charges or incarceration?