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RACE AND THE IMPACT OF PARENTAL INCARCERATION ON CHILDHOOD
OUTCOMES

by

ASANTEWAA DARKWA

Under the Direction of Tomeka Davis, PhD

ABSTRACT

Using Waves I and IV of the National Longitudinal Study of Adolescent to Adult Health (Add Health), this thesis analyzes the relationship between parental incarceration and adverse life outcomes. More specifically, I examine the associations between parental incarceration and education, depressive symptoms, and criminal justice involvement. Using binomial logistic regression, I examine the differences between youth that had an incarcerated parent (mother, father, or both) compared to not having a parent incarcerated. Results indicate that Individuals experiencing parental incarceration were statistically more likely to experience negative outcomes compared to those that have not experienced parental incarceration.

INDEX WORDS: Parental Incarceration, Depression, Criminal Justice Involvement, Education, Strain Theory

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ASANTEWAA DARKWA

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

in the College of Arts and Sciences

Georgia State University

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Asantewaa Darkwa
2019

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May 2019

DEDICATION

This thesis is dedicated to my late grandmother, Reanell Alexander Franklin. I miss you, granny.

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1 INTRODUCTION

The United States' obsession with mass incarceration over the past few decades has disproportionately affected the lives of many people of color, specifically African American men and women. While the United States only makes up about 5% of the world's population, it holds around 21% of the world's prisoners. At the end of 2016, an estimated 1.5 million adults were under the supervision of U.S. state and federal correctional facilities (Carson 2018). While this number mainly included males, the number of incarcerated women in the U.S. has increased by more than 700% between 1980 and 2014 (Carson 2015). As the number of incarcerated people has skyrocketed over the years, so has the number of incarcerated parents. Of the estimated 2.3% of children in 2007 that had a parent in prison, Black children were seven and a half times more likely than white children to have a parent in prison (Glaze and Maruschak 2008).

Mass incarceration has negatively affected both African American men and women. However, due to the lower rates of incarcerated women in prison than men, research on the incarceration of women has not been a high priority. Racial disproportionality in the criminal justice system, one of the many defining components of mass incarceration, has resulted in children of color being the most at risk to experience parental incarceration (Haskins 2017). Despite this disproportionate likelihood, there is a significant gap in the literature examining the consequences of having a parent incarcerated, especially for African American children. Given the growing population of incarcerated parents, it is important to look at the impact of parental incarceration on African American children as they transition into adulthood. There are many risk factors associated with the incarceration of a parent, including poverty, mental illness, and substance abuse (Dallaire 2007). While these risk factors may already exist in many African

American communities, the removal of a parent due to incarceration may further exacerbate these risks.

This study argues that the disproportionate imprisonment of African American mothers and fathers perpetuates social inequality and are linked to long-lasting consequences for their children. I examine the impact of incarceration on children's educational outcomes, mental health, and criminal justice involvement. Using the National Longitudinal Study of Adolescent to Adult Health (Add Health), 1994-2008 dataset, the goal of this quantitative study is to not only address the gap in the literature on the effects of parental incarceration, but also to examine the outcomes associated with the incarceration of Black parents on their children. Using this dataset, I intend to examine the following questions:

1. Are Black children more negatively affected by parental incarceration than children of other races?
2. Does maternal incarceration affect education outcomes, depressive symptoms, and criminal justice involvement more negatively than paternal incarceration?
3. Are there significant differences in the educational outcomes of individuals that have experienced parental incarceration and those that have not?
4. Are there significant differences in the depressive symptoms of individuals that have experienced parental incarceration and those that have not?
5. Is parental incarceration associated with youth criminal justice involvement?

Next, I discuss the themes that emerged from the literature that guide these research questions and help frame my argument.

2 LITERATURE REVIEW

This chapter reviews the current literature on mass incarceration and children of the incarcerated. Though a significant amount of research has focused on mass incarceration and parental incarceration, the intergenerational consequences of the two are overwhelmingly neglected (Foster and Hagan 2009). This literature review includes an analysis of the parallels between Jim Crow and Mass Incarceration, and how that has negatively affected children of the incarcerated. This review also discusses Intersectionality and General Strain Theory.

2.1 Race and Mass Incarceration

The mass incarceration of African Americans is a result of the racialized war on drugs, harsh laws and mandatory minimum sentencing, and the Prison Industrial Complex (Reed and Reed 1997; Sokoloff 2003; Willingham 2011; Wildeman and Wang 2017). There are two essential features that differentiate between an increase in incarceration rates and mass incarceration. First, mass imprisonment suggests the rate of incarceration is significantly higher than the historical and societal comparative norm. Second, imprisonment becomes mass imprisonment when it becomes systematic imprisonment of whole groups of the population, rather than individual offenders (Garland 2001).

Michelle Alexander (2010) argues there are many similarities between mass incarceration and Jim Crow, including legalized discrimination and political disenfranchisement. The “old” Jim Crow refers to a set of laws and policies in many Southern states between 1865 and 1965 legalizing segregation in the United States. While *de jure* discrimination is a thing of the past, many African American men and women face forms of *de facto* discrimination once they become a felon. Once released from prison, these men and women are forced into a “parallel social universe—much like Jim Crow,” (Alexander 2010:192) where they are legally

discriminated against. Just as chattel slavery and Jim Crow successfully confined and controlled African Americans in the United States, mass incarceration operates to do the same. Over the years, mass incarceration has taken away many of the gains of the Civil Rights Movement, placing many African Americans in a similar racial caste system as the Jim Crow era (Alexander 2010). Thus, mass incarceration has been designed to serve as a new means of racial control, implemented to do the work Jim Crow laws are no longer able to do.

The effects and impact of mass incarceration can be seen not only in the lives of those tangled in the system, but also in their family's lives. Mass incarceration can be detrimental for three main reasons: it is invisible, it is cumulative, and it is intergenerational (Western and Pettit 2010). It is invisible because prisoners often come from impoverished backgrounds but are purposely left out of measures of poverty and unemployment due to their incarceration status. This exclusion masks the true level of inequality in our society, causing the full extent of incarceration to be underestimated. It is cumulative because many prisoners come from the most disadvantaged backgrounds in society (Murray 2000). Incarceration disrupts the social and economic accumulation of those that are already disadvantaged, creating a cyclical effect that funnels poor people into a system that removes all avenues for upward mobility for generations to come. Lastly, it is intergenerational because these disadvantages affect not only those who go to prison, but their families and children also (Western and Pettit 2010). In the next section, I discuss the ways Intersectionality can be applied to discuss incarceration.

2.1.1 Intersectionality in the Age of Mass Incarceration

While policies stemming from the drug war and “tough-on-crime” rhetoric account for the disproportionate percentage of African Americans in prison, these percentages are also the result of many social problems they face. Pettit and Western (2004) argue that incarceration is

highly stratified by race. Critical Race Theorist and Civil Rights Activist Kimberlé Crenshaw conceptualized intersectionality to refer to how different forms of discrimination interact to impact marginalized people. The term was used to explain how race and gender affect Black women's oppression (Crenshaw 1991). Though scholars have discussed and used intersectionality for decades, it is still rarely discussed in criminal justice research (Barak, Leighton, and Flavin 2010).

Intersectionality rests on the premise that race, gender, class, and other intersecting identities work together to create distinctive overlapping systems of discrimination. I apply this concept to understand how the intersections of race and incarceration not only disadvantage incarcerated parents, but also intergenerationally disadvantage their children. Foster (2011) argues that within gender, there are differences by race and ethnicity in child placements after the incarceration of a parent. Consistent with the literature, Foster (2011) finds that children with incarcerated fathers are more likely to live with their other parent during incarceration, compared to children with incarcerated mothers. However, patterns of child placement differ by race/ethnicity for children with incarcerated mothers. Non-Hispanic white children with incarcerated mothers are more likely to live with their other parent than African American and Hispanic children. Among incarcerated mothers, Foster (2011) also finds that income levels explain racial and ethnic differences in the odds of living with the other parent during incarceration.

I apply the concept of intersectionality to examine the multiple ways parental incarceration has transformed the lives of many African Americans. Intersectionality is imperative to comprehend experiences not only as incarcerated African American mothers and fathers, but also African American children of these parents. When discussing gender and race,

many social science researchers use them as descriptive variables (Hill-Collins 1998), instead of examining the ways gender inequalities and institutional racism lead marginalized people to incarceration. I argue that because of the historical intersecting oppressions and social exclusions African Americans face, children of incarcerated Black parents experience greater negative outcomes due to the incarceration than their counterparts of other races. The next section will explore the negative outcomes associated with having an incarcerated parent.

2.2 Negative Outcomes for Children of Incarcerated Parents

A major factor determining how much a child adjusts to parental incarceration is the quality of the parent-child relationship before incarceration (Davis and Shlafer 2017). The incarceration of a parent produces a unique form of separation. The life course perspective assumes the removal or absence of a parent may weaken the parent-child relationship, producing lower levels of social control (Kopak and Smith-Ruiz). Thus, it is posited that children with incarcerated parents are more likely to participate in risky behaviors. If the pre-incarceration parent-child relationship is positive, it is imperative to maintain the relationship through frequent visits to reduce negative long-term outcomes (Miller 2006). Most inmates with minor children had some form of contact with their children since their admission (Mumola 2000; Glaze and Maruschak 2008). However, many children have trouble maintaining relationships with their incarcerated parents due to lack of transportation or support from their new caregivers (Luther 2015). Bureau of Justice Statistics data shows that while mothers in state prisons are more likely than fathers to receive some sort of weekly and/or monthly contact with their children, about half have never received a visit and about one-third do not receive phone calls (Mumola 2000). For children with incarcerated or formerly incarcerated parents, higher parental closeness was

associated with more than half the risk of internalizing problems, compared to children with no experience of parental incarceration (Davis and Shlafer 2017).

Many children are in the primary care of a single mother when she is arrested (McCampbell 2005; Glaze and Maruschak 2008; Roberts 2012). Fathers that do live with their children before incarceration tend to rely heavily on someone else to provide daily care for their children (Glaze and Marushak 2008). After their incarceration, fathers are more likely to report that their children are in the care of their mother, while incarcerated mothers are more likely to report that their children are in the care of the children's grandparents (Glaze and Maruschak 2008). Incarcerated mothers are also more likely to report that their children are in the care of a foster home, agency, or institution than incarcerated fathers.

Parental incarceration has been shown to cause detrimental life outcomes in children (Hanlon, Carswell, and Rose 2006; Lee, Fang, and Luo 2013; Woodard and Copp 2016), especially as African American children transition into adulthood (Kopak and Smith-Ruiz 2016). The risk of exposure to parental incarceration is greatest for low-income children and children of color. Nationally, one in every four African American and one in every ten Latino children are expected to experience parental incarceration, compared to the one in twenty-five white children (Haskins 2017). Among African American families, parental incarceration is one of the most significant factors contributing to father-child separation (Currence and Johnson 2003). While nearly half (46%) of children with an incarcerated father are Black, 30% of children with an incarcerated mother are Black (Glaze and Maruschak 2008). Although not much research on parental incarceration has focused specifically on African American children, the few studies that conclude that African American children are at a greater risk for negative outcomes (Foster and Hagan 2009; Foster 2012; Ruiz and Kopak 2014).

While there are numerous outcomes that children with incarcerated parents face, this study focuses on the educational outcomes, mental health, and criminal justice involvement of youth that have or have previously had an incarcerated parent. The next section examines the literature guiding my research questions.

Educational Outcomes. Graduating with a college degree has almost become a basic requirement for upward economic mobility in today's society. In the 2015-2016 school year, 57.3% of African American high school graduates in the United States matriculated to 2 and 4-year colleges, compared to 69.7% of white high school graduates (NCES 2017). However, many children with incarcerated parents do not graduate from high school and even fewer graduate from college.

There are many reasons why children experience academic difficulties after the incarceration of a parent. Cho (2010) found that the timing of incarceration significantly affects a child's school performance. Boys that experienced maternal incarceration during early adolescence (ages 11-14) are more likely to drop out of high school than children that experience it later in life (Cho 2010). In a qualitative study of teachers of students with incarcerated parents, Dallaire, Ciccone, and Wilson (2010) suggest that these children experience an increase in school stigmatization not only from peers, but from their teachers as well. After being made aware that a student had an incarcerated parent, many teachers began expecting less from that student (Dallaire, Ciccone, and Wilson 2010), which allows them to do less. Along with stigmatization, children may experience bullying or teasing. Because of this, children may be more reluctant to go to school, and may eventually drop out.

Hagan and Foster (2012) found that while the incarceration of a parent had a significant effect on student's high school grade point average (GPA) and college graduation, maternal

incarceration presented a greater effect. Children with incarcerated mothers may experience academic difficulties. In a study of 88 9-14 year-olds experiencing maternal incarceration, Hanlon et al. (2005) found that 45% of children expressed little or no interest in school, and 49% reported being previously suspended from school. Of those suspended, the average number of times suspended was 4.11.

One limitation and/or weakness of previous studies is the failure to analyze the way race, and the type of parental incarceration relates to educational outcomes. For example, using the Add Health dataset, Huynh-Hohnbaum, Bussell, and Lee (2015) found that compared to non-Hispanic white students with an incarcerated parent, there is a 4.1% decrease in odds that Black students will receive a high school diploma and a 7.1% decrease every time a parent was arrested. While this study does separate the type of incarceration (maternal/paternal incarceration), the authors do not analyze the interaction between race and maternal v. paternal incarceration. While the likelihood that women in state prisons are mothers does not vary by race, Black and Hispanic men in state prison are more likely than white men to be fathers (Christian 2009). Consequently, the race of the youth and type of parental incarceration they experienced may contribute to the ways they adjust and react to the incarceration. Therefore, it is imperative to analyze race and the type of parental incarceration separately and together.

Mental Health. Research on the relationship between parental incarceration and mental health is one of the most understudied problems facing these children (Tasca, Turanovic, White, and Rodriguez 2014), and has produced many inconsistent results (Kopak and Smith-Ruiz 2016; Davis and Shlafer 2017). Children separated due to incarceration are likely to respond with internalized behaviors, such as anxiety, depression, and other mental health problems (Murray and Farrington 2008; Tasca, Turanovic, White, and Rodriguez 2014; Davis and Shlafer 2017).

While the majority of research does not differentiate by the type of incarceration, studies show that maternal and paternal incarceration is associated with different mental health effects on children (Johnston 1995; Tasca et al. 2014). Tasca et al. (2014) examined a population of incarcerated parents confined in the Arizona Department of Corrections. Controlling for additional parent stressors, parental mental illness, and child risk factors, such as exposure to violence, incarcerated mothers reported their children had more mental health problems than incarcerated fathers (Tasca et al. 2014). Using the National Longitudinal Study of Adolescent to Adult Health (Add Health), Lee, Fang, and Luo (2013) found a significant association between parental incarceration and depression, posttraumatic stress disorder, and anxiety. Wilbur et al. (2007) found a significant positive relationship between depressive symptoms among disadvantaged children of incarcerated fathers aged 6 to 11 years, compared to similarly disadvantaged children without incarcerated fathers.

Delinquency. Often, research suggests that children separated due to incarceration are also likely to respond with externalized behaviors, such as aggression, violence, or defiance (Craigie 2011). The most commonly cited adverse reactions include delinquent activity (Miller 2006), criminal behavior (Huebner and Gustafson 2007), and social exclusion (Foster and Hagan 2007; Foster and Hagan 2009). Although these behaviors may exist before the incarceration of a parent, Murray and Farrington (2005) found that young boys separated from a parent due to incarceration had an increased risk of delinquency and/or adult incarceration, compared to boys that were separated due to other reasons.

Overall, children with incarcerated parents in prison are 5-6 times more likely to become involved in the criminal justice system (Springer et al. 2000). African American children with an incarcerated parent are more likely to be arrested and arrested a greater number of times than

children that do not have an incarcerated parent (Kopak and Smith-Ruiz 2016). Murray et al.'s (2007) Swedish study reported that children aged 6 or younger who experienced the incarceration of a parent were more than twice as likely to be convicted of a criminal offense between the ages of 19 and 30 than those that did not have a parent incarcerated at that age. Additionally, children experiencing parental incarceration, regardless of their age, were more likely to engage in criminal activity than children whose parents were incarcerated before their birth. Research has also found a positive correlation between same-sex parental incarceration and criminal justice involvement (Burgess-Proctor, Huebner, and Durso 2016).

As discussed in the above literature, the separation of a parent and a child due to incarceration can produce many negative outcomes in children. Theory, however, plays a central role in explaining exactly how these negative outcomes occur. In this next section, I will address the ways strain contributes to education outcomes, mental health, and delinquency.

2.3 Strain as a Predictor of Negative Outcomes

Another useful way to frame outcomes for children with incarcerated parents is Agnew's (1992) General Strain Theory. Agnew (1992) argues that the actual or anticipated removal of positively valued stimuli can lead to negative emotions (e.g., anger, depression, and fear). General Strain Theory has been applied to previous studies, to understand the many outcomes of parental incarceration (Foster and Hagan 2007; Foster 2012; Porter and King 2015). Because African American children are more likely to experience strains than children of other races due to their lower overall socioeconomic status and experiences of discrimination (Sung Joon Jang and Johnson 2003), the present study hypothesizes that African American children are more negatively affected by parental incarceration than their white counterparts.

General Strain Theory assumes that engaging in criminal behavior is often a means of coping with negative emotions and stimuli (Agnew 1992; Foster 2012). Additionally, an individual may begin engaging in criminal activity to prevent the loss of the positively valued stimuli (Agnew 1992). In this case, the removal of a parent due to incarceration represents the positively valued stimuli. Individuals who experience the incarceration of their parent are more likely to experience negative emotions, such as anger, depression, and fear, which, according to Agnew, then turns into criminal involvement as a means of coping with negative emotions (Porter and King 2015). Although this theory has traditionally been applied to studies of delinquency, this study extends this theory and argues that parental incarceration, as a strain, leads to an increase of criminality in children.

The arrest of a parent may cause psychological, emotional, and economic strains on children and their families (Murray, Loeber, and Pardini 2012). Because some children are taken away from their homes and held at police stations while waiting for an adult to pick them up after their parent is incarcerated, many children report feeling anxious or as if they are also in trouble or under arrest (Phillips and Zhao 2010). Using the National Survey of Child and Adolescent Well-being, Phillips and Zhao (2010) found that in children eight years and older, witnessing the arrest of any household member may later suffer from post-traumatic stress. Often, youth blame themselves for their parent's incarceration, especially when their parent is in prison for crimes they did to support their family (Miller 2006).

Children living with grandparents or relatives during an incarceration, rather than foster care, have a greater likelihood to return to their parents care once released from prison (Miller 2006). However, about 10% of children with an incarcerated parent end up in foster care or another agency (Mumola 2000; Sokoloff 2003). Once incarcerated parents are released, many

children remain in the foster care system because parents have trouble finding housing, employment, child care, and many other resources needed to regain custody (Katz 1998; Swann and Sylvester 2006). A child placed in foster care may be separated from their siblings, forced to move and attend a new school, and may even experience abuse and neglect in their new home. According to General Strain Theory, negative events like these can lead a child to experience mental health issues, education detainment, and social exclusion (Agnew 1992; Foster and Hagan 2009).

The economic strain due to the incarceration of a parent may intensify emotional strains. Not only does the child lose the income of that parent, maintaining contact with an incarcerated parent can be expensive. The majority of parents are placed in state or federal prisons that are more than 100 miles from their last residence (Mumola 2000). Walker (2005) estimated that the cost of maintaining contact with an incarcerated person is around \$54 per month (Murray, Loeber, and Pardini 2012), which many families cannot afford.

General Strain Theory guides the hypothesized path model (below) through which parental incarceration influences education, mental health, and criminal justice involvement.

2.4 Hypothesized Causal Model

I generate a causal model to examine the effects of maternal incarceration on criminal justice involvement of youth (see Figure 1). The model includes both direct and moderating effects of parental incarceration. Parental incarceration is expected to directly increase the likelihood of children's criminal justice involvement. Educational outcomes and depression are used as moderating effects between maternal incarceration and criminal justice involvement. Parental incarceration is expected to negatively affect a child's educational outcome; in turn, is expected to be directly associated with a higher likelihood of criminal justice involvement. In

addition, the incarceration of a mother is expected to negatively affect the child's mental health, which is expected to enhance the relationship between maternal incarceration and criminal justice involvement. Research has found a positive relationship between the race of the incarcerated mother and the delinquent involvement of the child (Woodard and Copp 2016). Therefore, it is posited that the hypothesized causal model may be more evident for Black children than children of other races.

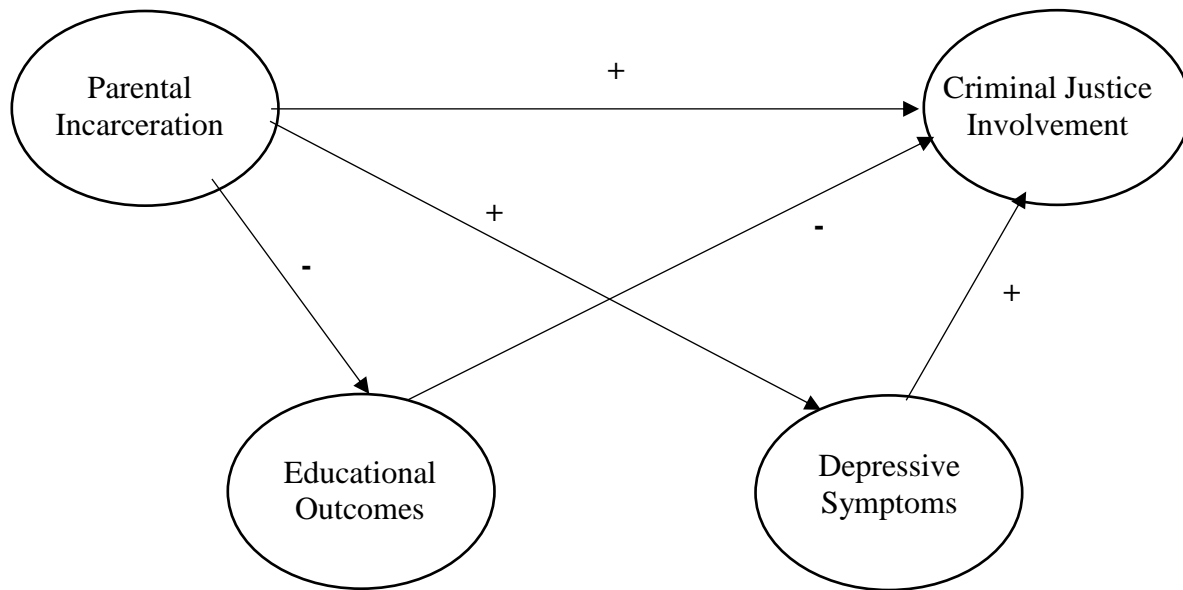


Figure 1: The Influence of Parental Incarceration on Criminal Justice Involvement

3 RESEARCH DESIGN

3.1 Data

To assess the relationship between parental incarceration, education, mental health, and criminal justice involvement, I assessed public data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) 1994-2008. Add Health is a longitudinal survey of a nationally representative sample of U.S. adolescents in grades 7 through 12 during the 1994-1995 school year (Wave I). Wave II was collected in 1996 and Wave III was collected between 2001-2002. The cohort was followed into adulthood during Wave IV, with the most recent survey taking place in 2008, when the sample was between 25-34 years of age. The dataset was collected using an in-school survey, in-home interviews, parent interviews, and a school-administrator survey. Survey data collected asked questions about the social, economic, psychological, and physical well-being with contextual data on the family, neighborhood, community, school, friendships, peer groups, and romantic relationships.

Between September 1994 and December 1995, data collection for Wave I consisted of two stages. The first stage was a stratified, random sample of all high schools in the United States. Prior to sampling, schools were sorted by size, school type, and urbanicity. To qualify, schools had to have a minimum enrollment of 30 students and had to have an 11th grade. Of the 80 high schools selected, 52 were eligible to participate. The ineligible 28 schools were replaced by similar high schools. Similar high schools were found by sorting schools in a random order within eight categories: school size, school type, urbanicity, percent white, grade span, percent black, census region, and census division. Additionally, eligible high schools were asked to identify feeder schools, or junior high or middle schools that typically provide at least five students to the entering high school class. Overall, 65 feeder schools were selected, for a total of

145 middle, junior high, and high schools. Over 90,000 students in grades 7th-12th completed the 45-minute in-school survey. This questionnaire measured a range of social and demographic characteristics, such as household structure, self-esteem, health status, and risk behaviors. After completing the in-school survey, students were then further sampled to complete an in-home survey, or stage two. The in-home sample consisted of 27,000 adolescents.

From April to August 1996, Wave II surveyed almost 15,000 follow-up in-home interviews with adolescents from Wave I. Interview questions in Wave II were generally similar to questions asked in Wave I. From August 2001 to April 2002, Wave III data was collected from 15,170 Wave I in-home respondents. Respondents were now 18 to 26 years old. Wave III includes interviews from respondent's partners. Respondents were surveyed amongst a range of topics, such as sexual experiences, mental health, delinquency and violence, and involvement with the criminal justice system.

Wave IV of the study took place in 2008, when the original cohort was 24-32 years old. Of the original cohort, 15,701 participants were surveyed. Data were collected about the respondent's social, economic, psychological, and health circumstances. Dates of key life events, such as marriage and cohabitation history, contact with the criminal justice system, and employment events were asked.

3.2 Dependent Variables

Education Outcomes. High school graduation status was measured by the respondent's report at Wave IV. The original question asked if respondents (a) finished high school with a diploma; (b) earned a high school equivalency degree (GED); (c) earned a certificate of attendance or a certificate of completion; or (d) did not receive a high school diploma,

equivalency degree (GED), or other certificate. This variable was dichotomized so those that received a high school diploma were coded as 1, and all other options were coded as 0.

Depressive Symptoms. Based on the Center of Epidemiologic Studies-Depression Scale (CES-D; Radloff 1977), symptoms of depression are examined at Wave IV. The CES-D scale is a widely used measure of depressive symptoms. Similar to Gaston (2016), I created a depressive symptom score using ten items of the CES-D for each participant. The variable consisted of questions asking how often participants experience the following during the past seven days: (1) bothered by things that don't usually bother you; (2) could not shake off the blues; (3) feeling just as good as other people; (4) had trouble focusing; (5) feeling depressed; (6) feeling too tired to do things; (7) felt happy; (8) enjoyed life; (9) feeling sad; and (10) feeling that people dislike you. Responses will include never or rarely (0); sometimes (1); a lot of the time (2); and most of the time or all of the time (3). Questions (3), (7), and (8) were reverse coded, so higher values represented greater psychological distress. Responses were summed up to form a total score ranging from 0 to 29 for depressive symptoms, with higher scores indicating more depressive symptoms. Cronbach's alpha for the Depressive Symptoms Scale was .773.

Criminal Justice Involvement. There was one criminal justice involvement question reported from Wave IV included in the Add Health dataset. This was a dichotomous self-report question asking, "Have you ever been arrested?" Participants reporting that they have never been arrested were coded 0, and those that report they have been arrested were coded 1.

3.3 Independent Variables

Parental Incarceration. Maternal incarceration was measured by respondent's report at Wave IV. Participants that respond "Yes" to the question "Has your biological mother ever spent time in jail or prison?" were coded as 1. Paternal Incarceration was measured with the item, "Has

your biological father ever spent time in jail or prison?” Parental incarceration was a dummy variable created to include those that have experienced maternal incarceration, paternal incarceration, or the incarceration of both parents. Participants that did not report having an incarcerated parent served as the reference category.

Other Controls. *Race* and ethnicity were assessed by self-reported racial identification and Hispanic origin asked in Wave I. The final mutually exclusive categories included Non-Hispanic White (0); Non-Hispanic Black (1); and Other (2). *Gender* was a self-reported measure, where 0 = male, and 1 = female. *Age* (at Wave IV) was a self-reported measure asking participants what year they were born. This continuous variable was recoded to match the participant’s age during Wave IV. *Urbanicity* was measured by asking the interviewer “How would you describe the immediate area or street (one block, both sides) where the respondent lives?” This variable was dummy coded into three categories: rural, suburban, and urban. *Parent’s Education* was measured in Wave I by asking the participant’s parent how far they went in school. This was originally a continuous variable, from 8th grade or less to professional training, beyond a 4-year college or university. This variable was dichotomized, so parents that received a high school diploma were coded as 1, and all other options were coded as 0. *Welfare* was a dichotomous question in Wave I, asking parents if they were receiving public assistance, such as welfare. Those that responded yes were coded as 1, those that were not were coded as 0. *Parent Employment* was a dichotomous question in Wave I asking parents if they worked outside the home. Parents that responded yes were coded as 1, those that responded no were coded as 0.

3.4 Data Analysis

All statistical procedures were analyzed using SPSS version 25. First, univariate analysis was conducted to analyze the descriptive statistics of the population, including the means and

standard deviations. Dummy variables were created to examine the following parental incarceration groups: Mother Incarcerated, Father Incarcerated, Parent Incarcerated (Mother, Father, or Both Parents Incarcerated), and Neither Parent Incarcerated. Next, a correlation matrix was conducted to assess for multicollinearity.

Next, a series of binomial logistic regressions with the different parental incarceration groups as a predictor of education outcomes was conducted. To examine the relationship between parental incarceration and adult depressive symptoms, ordinary least squares (OLS) regression models were performed. Next, a set of binomial regression models were conducted to predict criminal justice involvement among the parental incarceration groups. Lastly, another set of binomial regression models were executed to estimate the indirect paths to criminal justice involvement among the parental incarceration groups, with education outcomes and depressive symptoms as control variables. To assess the effects of maternal incarceration on African Americans specifically, an interaction term was created and included in all of the regression models.

4 RESULTS

The final sample included 4,226 participants (2184 females, 2042 males). Table 1 presents the descriptive statistics, by race, for all variables, including means and standard deviations. Of the sample, 23.5% reported they were non-Hispanic African American, 68% reported they were non-Hispanic white, and 8.5% reported they were another race. Of the full sample, 85.8% of participants graduated with a high school diploma, and 28.5% have previously been arrested. The average age of respondents was 29.01 (± 1.77).

A series of dummy variables were created to make four different parental incarceration groups. The smallest group consisted of those that have experienced maternal incarceration (N=148). The second group included those that have experienced paternal incarceration (N=682). The third group consisted of those that have experienced maternal or paternal incarceration (N=757), with some respondents reporting they've experienced both. The last and largest group consisted of those that have not experienced maternal or paternal incarceration (N=3469). While African American participants make up a greater proportion of those that have experienced an incarcerated mother or father, there appears to be no significant differences between the different racial categories. This result suggests there are no racial differences between the parental incarceration groups. The average age of when participant's mothers were incarcerated was 13.42 years old, while the average age of when participant's fathers were incarcerated was 9.38 years old.

Participants ranged from various types of neighborhoods, with 28.5% living in a rural area, 37% living in a suburban area, and 31% in an urban area. Measured at Wave I, 81% of participant's parents received a high school diploma and 9% of participant's parents reported receiving public assistance, such as welfare benefits. These three variables appear to be

significant, suggesting there are racial differences between urbanicity, parent's education, and welfare status. Additionally, 74.4% of the participant's parents reported working outside of the home.

Table 2 presents the descriptive statistics, including means and standard deviations, by parental incarceration status. As hypothesized, there are significant differences in the education, depressive symptoms, and criminal justice involvement of those that have experienced parental incarceration and those that have not. The strength and direction of these relationships tested below.

Table 1: Descriptive Statistics by Race

	White		Black		Other		Full Sample	
	% (N)	M (SD)	% (N)	M (SD)	% (N)	M (SD)	% (N)	M (SD)
Education ¹	85.4 (2453)		86.5 (860)		87.7 (315)		85.8 (3628)	
Depressive Symptoms		8.96 (2.79)		9.07 (2.99)		9.03 (2.77)		8.99 (2.83)
Criminal Justice Involvement	27.9 (802)		29.7 (295)		29.5 (106)		28.5 (1203)	
Parental Incarceration ²								
Mother Incarcerated	3.2 (91)		4.2 (42)		4.2 (15)		3.5 (148)	
Father Incarcerated	16.2 (464)		16.7 (166)		14.5 5(2)		16.1 (682)	
Parent Incarcerated	17.8 (510)		18.8 (187)		16.7 (60)		17.9 (757)	
Neither Parent Incarcerated	82.2 (2363)		81.2 (807)		83.3 (299)		82.1 (3469)	
Age Mother Incarcerated		13.41 (8.21)		13.51 (7.41)		13.15 (8.71)		13.42 (7.97)
Age Father Incarcerated		9.16 (7.50)		9.73 (6.70)		10.21 (7.47)		9.40 (7.31)
Parent's Education ¹	83.1 (2387)		80.5 (799)		65.1 (233)		81.0 (3419)	
Welfare (Wave I)	6.2 (177)		15.6 (155)		13.1 (47)		9.0 (379)	
Parent Employed (Wave I)	73.7 (2114)		76.9 (764)		72.7 (261)		74.4 (3139)	
Urbanicity								
Rural	32.8 (942)		21.4 (213)		14.2 (51)		28.5 (1206)	
Suburban	40.1 (1152)		26.5 (263)		41.8 (150)		37.0 (1565)	
Urban	24.4 (702)		48.0 (477)		36.8 (132)		31.0 (1311)	
Other Area	2.7 (77)		4.1 (41)		7.2 (26)		3.4 (144)	
Age ³		28.97 (1.76)		29.06 (1.80)		29.13 (1.70)		29.13 (1.77)

Note. N=4226; ¹Education is High School Diploma; ²Mother/Father Incarcerated and Neither Parent Incarcerated equals more than 100% because respondents were able to select each category; ³Age is a continuous variable from ages 25-34.

Table 2: Descriptive Statistics by Parental Incarceration

	Neither Parent Incarcerated		Mother Incarcerated		Father Incarcerated	
	% (N)	M (SD)	% (N)	M (SD)	% (N)	M (SD)
Education ¹	89.0 (3086)		64.2 (95)		72.0 (491)	
Depressive Symptoms		8.81 (2.64)		9.81 (3.33)		9.74 (3.45)
Criminal Justice Involvement	25.4 (880)		49.3 (73)		42.1 (287)	
Age Mother Incarcerated				13.42 (7.97)		
Age Father Incarcerated						9.38 (7.31)
Parent's Education ¹	80.8 (2801)		80.4 (119)		82.4 (561)	
Welfare (Wave I)	8.9 (309)		9.5 (14)		9.3 (63)	
Parent Employed (Wave I)	74.6 (2586)		77.7 (115)		72.6 (494)	
Urbanicity						
Rural	28.2 (977)		18.9 (28)		31.5 (215)	
Suburban	36.9 (1279)		43.9 (65)		37.4 (255)	
Urban	31.7 (1101)		34.5 (51)		26.5 (181)	
Other	3.2 (112)		2.7 (4)		4.5 (31)	
Race						
White	68.1 (2363)		61.5 (91)		68.0 (464)	
Black	23.3 (807)		28.4 (42)		24.3 (166)	
Other	8.6 (299)		10.1 (15)		7.6 (52)	
Age ²		29.02 (1.77)		29.06 (1.83)		28.93 (1.74)

Note. N=4226; * $p \leq .05$; ¹Education is High School Diploma; ²Age is a continuous variable from ages 25-34.

4.1 Education Outcomes

Table 3 shows the results of the binomial logistic regression to analyze education outcomes, controlling for demographic variables. I examined maternal/paternal incarceration and overall parental incarceration separately to explore the differences between the two, with no experience of parental incarceration being the reference category. Model 1 shows the results of regressing overall parental incarceration on participants high school graduation status. As expected, the odds of graduating high school after experiencing parental incarceration were 68.7% (O.R.=.313, $p<.001$) less than those that had not experienced parental incarceration. This outcome remains consistent across all five models. Models 3 and 5 include an interaction term to assess Black participants with an incarcerated parent. However, this interaction was not found to be significant, even after controlling for the demographic variables. None of the control variables were statistically significant.

Similarly, Table 4 shows the logistic regression analyzing maternal and paternal incarceration on high school graduation outcomes. Model 1 shows that the odds of graduating high school after maternal incarceration (O.R.=.386, $p<.001$) or paternal incarceration (O.R.=.365, $p<.001$) are significantly lower than those that have not experienced parental incarceration. This outcome remained significant across all five models. Similar to the previous table, Table 4 includes an interaction term to analyze Black participants with an incarcerated mother. However, this interaction was not found to be statistically significant in either model. Similarly, Model 2 shows that the odds of graduating high school after maternal incarceration (O.R.=.386, $p<.001$) or paternal incarceration (O.R.=.365, $p<.001$) are significantly decreased.

After controlling for the demographic variables (race, sex, age, urbanicity, parent's education, welfare, and parent's employment) in Model 5, the odds of high school graduation

after maternal incarceration were 62% (O.R.=.380, $p<.001$) less than those that have not experienced maternal incarceration. The odds of high school graduation after paternal incarceration were 63.3% (O.R.=.367, $p<.001$) less than those that have not experienced paternal incarceration. However, none of the control variables were statistically significant.

Table 3: Parental Incarceration Regressed on High School Graduation Outcomes

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR
<i>Independent Variable</i>										
Parent Incarcerated ¹	-1.162*** (.097)	.313	-1.164*** (.097)	.312	-1.182*** (.111)	.307	-1.158*** (.098)	.314	-1.172*** (.111)	.310
<i>Control Variables</i>										
Black			.093 (.108)	1.098	.068 (.130)	1.071	.116 (.112)	1.123	.096 (.133)	1.101
Female							-.104 (.091)	.901	-.104 (.091)	.902
Age							.049 (.059)	1.050	.048 (.026)	1.050
Urban ²							-.169 (.099)	.845	-.169 (.099)	.845
Parent's Education ³							-.102 (.122)	.903	-.102 (.122)	.903
Welfare							.112 (.173)	1.119	.109 (.174)	1.115
Parent Employed							.081 (.108)	1.085	.081 (.108)	1.084
Black x Parent Incarcerated					.078 (.230)	1.081			.063 (.232)	1.065
Constant	2.087*** (.054)	8.057	2.065*** (.059)	7.889	2.071*** (.061)	7.933	.777 (.753)	2.175	.787 (.754)	2.196
Nagelkerke R ²	.055		.056		.056		.059		.059	

Note. N=4226. *p≤.05; **p≤.01; ***p≤.001. ¹Reference category is Neither Parent Incarcerated. ²Reference category is suburban neighborhood. ³Education is high school diploma.

Table 4: Maternal and Paternal Incarceration Regressed on High School Graduation Outcomes

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR
<i>Independent Variable</i>										
Mother Incarcerated ¹	-.953*** (.185)	.386	-.958*** (.185)	.384	-.979*** (.216)	.376	-.962*** (.186)	.382	-.967*** (.217)	.380
Father Incarcerated ¹	-1.009*** (.103)	.365	-1.009*** (.103)	.364	-1.010*** (.103)	.364	-1.002*** (.104)	.367	-1.002*** (.104)	.367
<i>Control Variable</i>										
Black			.100 (.108)	1.105	.094 (.112)	1.099	.121 (.112)	1.129	.120 (.116)	1.127
Female							-.099 (.091)	.905	-.099 (.091)	.905
Age							.049 (.026)	1.050	.049 (.026)	1.050
Urban ²							-.165 (.099)	.848	-.165 (.099)	.848
Parent's Education ³							-.095 (.122)	.909	-.095 (.122)	.909
Welfare							.116 (.174)	1.123	.116 (.174)	1.123
Parent Employed							.086 (.108)	1.090	.087 (.108)	1.090
Black x Mother Incarcerated					.077 (.411)	1.080			.018 (.412)	1.018
Constant	2.071*** (.053)	7.929	2.048*** (.058)	7.752	2.049*** (.059)	7.762	.727 (.753)	2.069	.728 (.754)	2.072
Nagelkerke R ²	.056		.056		.056		.059		.059	

Note. N=4226. *p≤.05; **p≤.01; ***p≤.001. ¹Reference category is Neither Parent Incarcerated. ²Reference category is suburban neighborhood. ³Education is high school diploma.

4.2 Mental Health Outcomes

Table 5 presents the findings from the OLS regression models predicting adult depressive symptoms. Model 1 shows that respondents that have experienced parental incarceration scored .886 points higher on the depressive symptoms scale ($b=.886$, $p<.001$) than respondents that have not experienced parental incarceration. Models 4 and 5 also predict depressive symptoms in adulthood, but control for demographic variables and the interaction term. Model 5 shows that after controlling for race, sex, age, urbanicity, parent's education, welfare, and parent's employment, respondents that have experienced parental incarceration score .756 points higher on the depressive symptoms scale ($b=.756$, $p<.001$) than those that have not experienced an incarcerated parent. None of the control variables or the included interaction term was found to be significant.

Similarly, Table 6 also presents the findings from the OLS regression models predicting adult depressive symptoms for those that have experienced the incarceration of their mother or father. Model 1 shows that respondents that have experienced maternal incarceration scored .572 points higher on the depressive symptoms scale ($b=.572$, $p<.05$), while those that have experienced paternal incarceration scored .854 points higher on the depressive symptoms scale ($b=.854$, $p<.001$) than those that have not experienced parental incarceration. Model 3 includes an interaction term, analyzing Black participants with an incarcerated mother. While maternal incarceration was not found to be significant, Black participants with an incarcerated mother score 1.466 points higher on the depressive symptoms scale ($b=1.466$, $p<.01$) than other participants.

After controlling for the demographic variables (race, sex, age, urbanicity, parent's education, welfare, and parent's employment) in Model 5, maternal incarceration was not found

to be significant. However, those that experienced the incarceration of their father scored .839 points higher on the depressive symptoms scale ($b=.839$, $p<.001$) than those that have not experienced it. While none of our control variables were found to be statistically significant, Black participants with an incarcerated mother scored 1.449 points higher on the depressive symptoms scale ($b=1.449$, $p<.01$) than other participants.

Similarly, Model 2 shows that compared to respondents that have not experienced parental incarceration, respondents that have experienced maternal incarceration score 57.2% higher on the depressive symptoms scale ($b=.572$, $p<.05$), while experiencing paternal incarceration is associated with an 85.4% increase in adult depressive symptoms scale ($b=.854$, $p<.001$).

Table 5: OLS Regression Model for Predictors of Adult Depressive Symptoms

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B (SE)	t	B (SE)	t	B (SE)	t	B (SE)	t	B (SE)	t
<i>Independent Variable</i>										
Parent Incarcerated ¹	.886*** (.127)	6.989	.884*** (.127)	6.971	.760*** (.146)	5.191	.868*** (.127)	6.828	.756*** (.147)	5.149
<i>Control Variables</i>										
Black			.074 (.120)	.616	-.032 (.135)	-.235	.075 (.124)	.602	-.019 (.138)	-.138
Female							.033 (.102)	.321	.035 (.102)	.345
Age							.020 (.029)	.692	.019 (.029)	.664
Urban ²							-.076 (.112)	-.672	-.075 (.112)	-.667
Parent's Education ³							-.002 (.136)	-.015	-.007 (.136)	-.051
Welfare							.067 (.191)	.353	.048 (.191)	.253
Parent Employed							-.097 (.124)	-.783	-.100 (.124)	-.803
Black x Parent Incarcerated					.494 (.293)	1.690			.451 (.294)	1.532
Constant	8.814*** (.057)	154.714	8.797*** (.063)	138.938	8.822*** (.065)	135.892	8.292*** (.853)	9.720	8.343*** (.854)	9.774
R ²	.016		.016		.017		.016		.017	

Note. N=3055. *p≤.05; **p≤.01; ***p≤.001. ¹Reference category is Neither Parent Incarcerated. ²Reference category is suburban neighborhood. ³Education is high school diploma.

Table 6: OLS Regression Model for Predictors of Adult Depressive Symptoms

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B (SE)	t	B (SE)	t	B (SE)	t	B (SE)	t	B (SE)	t
<i>Independent Variables</i>										
Mother Incarcerated ¹	.572* (.252)	2.266	.569* (.253)	2.252	.155 (.297)	.524	.580* (.253)	2.295	.170 (.297)	.572
Father Incarcerated ¹	.854*** (.135)	6.348	.853*** (.135)	6.339	.858*** (.134)	6.377	.834*** (.253)	6.171	.839*** (.135)	6.211
<i>Control Variables</i>										
Black			.075 (.120)	.621	.002 (.123)	.015	.074 (.124)	.599	.001 (.127)	.005
Female							.030 (.102)	.295	.038 (.102)	.377
Age							.021 (.029)	.715	.019 (.029)	.660
Urban ²							-.073 (.113)	-.647	-.064 (.113)	-.569
Parent's Education ³							-.009 (.136)	-.063	-.008 (.135)	-.060
Welfare							.068 (.190)	.356	.064 (.190)	.335
Parent Employed							-.096 (.124)	-.775	-.090 (.124)	-.723
Black x Mother Incarcerated					1.466** (.552)	2.653			1.449** (.553)	2.622
Constant	8.814*** (.057)	155.765	8.797*** (.063)	139.636	8.813*** (.063)	139.376	8.278*** (.853)	9.703	8.329*** (.852)	9.770
R ²	.016		.017		.019		.017		.019	

Note. N=3055. *p<.05; **p<.01; ***p<.001. ¹Reference category is Neither Parent Incarcerated. ²Reference category is suburban neighborhood. ³Education is high school diploma.

4.3 Criminal Justice Involvement

Table 7 presents the results from the first multivariate models which regressed criminal justice involvement on overall parental incarceration and control variables. Consistent with the current study's hypothesis, findings from Model 1 reveal that respondents with an incarcerated parent were significantly more likely to be arrested (O.R.=2.190, $p<.001$). After controlling for demographic variables and the interaction term, Model 5 shows that the odds of being arrested after experiencing parental incarceration were 105.3% (O.R.=2.053, $p<.001$) more likely than those that have not experienced parental incarceration. The only significant control variable was parent's education (O.R.=1.204, $p<.05$).

Similarly, Table 8 shows the regression analysis of maternal and paternal incarceration regressed on criminal justice involvement. Model 1 shows that maternal incarceration (O.R.=2.036, $p<.001$) and paternal incarceration (O.R.=1.962, $p<.001$) significantly increases the odds of criminal justice involvement. This significance remained consistent across all five models. Model 5 shows that after controlling for demographic variables and the interaction term, the odds of being arrested after the incarceration of a mother (O.R.=1.757, $p<.01$) or a father (O.R.=1.956, $p<.001$) are significantly higher than for those that have not experienced the incarceration of either parent. None of the control variables or interaction term included in Model 5 proved statistical significance.

To examine the relationship between parental incarceration, education outcomes, depressive symptoms, and criminal justice involvement, education outcomes and depressive symptoms were included as control variables in Tables 9 and 10. In table 9, Model 1 shows that while having an incarcerated parent (O.R.=1.736, $p<.001$) significantly increases the odds of being arrested, having a high school diploma (O.R.=.346, $p<.001$) significantly decreases the

odds of being arrested. Essentially, those with an incarcerated parent are 73.6% more likely to be arrested, those with a high school diploma 65.4% less likely to be arrested. As hypothesized, there is a statistically significant relationship between depressive symptoms (O.R.=1.039, $p<.01$) and criminal justice involvement. More specifically, for every one-unit increase in depressive symptoms, the odds of being arrested increase by 1.039, holding all other variables constant. Model 2 introduces the interaction term, Black participants with an incarcerated parent. This interaction was found to be statistically significant (O.R.=1.542, $p<.05$), suggesting Black participants with an incarcerated parent are more likely to be involved in the criminal justice system. None of the control variables in either model were found to be statistically significant.

Similar to the previous table, Table 10 shows that maternal and paternal incarceration increase the odds of being arrested. Model 1 shows that having a high school diploma (O.R.=.347, $p<.001$) significantly decreases the odds of being arrested. Model 1 also suggests that increased scores on the depressive symptoms scale (O.R.=1.038, $p<.01$) is associated with an increased likelihood of being arrested. Model 2 introduces our interaction term, Black participants with an incarcerated mother. However, this interaction was not found to be statistically significant, suggesting the effects of maternal incarceration is similar across racial/ethnic groups. In both models, none of the control variables were found to be statistically significant.

Table 7: Parental Incarceration Regressed on Criminal Justice Involvement

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR
<i>Independent Variable</i>										
Parent Incarcerated ¹	.784*** (.083)	2.190	.783*** (.083)	2.188	.739*** (.096)	2.073	.782*** (.084)	2.187	.719*** (.096)	2.053
<i>Control Variables</i>										
Black			.069 (.081)	1.071	.019 (.092)	1.020	.088 (.083)	1.092	.031 (.094)	1.032
Female							.001 (.069)	1.001	.001 (.069)	1.001
Age							-.005 (.020)	.995	-.005 (.020)	.995
Urban ²							.013 (.076)	1.013	.014 (.077)	1.014
Parent's Education ³							.188* (.094)	1.206	.186* (.094)	1.204
Welfare							-.133 (.132)	.845	-.145 (.132)	.865
Parent Employed							-.126 (.083)	.882	-.127 (.083)	.881
Black x Parent Incarcerated					.217 (.193)	1.243			.257 (.194)	1.292
Constant	-1.079*** (.039)	.340	-1.095*** (.044)	.334	-1.084*** (.045)	.338	-1.016 (.576)	.362	-.986 (.577)	.373
Nagelkerke R ²	.029		.029		.030		.032		.032	

Note. N=4226. *p≤.05; **p≤.01; ***p≤.001. ¹Reference category is Neither Parent Incarcerated. ²Reference category is suburban neighborhood. ³Education is high school diploma.

Table 8: Maternal and Paternal Incarceration Regressed on Criminal Justice Involvement.

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR
<i>Independent Variables</i>										
Mother Incarcerated ¹	.711*** (.173)	2.036	.708*** (.173)	2.030	.555** (.204)	1.742	.715*** (.173)	2.045	.563** (.205)	1.757
Father Incarcerated ¹	.674*** (.088)	1.962	.674*** (.088)	1.962	.674*** (.088)	1.963	.670*** (.089)	1.954	.671*** (.089)	1.956
<i>Control Variables</i>										
Black			.066 (.081)	1.068	.040 (.083)	1.041	.086 (.083)	1.090	.060 (.086)	1.062
Female							-.001 (.069)	.999	.000 (.069)	1.00
Age							-.005 (.020)	.995	-.006 (.020)	.994
Urban ²							.010 (.077)	1.010	.013 (.077)	1.013
Parent's Education ³							.185* (.094)	1.204	.485* (.094)	1.204
Welfare							-.135 (.132)	.874	-.137 (.132)	.872
Parent Employed							-.129 (.083)	.879	-.126 (.083)	.881
Black x Mother Incarcerated					.545 (.384)	1.724			.540 (.385)	1.717
Constant	-1.071*** (.039)	.343	-1.087*** (.043)	.337	-1.081*** (.043)	.339	-.988 (.577)	.372	-.965 (.577)	.381
Nagelkerke R ²	.029		.029		.030		.032		.032	

Note. N=4226. *p≤.05; **p≤.01; ***p≤.001. ¹Reference category is Neither Parent Incarcerated. ²Reference category is suburban neighborhood. ³Education is high school diploma.

Table 9: Indirect Outcomes of Parental Incarceration Regressed on Criminal Justice Involvement

	Model 1		Model 2	
	B (SE)	OR	B (SE)	OR
<i>Independent Variable</i>				
Parent Incarcerated ¹	.551*** (.098)	1.736	.442*** (.114)	1.556
<i>Control Variables</i>				
Black	.073 (.100)	1.075	-.034 (.116)	.966
Female	-.020 (.083)	.981	-.018 (.083)	.982
Age	-.013 (.023)	.987	-.014 (.023)	.986
Urban	-.085 (.092)	.919	-.085 (.092)	.919
Parent's Education	.135 (.112)	1.145	.130 (.112)	1.138
Welfare	-.063 (.156)	.939	-.084 (.157)	.919
Parent Employed	-.068 (.100)	.934	-.071 (.100)	.932
Black x Parent Incarcerated			.433* (.224)	1.542
<i>Moderating Variables</i>				
Education	-1.062*** (.108)	.346	-1.069*** (.108)	.343
Depressive Symptoms	.038** (.014)	1.039	.037** (.014)	1.038
Constant	-.130 (.706)	.878	-.065 (.707)	.937
Naglekerke R ²	.081		.083	

Note. N=3050. *p≤.05; **p≤.01; ***p≤.001. ¹Reference category is Neither Parent Incarcerated.

Table 10: Indirect Outcomes of Maternal and Paternal Incarceration Regressed on Criminal Justice Involvement

	Model 1		Model 2	
	B (SE)	OR	B (SE)	OR
<i>Independent Variable</i>				
Mother Incarcerated ¹	.620*** (.189)	1.858	.447* (.222)	1.563
Father Incarcerated ¹	.433*** (.104)	1.542	.437*** (.104)	1.548
<i>Control Variables</i>				
Black	.072 (.100)	1.075	.036 (.104)	1.036
Female	-.025 (.083)	.975	-.021 (.083)	.980
Age	-.014 (.023)	.986	-.015 (.023)	.985
Urban	-.090 (.092)	.914	-.086 (.092)	.917
Parent's Education	.134 (.112)	1.143	.134 (.112)	1.143
Welfare	-.060 (.156)	.942	-.062 (.156)	.939
Parent Employed	-.071 (.100)	.931	-.068 (.100)	.934
Black x Mother Incarcerated			.619 (.420)	1.858
<i>Moderating Variables</i>				
Education	-1.060*** (.108)	.347	-1.064*** (.108)	.345
Depressive Symptoms	.038** (.014)	1.038	.037** (.014)	1.037
Constant	-.104 (.706)	.901	-.063 (.707)	.939
Naglekerke R ²	.082		.083	

Note. N=3050. *p≤.05; **p≤.01; ***p≤.001. ¹Reference category is Neither Parent Incarcerated.

5 DISCUSSION

This study examined the associations between having an incarcerated mother, father, or parent on youth. While many studies examine the effects of parental incarceration, many fail to examine the racial differences in these effects. Because African American children are more likely to have an incarcerated parent (Foster and Hagan 2009), it is imperative to examine the effects and outcomes among African American children of incarcerated parents.

Overall, this study finds mixed support for Agnew's (1992) General Strain Theory, which suggests African Americans and other minority groups are more likely to experience strains. Findings indicate, as hypothesized, that parental incarceration significantly affects youth's education, adult depressive symptoms, and criminal justice involvement, even after controlling for demographic variables. The results of this study are consistent with existing research on parental incarceration. However, inconsistent with General Strain Theory, no significance was found for African American children with an incarcerated parent, meaning these effects were not amplified for Black children as hypothesized. However, when analyzing the differences between maternal and paternal incarceration for Black children, the regression analyses show significance for Black children with an incarcerated mother for adult depressive symptoms. Consistent with General Strain Theory, these results suggest that the experience of maternal incarceration for African American children more negatively affect adult depressive symptoms than children of other races.

Youth that experience the incarceration of their mother or father show similar high school graduation outcomes. The first hypothesis was supported to show that the incarceration of a parent negatively affects high school graduation. After controlling for demographic variables, the odds of graduating high school with a diploma after the incarceration of a mother were 61.8%

less than those without an incarcerated mother. Similarly, the odds of graduating after the incarceration of a father were 63.3% less than those without an incarcerated father, suggesting paternal incarceration more negatively affects high school graduation. The odds of graduating high school after the incarceration of a parent, whether it was either mother, father, or both parents, were 69% less than those that have never experienced parental incarceration.

Inconsistent with General Strain Theory, this finding was not found to be significant for Black children with an incarcerated parent.

Previous research has produced many inconsistent results about parental incarceration and mental health outcomes (Kopak and Smith-Ruiz 2016; Davis and Schlafer 2017). The second hypothesis of this study was supported, showing that parental incarceration is significantly associated with an increased score on the depressive symptoms scale. However, the current study suggests that those that have experienced the incarceration of their father score higher on the depressive symptoms scale than those that have experienced the incarceration of their mother. Similar to Swisher and Roettger's (2012) and Gaston's (2016) studies, which include an interaction term to test whether race/ethnicity moderates the relationship between parental incarceration and depressive symptoms, the current study also finds that the interaction term was significant for depressive symptoms. This result suggests that the effect of maternal incarceration on depressive symptoms differ across racial groups, more negatively affecting African American children.

With this finding, it is imperative to note that participants' depressive symptoms were measured in adulthood, not directly following the incarceration of their parent. As such, parental incarceration may cause long-lasting mental health effects well into adulthood, especially for Black children after the incarceration of their mother. However, these mental health effects may

also be a result of other intergenerational strains Black children may have faced during their childhood. Though, without qualitative data to assess this relationship, we are left to speculate why Black children with an incarcerated mother are more likely to experience adult depressive symptoms compared to children of other races.

Consistent with our third hypothesis, this study also suggests that those that have experienced the incarceration of a parent, whether mother or father, are more likely to be involved in the criminal justice system. However, the odds after the incarceration of a mother were much higher than the incarceration of a father. The odds of being arrested after the incarceration of a father is 95.4% higher than those that have not experienced paternal incarceration, while the odds of being arrested after the incarceration of a mother is 104.5% higher. Considering more children with incarcerated mothers are likely to be in nonfamilial care situations than those with incarcerated fathers, the higher odds of being arrested after maternal incarceration may be due to the disruption in the mother-child relationship after a mother is incarcerated, which is an important risk factor for the child's incarceration (Dallaire 2007). Similar to the previous outcomes, our interaction term was not significant. This suggests that the odds of being involved in the criminal justice system after the incarceration of a parent are similar across racial groups.

General Strain Theory (Agnew 1992) suggests that negative emotions, such as depression, may moderate the relationship between strain and delinquency. The results of this study support our final hypothesis, which examined education and depressive symptoms as moderating variables on criminal justice involvement. The odds of being involved with the criminal justice system for those that have a high school diploma are lower than those that do not have a high school diploma. Additionally, increased scores on the depressive symptoms scale are

associated with the increased likelihood of being involved in the criminal justice system. This study suggests that when looking at depressive symptoms, maternal incarceration most negatively affects African American children. However, this finding was not consistent when examining the relationship between maternal incarceration, depressive symptoms, and criminal justice involvement for African American children.

5.1 Implications, Limitations, and Future Research

There are several limitations to the current study. While the National Longitudinal Study of Adolescent to Adult Health (Add Health) was a nationally representative sample of adolescents, the available public-use data used was much smaller than the restricted-use data. Because only a small percentage of this sample have experienced maternal or paternal incarceration, this may affect the generalizability of the current study. The small sample size may have also affected the observed Nagelkerke R^2 , explaining why they are so low. Since the observed R^2 in logistic regression is a pseudo R^2 , it is important to interpret this statistic with caution.

Although widely cited and validated, because most of the interviews given were face-to-face, interviewer bias may exist. Additionally, because Add Health uses a school-based sample in Wave I, absent individuals or individuals that are not attending school are excluded. The behaviors and outcomes of adolescents that are not attending school, because they are incarcerated or dropped out, are just as important as those included in the study and may affect the generalizability of results. Additionally, the Add Health does not ask participants about parental incarceration until Wave IV, when all of the participants are an adult. This limits our analysis and does not allow us to establish a causal relationship. Nonetheless, this research is

necessary and adds to the literature on some of the disadvantages children with incarcerated parents encounter.

This study leaves ample potential for future research. The current study's main focus was to understand and predict the outcomes of Black children with incarcerated mothers. Results of this study indicate that the incarceration of a mother could be a risk factor for depressive symptoms in the Black community. Though this study adds to literature about the effects of maternal and paternal incarceration, this study does not go as to establish a causal link. However, this study does provide a strong indication that maternal incarceration has negative effects, that in some cases, are racialized. It is still unknown if these outcomes are due to the incarceration of a parent, or from other shared detriments children face. Future research, such as a qualitative study rather than a quantitative study, should examine the causal relationship between the two.

Additionally, future research should investigate placement after the incarceration of their parent. While incarcerated fathers usually report the child's mother as being the primary caregiver, incarcerated mothers commonly report the child's grandparents, relatives, or other relatives as being the primary caregiver (Glaze and Maruschak, 2008). Children that live with their grandparents or other relatives may experience better outcomes than those that end up in foster care.

5.2 Conclusion

The United States remains the country with the highest incarceration rates in the world, leaving many children to grow up without a parent. While parental incarceration affects every child differently, it is imperative to examine the outcomes of these children, whether causal or correlational. I hope that this thesis not only contributes to the literature of parental incarceration but will also give insight into the difficulties these children face every day.

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APPENDIX: DEPRESSIVE SYMPTOMS SCALE

Wave 4 – Depressive Symptoms Scale. Chronbach's alpha=.773; N=4217.	
Now, think about the past seven days. How often was each of the following things true during the past seven days:	
H4MH18	You were bothered by things that don't usually bother you.
H4MH19	You could not shake off the blues, even with help from your family and friends.
H4MH20	You felt you were just as good as other people.
H4MH21	You had trouble keeping your mind on what you were doing.
H4MH22	You felt depressed.
H4MH23	You felt that you were too tired to do things.
H4MH24	You felt happy.
H4MH25	You enjoyed life.
H4MH26	You felt sad.
H4MH27	You felt that people disliked you, during the past seven days.