Education and Health: Race and Gender Variations in the Causes and Consequences of Criminal Justice Involvement

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To the youths who march onward and upward toward the light,
this dissertation is respectfully dedicated

And to
JR Williams
Darrion Barnhill
Nana Adomako
Chad Robertson
Raynard Burton
Alteria Woods
Jordan Edwards
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TABLE OF CONTENTS

LIST OF TABLES

Chapter II. Holes in the Pipeline: An Empirical Test of the Relationship between School Suspension and Incarceration

Chapter III. Stress and Arrests: Racial Variations in the Effect of Arrest History on Depressive Symptoms

Chapter IV. Black Identity Matters: Arrest History and Psychological Well-Being Among African Americans, Caribbean Blacks, and Whites

LIST OF FIGURES

Chapter II. Holes in the Pipeline: An Empirical Test of the Relationship between School Suspension and Incarceration

Chapter IV. Black Identity Matters: Arrest History and Psychological Well-Being Among African Americans, Caribbean Blacks, and Whites

CHAPTER I

INTRODUCTION

The United States has experienced a dramatic growth and recent stabilization in incarceration rates (Sugie & Turney, 2017; Wakefield & Uggen, 2010). Within the past 40 years, the prison population increased five-fold (Wakefield & Uggen, 2010). The increase in the prison population has contributed to the United States being home to over a quarter of the world's prisoners, despite making up just five percent of the world's total population (Glaze & Parks, 2014; Maurer and King, 2007; NAACP, 2014; Western & Pettit, 2010). Today, the rate of incarceration in America surpasses that of any other nation in the world. Decades of dramatic growth and recent stabilization, and no decline, leave little doubt that America has a mass incarceration problem.

Confinement is the topic most often used to highlight the problem of mass incarceration. Though equally a part of the mass incarceration problem, statistics regarding arrests and convictions have received less attention in scholarly research and the media. Population-level estimates suggest that 12.2 million individuals are arrested annually (Department of Justice, 2012). Over one-third of individuals have been arrested by age 23 (Brame et al., 2012). Although not all arrests lead to convictions, the prevalence of convictions is still high. For example, 14 percent of individuals between the ages of 24 and 32 report a conviction (Lerman & Weaver, 2014). These statistics point to a problem with punishment in this country that is larger than incarceration. Forms of criminal justice involvement that are less often reported further underscore the problem, including police stops, harassment, or the use of deadly force (Goff et al., 2016; Lundman & Kaufman, 2003).

The larger problem is that the distribution of each of these types of criminal justice involvement is not random across individuals in the United States. Criminal justice involvement

is concentrated among racial/ethnic minorities, men, the poor, and the mentally ill (Sugie & Turney, 2017; Western, 2006). Relative to their overall representation in the United States population, Blacks and Hispanics are far more likely than whites to be incarcerated. For example, African Americans constitute over 1 million of the 2.3 million state and federal prison population, despite making up only 13 percent of the entire U.S. population (2014). Similar to Blacks, Latinos are overrepresented in the criminal justice system. Latinos represented about 21.6% of all state and federal prisoners in 2015, far exceeding the Latino portion of the entire US population, 17.1% (Bureau of Justice Statistics, 2015; US Census Bureau, 2014). Together, Blacks and Hispanics comprised 56% of all incarcerated people in 2015, despite making up only 32% of the US population (NAACP, 2014).

Criminal justice involvement is also unequally distributed across gender. Men are incarcerated at a rate nearly ten times higher than women (Prison Policy Initiative, 2012). Though many more men are in prison than women, the rate of growth for female imprisonment outpaced men by more than 50% between 1980 and 2014 (The Sentencing Project, 2014). This increase in the rates of women spending time incarcerated has warranted increased attention to gender differences in our correctional system. For years, it was difficult to find detailed information about incarcerated women. The lack of information on imprisoned women was due, in part, to being far outnumbered by men (Bosworth et al., 2005). More recently, increased attention has been paid to this incarcerated population.

Considering race and gender simultaneously adds another layer of detail to the distribution of criminal justice involvement. In 2014, the imprisonment rate for Black women (109 per 100,000) was more than twice the rate of imprisonment for white women (53 per 100,000) (Carson, 2015). Additionally, the highest concentration of arrests is among Black men

and the danger of incarceration occurs at younger and younger ages. By age 23, 38 percent of white males have been arrested, while the same is true for 49 percent of Black males and 44 percent of Latino men (Brame et al., 2014). In 2003, a report by Bureau of Justice statistics drew attention to the incarceration problem for Black men, making headlines nationwide (Bonczar, 2003). This report asserted that if imprisonment rates remained consistent, 1 in 3 Black males born in 2001 could expect to spend time in prison.

The disparities in criminal justice involvement are important because there are a host of known negative consequences that stem from being involved with the criminal justice system. If there is differential funneling of individuals into the criminal justice system, it is logical to expect that the criminal justice system will contribute to health inequality that mirrors differential involvement. Based on both the sheer number of people who spend time behind bars and the disparities across race and gender, research on the causes and the consequences of criminal justice involvement is necessary.

RESEARCH QUESTIONS

In this dissertation, I explore some understudied causes and consequences of criminal justice involvement: school discipline as cause and mental health as consequence. I pay special attention to race and gender variations in these causes in consequences in order to more fully understand how America's fascination with mass incarceration contributes to life inequity. This dissertation is made up of three separate but related studies. One that covers schools as cause, one that covers mental health as consequence, and one that honesin on variations in the process linking mass incarceration to poor health outcomes. Each paper offers insight into the link between criminal justice involvement and poor life circumstance.

The main research questions are:

1) What is the relationship between school suspension and later chances of incarceration?
2) Does having an arrest history influence depressive symptoms among young adults?
3) What is the role of racial/ethnic group identity in the link between arrest history and mental health status?

Across each of these research questions, I focus on variations by race/ethnicity and, in two of three chapters, gender. Before describing the background research and theoretical framework that informed this dissertation, it is necessary to provide a few notes about terminology used throughout the chapter. This dissertation is focused on criminal justice involvement. While incarceration is the topic most often used to highlight the problem of mass incarceration, there are multiple forms of criminal justice involvement that contribute to the larger problem of mass incarceration. Part of the reason that incarceration has been the privileged statistic is because it seemingly represents the penultimate outcome of criminal justice involvement. Incarceration, however, is the least common form of involvement. Two other forms of involvement are arrests and convictions. The variables used in the papers in this dissertation are arrests in incarceration. When covering the literature and in discussion of results, I often used the broad term criminal justice involvement to highlight the interconnectedness of the criminal justice system and the breadth of ways it can impact health.

It is important to note that this dissertation focuses on health inequalities. By health inequalities I mean the disparate ways in which health status distribution is patterned by social status defining characteristics, namely race/ethnicity and gender here. This distinction is important for two reasons. First, it highlights that I am not concerned with the fact that, on the whole, the U.S. population has experienced an increase in life expectancy and well-being, as the primary causes of death have transitioned from infectious diseases to chronic diseases (Gaylin &

Kates 1997). Rather, I am concerned, for example, with the way in which health status distribution has continued to be patterned by race and ethnicity while the number of non-white individuals in the country has grown. Second, I highlight this point because there has been some debate regarding the use of the terms health inequalities, health disparities, and health inequities. While many insist that these terms describe different situations, others use the terms interchangeably (LaVeist, 2002). I use the terms interchangeably, but argue that the most important aspect of research should be finding and addressing the sources of these differences – no matter the term used. Lastly, I am intentional about the use of the term criminal justice involvement. A more widely used term is criminal justice contact. However, I use criminal justice involvement to highlight that contact may not be necessary to incite negative consequences. For example, for some the mere thought of police, being pulled over, or being arrested being incarcerated can illicit stress responses.

BACKGROUND AND THEORY

Sources of Criminal Justice Involvement

A long-standing argument about the source of criminal justice involvement and the disparities therein is that rates of incarceration can be explained by criminal offending (Blumstein 1993; Harris et al., 2009; Hawkins 1986; Sorenson et al. 2003). Specifically, research has contended that people go to jail because they commit crimes, and that existing disparities in arrests, convictions, and incarceration can be explained by disproportionality in crimes committed (Blumstein 1993; Harris et al., 2009; Hawkins 1986; Sorenson et al. 2003). Police cite such differences in crime rates to justify racial and gender imbalances in patrolling and arrests (Harcourt, 2001; Rudovsky, 2001). However, this focus on criminal behavior neglects both the

bias on the part of law enforcement officals and the structural inequities that foster high rates of crime.

In the late 1990s, concerns were raised across the U.S. about police harassment of African Americans and Hispanics in their everyday encounters with law enforcement. These concerns focused on the extent police were stopping people on the roads and highways for simply "driving while Black" (Lundman & Kaufman, 2003). Research has supported these concerns, demonstrating the concentration of police stops, searches, and arrests among Blacks and Hispanics can be attributed to police officer bias (Demuth, 2001; Smith & Alpert, 2007; Spohn, 2002). Focusing on criminal behavior as the cause of crime also masks the connection between social disadvantage and crime. Racial and ethnic segregation results in the concentration of Blacks and Hispanics in neighborhoods characterized by failing schools, high unemployment and lack of stable family structures (e.g. incarcerated family members) (Peterson & Krivo, 2005; Sampson & Raudenbush, 2004; Turney, Wildeman, & Schnittker, 2012).

Gender differences in criminal justice involvement are now well documented but less is known about the source. The explanations that do exist have also focused on differences in criminal behavior and police bias. Women tend to occupy the social role of caregiver. In many ways, this can lead to women having more to lose from incarceration, as a criminal record would result in disruptions to more social roles than men. (Starr, 2014). Therefore, one explanation is that women tend to engage in less criminal behavior than men because of their own recognition of what they have to lose. A second explanation is that individuals in the criminal justice system tend to treat women differently by offering shorter prison sentences, for example. (Stacey & Spohn, 2006; Starr, 2014). Taken together, these frequently reported explanations shed light on race/ethnicity and gender disparities in criminal justice involvement. However, this dissertation

focuses on a cause that has received and abundance of popular media attention and but less scholarly attention: schools.

The school-to-prison pipeline (STTP) is a term used to highlight the educational system's role in contributing to mass incarceration and its racial disparities, specifically. Over the few decades, schools have undergone a dramatic change in the way they approach discipline for disruptive children. As a result of 'zero-tolerance' policies in schools which were in response to mass shootings, schools are increasingly relying on more extreme forms of punishment such as suspension, expulsion, referrals to law enforcement, and school based-arrests to discipline children for rule violations (Meiners, 2011; Raible & Irizarry, 2010; Wun, 2015). For example, over a period of 40 years, the number of out-of-school suspensions reported annually doubled from 1.7 million in 1974 to 3.45 million in 2012 (Nance, 2016). Students are also being directly arrested as a result of misbehavior The U.S. Department of Education's Office of Civil Rights estimated that during the 2011-2012 school year, schools refereed approximately 260,000 students to law enforcement, and there were 92,000 school-based arrests.

Research has demonstrated that suspending students from school is not an effective means of correcting misbehavior (Skiba & Knesting, 2001). Instead, punitive practices such as suspension and expulsion lead to academic deterioration. Students who are suspended and divorced from their academic environment endure feelings of hopelessness, reduced self-worth and often engage in delinquent or criminal behavior (Cumi, 2016; Townsend, 2000; Wald & Losen, 2003; Walker-Dalhouse 2005). Suspension from school has been reported as a major reason for dropping out of school (DeRidder, 1991; Skiba & Noam, 2001). The future outlook for youth who drop out of school is dismal, with dropouts composing 82% of the adult prison population and 85% of juvenile justice cases (Coalition for Juvenile Justice, 2001). While this

link between suspensions and incarceration is the broad problem encompassed in the school-to-prison pipeline. A central component is the racialized aspect of the process.

The most alarming aspect of over-policing students in schools and the STPP generally is that not all racial groups are affected equally. The STTP as metaphor recognizes the uptick in school suspensions and ties it specifically to racial inequity in imprisonment rates (Figlio, 2006; Lochner & Moretti, 2004; Meiners, 2011; Raible & Irizarry, 2010). In 2012, African American students represented 16% of the total student population, but accounted for 32% of in-school suspensions, 33% of out-of-school suspensions, and 42% of students who were suspended more than once in the academic year (Nance, 2016). The disproportionality based on race remains after accounting the effects of socioeconomic status (Raffaele Mendez, Knoff, & Ferron, 2002; Skiba et al., 2002). Gender is also an important part of the STPP conversation, which tends to focus on boys of color. Recently, there has been a growth in attention to the ways that schools punish Black girls (Blake et al., 2011; Wallace et al., 2008; Wun, 2016). This research suggests that gender differences in the outcomes of school discipline among racial minorities is worth continuing attention.

Like explanations for criminal justice involvement more broadly, some explanations have proffered that the reason behind these disparities in school discipline is that Black and Brown children tend to misbehave more often than other students (Eitle & Eitle, 2004). However, empirical evidence debunks this claim (Skiba et al., 2002). Instead the STPP suggests that schools are an important source of race and gender disparities in rates of criminal justice involvement, and unjustly so. Rios (2011) considers school part a youth control complex that systematically treat youth's everyday behavior as criminal activity and pipelines them into the criminal justice system and poor life chances.

Consequences of Criminal Justice Involvement

In response to both an increase in the prison population in the U.S. and large disparities in criminal justice involvement, researchers have frequently chronicled the consequences criminal justice involvement. The conclusions are bleak. Overwhelmingly, these literatures have documented the adverse social conditions that follow criminal justice involvement (Wakefield & Uggen, 2010). Because of these literatures, it is clear that being 'marked' as criminal can lead to unemployment, disrupted family structures, future criminal behavior, and loss of civil rights (Braman, 2004; Pager, 2003; Nurse, 2002; Uggen, Manza, &Thompson, 2006; Western, 2006). Even though one of the goals of the criminal justice system is rehabilitation, it appears that individuals who pass through the system are set on a trajectory of poor life circumstance.

Poor health has received increased attention as a consequence of criminal justice involvement. Being incarcerated has been linked to a host of negative health outcomes including hypertension, functional limitation, infectious and stress-related diseases, and poor overall-general health (Massoglia 2008; Schnittker & John, 2007; Wang et al., 2009; for an exception see Patterson 2010). Owing to the use of deadly force, both incarceration and arrests have been associated with a reduced life span and loss of life (Binswanger et al., 2007; Patterson, 2010; Patterson, 2013). For a while, research on the consequences of criminal justice involvement focused on social role disruption (e.g. job loss, family disruption) and physical health. However, recently, increased attention has been given to the mental health consequences of formerly incarcerated people. Numerous empirical studies have demonstrated that criminal justice involvement adversely affects physical and, more recently, mental health (Geller et al., 2014; Sewell et al., 2016; Sugie & Turney, 2017; Turney, Wildeman, & Schnittker, 2012). Focusing mostly, on incarceration, this research finds that incarceration has a lasting impact on mood

disorders, including depressive symptoms and major depression. This relationship is true even after taking into account that psychiatric disorders are a precursor to incarceration.

One might ask, why would being incarcerated result in deteriorated health. Scholars have offered several answers. The mark of a criminal record is not just a signal to employers and non-incarcerated members of society. The stigma associated with becoming involved with the criminal justice system can lead to poor mental health (Hatzenbuehler, Phelan, & Link, 2013; Lerman & Weaver, 2014). Additionally, the trauma of being searched or harassed by police or school resource officers can also be detrimental to mental health (Brunson & Weitzer, 2009). The use of excessive force by police, which research has demonstrated is concentrated among Blacks and Hispanics, further sheds light on the ways in which criminal justice interactions can be detrimental to health (Worden, 2015).

The Stress Process and Labeling Theories

In terms of causes, this dissertation relies on the STPP metaphor and labeling theory. The STTP metaphor describes the process of funneling students from schools into prison. However, the concept lacks a theoretical mechanism. Labeling theory is a framework that helps close the gap Becker, 1963). The framework describes the application of stigmatizing or criminal labels that increase the likelihood of future criminal behavior. The application occurs in two ways: through internal and external processes (Lemery, 1951; Paternoster & Iovanni, 1989). Using suspensions from school as example, internal process describes the process of students applying delinquent labels to themselves as a result of being suspended. External processes refer to others applying the delinquent label and invoking additional exclusionary practices and withholding opportunities (Liberman, Kirk, & Kim, 2014). A teacher who knows a student has been suspended may be more likely to suspend them a second time or write them off as

underperforming despite their academic ability. The problem is that students of color are suspended for behaviors are characterized as normative behavior in most settings (Finn & Servos, 2014). Labeling theory ultimately suggests that once a deviant label is applied, through being suspended for example, an internal and external detachment process that promotes further criminal justice involvement ensues.

In terms of exploring consequences, I employ elements of the stress process model (Pearlin et al., 1981; Turner, 2010). The stress process model has become a dominant a widely used theoretical framework across the discipline. It has been used for conceptualizing both status differences in (mental) health and variations in the risk and protective factors implicated in these differences. Central to the stress process model is that social statuses determine the conditions of people's lives. Social statuses, including race/ethnicity and gender, influence people's stressful events and the availability of coping resources. The central parts of the stress process model are stressors, moderators, and health outcomes (Turner, 2009).

Stressors refer to any environmental, social, or internal demand which requires an individual to readjust his/her usual behavior patterns and stresses their coping strategies (Dagadu & Christie-Mizell, 2012; Thoits, 1995). Stressors impact mental health outcomes by creating strain on individuals' ability to cope and cause wear and tear on people's psychological and biological systems leading to illness, disease, and mortality (Geronmius et al., 2006; Williams & Mohammed, 2009). In this dissertation, criminal justice involvement is the stressor of interest. Recall that there are several ways that criminal justice involvement can serve as a stressor. Numerous empirical studies have demonstrated that criminal justice involvement adversely affects physical and, more recently, mental health (Geller et al., 2014; Sewell et al., 2016; Sugie & Turney, 2017; Turney, Wildeman, & Schnittker, 2012).

Moderators are psychosocial resources (e.g. mastery, self-esteem, and social support) that help reduce the deleterious effects of stressors. It is now widely accepted that examining stressors alone cannot adequately address the effect of stressors on health outcomes. Instead, we must consider the variety of behaviors, perceptions, and cognitions that are capable of altering the difficult conditions or of buffering their impact. Moderators develop out of the social statuses individuals occupy and the conditions they inhabit (Turner & Avison, 2003). The moderators most frequently studied using the stress process model are mastery and self-esteem. One of the chapters in this dissertation considers an understudied moderating resource: racial/ethnic group identity. Racial group identification involves a sense of racial or ethnic pride, involvement in cultural or ethnic practices, and cultural commitment to one's racial/ethnic group (McGee & Martin, 2011). Scholars suggest that racial group identity may be an important moderating resource inasmuch as it serves to buffer stressful situations by preventing negative stereotypes from permeating one's self concept. McGee & Martin, 2011; Sellers et al., 2003).

The final component of the stress process model is outcomes. Outcomes are the observed effects of stressors after accounting for the moderating process (Dagadu & Christie-Mizell, 2014; Ida & Christie-Mizell, 2012; Pearlin et al., 1981). Stress outcomes are unbounded, and can range from diastolic blood pressure to life satisfaction. In the sociology of mental health specifically, the most common stressors examined are depressive symptoms and anxiety. Papers in this dissertation, too, consider depressive symptomatology.

STATEMENT OF THE PROBLEM

The influence of the penal system on social and economic disadvantage is becoming increasingly clear. The inequality produced by mass incarceration is sizeable and important for three main reasons: it is largely invisible, it is cumulative and cyclic, and it is intergenerational.

The inequality is invisible because often times those who are institutionalized are not included in estimates of well-being. For example, it is often the case that individuals who have been pushed out of schools due to overpolicing are included in the uneducated population when hypercriminalization in schools could be contributing to health disparities. The inequality is cumulative because the consequences associated with criminal justice involvement are concentrated among those who already occupy the lower rungs of the socioeconomic mobility and cyclic because the mark of a criminal perpetuates further inequality. Mass incarceration exacerbates disparities and forecloses mobility for those who are already marginalized by structural disadvantage. Lastly, inequalities that stem from mass incarceration do not just impact the person who goes to jail or prison, but it also impacts their families and children and sets them on a path of low life chances (Brown, Bell, Patterson, 2016; Turner, Wildeman, & Schnittker, 2012; Western & Petit, 2010).

Alexander (2012) highlights the way in which the criminal justice system effectively pushes African American men further to the outer rungs of society, despite the belief that we live in a post-racial society. Hundreds of years removed from slavery and the formal control of Black bodies, the criminal justice system proves that America is still not an equal and just society. The arguments and rationale touted in support of racial discrimination such as the belief the Blacks and Hispanics engage in more delinquent behavior in schools, look slightly different than they did 100 years ago. However, research continues to conclude that the outcome is the same. Though the rate of incarceration in this country is historically high, the most important issue to issue address today is, perhaps the fact that there is inequality in the funneling of people into the prison system and the outcomes are divergent. For already marginalized groups in our society,

serving time in prison is becoming a normal life event (Western & Pettit, 2010). Uncovering reasons why and better understanding the outcomes are pertinent.

RESEARCHER POSITIONALITY

I would be remiss not to acknowledge that I approached the topics covered in this dissertation reluctantly. In the research process, remaining reflective enables researchers to be aware of the perspectives and biases that can influence research projects from topic selection to interpretations of results (Merriam, 2009). As a Black male, within the age range of the infamous "1 in 3" statistic, studying the problem of mass incarceration often felt too close for comfort. In many ways, I felt as if I already knew the problem. As the dissertation unfolded, the interplay between personal experience, occurrences across the U.S., statistics about the number of people involved in the mass incarceration system, and the findings of my research fostered a hyper-reality. I was reminded while completing this dissertation of the numerous times that I was stopped by the police and my perception was that it was only because I was young Black male. I was reminded of the fact that the '1 in 3' statistic was applicable to those closest to me among my family and friends. I was reminded of how feelings of anxiety overcome me whenever I simply drive past a police officer or one drives behind me. While writing the dissertation, I would dream about encounters with police that almost always ended negatively. I must admit that these memories and experiences not only brought me to the topic of this dissertation in the first place, but they kept me energized about shedding light on the topic. Despite feeling close to the research, the findings presented here are reflective of the data and rooted in theory. My hope is that this research will be used to help focus both efforts to eliminate causes of mass incarceration and remedy some of the detrimental consequences.

CONTRIBUTION

This dissertation and the three studies it includes will make several contributions to the literature. First, the school-to-prison pipeline has been referenced in scholarly research and popular media frequently over the past decade. However, few studies specify a mechanism and empirically validate the link between school discipline and later chances of incarceration. Second, this dissertation focuses on criminal justice involvement early in the life course. Research on the consequences of criminal justice involvement has tended to focus on adults. In this dissertation, I take a look at criminal justice involvement in youth and adolescence. An understanding of the effects of early involvement with the criminal justice system will further highlight the importance of the problem and increases chances that the source of important health disparities early in the life course is addressed. Next, this dissertation considers the compounding effects of criminal justice involvement by considering the way in which stress proliferates. Further, I do not assume that criminal justice involvement only has direct impacts on health. I also consider that it impacts several aspects of life which, together, adversely impact health status. Lastly, this dissertation places racial, ethnic, and gender variation at the center. Across the chapters in this dissertation, I ask, "For whom?" In doing so, I intend to highlight the disproportionate way in which the criminal justice system deteriorates the quality of life of those it touches.

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CHAPTER II

Holes in the Pipeline: An Empirical Test of the Relationship between School Suspension and Incarceration

INTRODUCTION

The racial gap in criminal justice involvement is important because it is becoming more widely understood that coming into contact with the criminal justice system can result in loss of life, family disruption, high levels of stigma, and lower socioeconomic attainment across the life course (Sugie and Turney, 2017). For years, crime and punishment have provided some of the most powerful symbols of racial inequity in America, wherein racial and ethnic minorities exposed to the system at much higher rates (Pager, 2003). Unfortunately, racial inequity in the criminal justice system is not new. The over-policing and hyper-visibility of Black bodies lingers from a time when such actions were explicit attempts to control the Black population (Dillon, 2012). For example, lynchings, chain-gang style penal practices, and prosecutions based solely on race were common in the early decades of the 20th century (Rosich, 2007).

In 1910, African Americans, who were roughly 11 percent of the U.S. population, were over one-third of the prison population (Russell-Brown, 2009). In contemporary times, Americans continue to grapple with the perceptions and reality of racial injustice in the American justice system. In 2008, 1 in 21 African American males was behind bars, compared to 1 in 72 for all men and 1 in 136 for white men (NAACP, 2014). These disparities are easy to highlight but more difficult to explain. Differential rates of criminal justice involvement may be the result of implicit bias in police officers or the result of the persisting gap in socioeconomic status that plagues the U.S. Or, these disparities may be the fault of social institutions such as the one that was once touted as the great equalizer. Research has implicated the American

educational system as a contemporary contributor to trends of racial inequity in the criminal justice system. This study focuses on the role education as a social institution plays in the production of involvement with the criminal justice.

Many schools have replaced the former system of step-wise sanctions with a "zero tolerance" approach to alleged misbehavior (Meiners, 2011; Raible & Irizarry, 2010; Wun, 2015). Implementation of such an approach has resulted in an increase in the presence of police in schools, the use of various search procedures, and state level policies that require students to be referred to law enforcement authorities for rule violations. These changes largely supplanted the judgement and authority of teachers and principals. Despite the alleged objective neutrality of the "zero tolerance" approach, school discipline practices are highly racialized. Racial minorities are punished more often and more severely than their White counterparts (Debnam, Bottiani, & Bradshaw, 2017; Huang, 2016; Skiba, 2001).

Having noticed these trends, scholars have begun to more seriously consider the connection between education, "the great equalizer," and the penal system. Recently, there has been an increase in research and public discourse surrounding the "school-to-prison pipeline" (STPP) or "prison-track" (Figlio, 2006; Lochner & Moretti, 2004; Meiners, 2011; Raible & Irizarry, 2010)**.** The school-to-prison pipeline is a metaphor that encompasses the expansive network of relations that normalizes the movement of children of color from schools and into under-employment, unemployment, and forms of permanent detention (Meiners, 2011). The school-to-prison pipeline suggests that students who are suspended or expelled from school wind up in jails and prisons. While an increasing amount of research that links punitive tracks to the growing prison population, there is a lack of scholarship that empirically demonstrates the role

that schools play in the extraordinary incarceration rates in the U.S (see Bowen and Brent, 2016 for an exception).

This study is intended to fill this gap. The first aim of this research is to empirically substantiate the alleged school-to-prison pipeline. Specifically, I ask: what is the relationship between suspension from school and later incarceration among a nationally, representative sample of adolescents? In line with the racialized component of the STPP, this project also examines the degree to which this relationship varies by race. Much of the work around school discipline has focused specifically on Black, and sometimes Latino, boys (Monroe, 2006; Noguera, 2008; Wun, 2016). Less attention has been given to gender; therefore, this study will incorporate an analysis of gender alongside race.

The second aim that drives this research is to investigate whether suspension is the significant difference in chances of incarceration between groups that are equivalent in terms of race, gender, socioeconomic status, and other background characteristics. I accomplish this goal using propensity score matching. In other words, I compare the results of a quasi-experimental approach to investigating the link between suspension and later chances of incarceration to a more traditional, non-experimental approach. The implications of the substantive results of the study are discussed. The discussion also includes considerations for the utility of propensity score matching in observational studies to approximate experimental designs.

BACKGROUND AND THEORY

Disproportionality in Criminal Justice Involvement

America is home to over one quarter of the world's prisoners, surpassing the rates of incarceration for all other nations. State and federal correctional authorities held an estimated 1.51 million prisoners in 2016 at year-end. In addition to imprisoning high proportions of its

population, the disproportional rate at which certain members of the U.S. population are imprisoned is alarming. Over the years, researchers have uncovered a host of predictors of criminal justice involvement. These scholars have sought to answer the questions: why are people incarcerated?

One of the most popular answers is race. In Sociology and Criminology, it has been well-established that race and ethnicity affect one's chances of incarceration. Relative to their overall representation in the United States population, Blacks and Hispanics are far more likely than whites to be incarcerated. In 2014, Black people constituted 2.3 million, or 34%, of the total 6.8 million correctional population. Together, Blacks and Hispanics comprised 56% of all incarcerated people in 2015, despite making up only 32% of the US population (NAACP, 2014). Between 2006 and 2016, the incarceration rate for Blacks and Hispanics has been decreasing at a faster pace than whites (Bureau of Justice Statistics, 2018). However, even if differential decreases persist, race will remain one of the strongest predictors of incarceration and criminal justice more broadly.

Another strong predictor of criminal justice involvement is gender. Men are incarcerated at a rate nearly ten times higher than women (Prison Policy Initiative, 2012). Though many more men are in prison than women, the rate of growth for female imprisonment outpaced men by more than 50% between 1980 and 2014 (The Sentencing Project, 2014). This increase in the rates of women spending time behind bars has warranted increased attention to gender differences in our correctional system. For years, it was difficult to find detailed information about incarcerated women. The lack of information on imprisoned women has been due, in part, to being far outnumbered by men. More recently, increased attention has been paid to this incarcerated population.

One of the additional details that has surfaced has been racial/ethnic breakdowns within gender. What these breakdowns reveal is a nuanced understanding of the incarceration picture. In 2014, the imprisonment rate for Black women (109 per 100,000) was more than twice the rate of imprisonment for white women (53 per 100,000) (Carson, 2015). In 2003, a report by the Bureau of Justice statistics drew attention to the incarceration problem for Black men, making headlines nationwide (Bonczar, 2003). This report asserted that if imprisonment rates remained consistent, 1 in 3 Black males born in 2001 could expect to spend time in prison. Incarceration rates for Black males have since declined, bringing uncertainty to the accuracy of this assertion. However, this decline should not overshadow the severity of the issue that remains. For example, there are nearly 4 times as many Black men incarcerated as women of all races in the U.S (Carson & Anderson, 2016).

The racial disparity in incarceration starts early in the life course. Typically, people associate incarceration with adulthood. However, Black youth represent 32% of children who are arrested and 42% of children who are detained. Black youth also represent 52% of children whose cases are judicially waived to criminal court (NAACP, 2014). These racial disparities among youth are particularly relevant to the present study, as it focuses on youth and young adult incarceration. As scholars and practitioners focus on the problem among Black men, attention also needs to be paid to Hispanics. As of 2001, 4% of Hispanic males in their twenties and early thirties were in prison or jail – as compared to 1.8% of white males (Federal Bureau of Prisons Population Count, 2003). Black women have the highest rates of incarceration among all women. White women represent the race-gender group with the lowest rate of imprisonment, with rates 50 times lower than Black men (Carson & Anderson, 2016). Simultaneously considering race

and gender can add depth to our understanding of the high incarceration rates in this country. It also raises important questions about the source of these disparities.

The Source of Criminal Justice Involvement

Can the large racial/ethnic and gender gaps be attributed to systematic racial and policy discrimination, or do they reflect disproportionally high rates of "serious" or street crime among Black and Hispanic men? A handful of studies on the topic have concluded that disparities in criminal justice involvement are due to differential offending, particularly for violent offenses (see, for example, Blumstein 1993; Harris et al., 2009; Hawkins 1986; Sorenson et al. 2003). This work largely neglects two issues. First, attributing incarceration and arrest disparities to criminal offending circumvents the fact that arrests are the direct result of police decisions and behaviors. Solely focusing on criminal offending also fails to account for arrests errors or racial and gender bias in arrests. For example, Hispanics may face increased chances of arrest because of their difficulty speaking English to police officers, misunderstanding or distrust of the criminal justice system, fear of deportation, or pure discrimination on the part of the arresting officer (Demuth, 2001; Spohn, 2002; Steffensmeier & Demuth, 2000).

Second, solely relying on criminal offending neglects the societal inequities that foster higher rates of crime. These inequities include racial segregation, resulting in the concentration of social disadvantage among Blacks and Hispanics. Consequentially, these groups live in neighborhoods characterized by failing schools, high unemployment, lack of stability in family structures, and inadequate access to healthcare. Such structural disadvantage has long been linked to higher rates of crime (Peterson & Krivo, 2005; Sampson & Raudenbush, 2004). Racial bias in policing and structural disadvantage together can help explain racial/ethnic differences in incarceration rates.

As for gender, several explanations for the disparity in criminal justice involvement rates between men and women have been posed. One explanation is that women, who tend to occupy the social role of caregiver, have more to lose from incarceration (Starr, 2014). Therefore, they avoid criminal activity or receive lighter, shorter prison sentences (Stacey & Spohn, 2006; Starr, 2014). This work suggests that young people may become involved with the criminal justice system and ultimately arrested, soley as a result of their social status defining characteristics.

While race, ethnicity, and gender have driven some of the strongest questions about why people are differentially incarcerated, there are several other factors to consider. For young people in particular, a substantial amount of research has been devoted to understanding factors that might cause them to become involved in crime and subsequently arrested (Hawkins et al., 2000; Loeber & Farrington, 2000). Health is one relatively underresearched, but important factor. A few recent studies that highlight the importance of concentrating research efforts on the health of formerly incarcerated adults (Schnittker, Massoglia, and Uggen, 2012). This research finds that psychiatric disorders and physical health limitations are precursors to incarceration. Though youth typically occupy a healthier social status relative to adults, health remains a critical consideration in exploring criminal justice involvement. A 2004 study of incarcerated juveniles in Mississippi uncovered that 71% to 85% of the study participants met criteria for one mental disorder, with one-third having co-occurring mental health and substance abuse disorders (Robertson et al., 2004)

School delinquency and neighborhood context are two more related and important factors. Association with delinquent peers, neighborhood violence, and limited opportunities for youth recreation or employment are known sources of delinquent behavior and criminal activity (Christle et al., 2005). Each of these factors stem from life in impoverished and under-resourced

areas. To illustrate - a prospective study involving a panel of youths followed since 1985, measuring potential risk factors for violence at ages 10, 14, and 16 years, concluded that the availability and use of drugs during the period of study was associated with criminal activity (Herrenkohl et al., 2000). Engaging in delinquent behavior is also heavily tied the behavior of close associates. Adolescents who report that their friends are delinquent tend to report higher levels of delinquency than adolescents with few or no delinquent friends (Haynie, 2002). Gang affiliation, an extreme form of peer influence, has been directly linked to incarceration as well as violent behavior while incarcerated (Varno, 2011). Still, delinquent behavior is not always directly linked to incarceration. A good majority of youth's time is spent in schools. Therefore, the place where their delinquent behavior is often initially addressed is in schools. In reaction to delinquent behavior, students can be suspended or expelled from school. Therefore, schools are important sources of criminal justice involvement, as many students move from schools into jail through suspension.

School-to-prison Pipeline and Labeling

Over the past few decades, schools have sought new ways to respond to both mass shootings and increased pressure to perform well on standardized testing. One of the biggest responses has been to replace the former system of step-wise sanctions with a "zero tolerance" approach to alleged misbehavior (Meiners, 2011; Raible & Irizarry, 2010; Wun, 2015). Suspension and expulsion from school are a marquee feature of zero-tolerance policies. These disciplinary practices are used to punish students, alert parents, and protect other students and school staff (Brownstein, 2009; Figlio, 2006; Rice, 2009). Yet, these zero-tolerance policies have been ineffective at improving the behavior they are attempting to remedy (McCord et al., 2000; McFadden & Marsh, 1992).

Around the same time, schools began adopting their own criminal-justice oriented approaches to safety, including the use of surveillance systems, metal detectors, drug sniffing dogs, and school resource officers (Robers et al, 2015). The extant research literature suggests that these punitive policies and practices exacerbate academic deterioration. Moreover, when students are provided with no immediate educational alternative, feelings of hopelessness, reduced self-worth, delinquency, crime, and substance abuse may ensue (Cumi, 2016; Townsend, 2000; Wald & Losen, 2003; Walker-Dalhouse 2005). Exclusionary disciplinary practices interfere with the educational progress and perpetuate a failure cycle, decreasing the opportunities to gain academic skills and appropriate social behaviors (Costenbader & Markson, 1998). Moreover, suspension from school has been reported as a major reason for dropping out of school (DeRidder, 1991; Skiba & Noam, 2001). The future outlook for youth who drop out of school is dismal, with dropouts composing 82% of the adult prison population and 85% of juvenile justice cases (Coalition for Juvenile Justice, 2001).

Why would being suspended lead to being incarcerated? Labeling theory can be used as a theoretical framework to support the connection. This theoretical framework generally focuses on the application of stigmatizing or criminal labels that increase the likelihood of future offending (Becker, 1963). Reactions to primary deviance are positioned as independent variables that foster, rather than deter, secondary deviance. Existing work offers two mechanisms for how labels attached to sanctioning can promote future criminal behavior: internal processes (Lemery, 1951) and external factors (Paternoster & Iovanni, 1989). The internal processes mechanism suggests that delinquent labels, such as ones that stem from being suspended, can shift identities toward a deviant self-concept. Individuals given a stigmatized label may adopt a criminal-self and become more deviant (Lemert, 1951). The mechanism that focuses on external factors

suggests that being labeled through primary sanctions (e.g. being suspended) can provoke 'secondary sanctions' via increased monitoring, exclusionary policies, and reduced opportunities (Liberman, Kirk, & Kim, 2014). Labeling theory, then, suggests that once a deviant label is attached, an internal and external detachment process that promotes further criminal justice contact ensues. Based on this theoretical conceptualization, the rise in school suspensions as a function of zero tolerance policies may be understood as one contributing factor to the growth in imprisonment rates over the past few decades.

Though evidence suggests that suspension is not an effective means of improving behavior, and instead may increase deviant behavior, suspension remains a common practice – especially, for certain groups of students. Based on this literature, one might argue that all youth who are suspended from school will be sent down a path of poor outcomes. For example, one of the few studies that links suspension to criminal justice involvement concludes that all students who are suspended experience an increased chance of being arrested (Mowen & Brent, 2016). The authors of this study find that suspension is linked to arrests even when controlling for a number of theoretically important dimensions such as race, age, delinquency, and gender among others. This study neglects to consider whether this process is universal across race and gender. With regard to chances of incarceration following suspension, one theoretical metaphor suggests that race, at least, may be an important conditional variable.

The STTP is a metaphor the recognizes the uptick in school suspensions and ties it specifically to racial inequity in imprisonment rates (Figlio, 2006; Lochner & Moretti, 2004; Meiners, 2011; Raible & Irizarry, 2010). Scholars, policy-makers and politicians, who are bringing awareness to the STTP recognize the intersection of two major American institutions that wield tremendous power over the life chances of youth, namely education and the criminal

justice system. The STTP encompasses the expansive network of relations that normalizes the movement of children of color from schools and into under-employment, unemployment, and forms of permanent detention (Meiners, 2011). At the heart of the school-to-prison pipeline is the belief that students who are, often unjustly, suspended or expelled from school end up in jails and prisons, and that race is a critical component of this process. It is well-established that males, the economically disadvantaged, racial/ethnic minorities, those who live in urban environments, and those with disabilities, are more likely to be suspended (Osher et al., 2010; Skiba et al., 2002). Black students are 2 to 3 times as likely to be suspended as White students (Wallace et al., 2008). The disproportionality based on race remains after accounting for the effects of socioeconomic status (Raffaele Mendez, Knoff, & Ferron, 2002; Skiba et al., 2002).

School discipline literature that has examined the effects of school discipline has tended to focus on boys of color (Monroe, 2006; Noguera, 2008). These studies have provided a necessary framework for understanding the racialized and criminalizing effects of school discipline policies. Recently, however, there has been a growth in attention to the ways that schools punish Black girls (Blake et al., 2011; Wallace et al., 2008; Wun, 2016). This research suggests that gender differences in the outcomes of school discipline among racial minorities is worth continuing attention. According to the U.S. Department of Education's Civil Rights Office (2014), 12% of school-aged Black girls across the country have experienced out of school suspensions, compared with 7% for Native American girls, 4% for Hispanic girls, and 2% for White girls. Other research has found that Black girls are twice as likely as their white counterparts to be sent to the office and are five times as likely to be suspended or expelled (Wallace, Goodkind, Wallace, & Bachman, 2008). This study finds that Black girls are not only more likely to be suspended and expelled, but they are also more likely to be under constant

surveillance by school administrators and disciplined for "disobedience" and "defiance" (E. W. Morris, 2007). The present study continues the conversation by paying careful attention to the intersection of race and gender in the STPP.

The differential rates of suspension for Black and White students are important because of the negative outcomes associated with suspension. As suggested by labeling theory, correlational and longitudinal research has shown that suspended students are more likely to be truant, miss instructional time, drop out of high school, and exhibit antisocial behavior (Arcia, 2006; Catalano, 2006). The STPP suggests that labeling theory is most applicable to racial and ethnic minorities when connecting suspension to incarceration. While incarceration as a consequence has garnered much attention as a guiding framework, limited work has quantitatively investigated its social reality. While public education was once used as a space for political education and social mobilization, policies and disciplinary procedures in schools may have disrupted this role. As Meiners (2007) documents in her research, disciplinary action, assessment techniques, pedagogy, and other school practices and policies all too often set in motion a series of actions that "function to normalize an 'expectation' of incarceration" for growing numbers of youth (p. 31). This study adds to the conversation by offering an empirical investigation of this function of education and suspension in particular. I focus specifically on how education, then, is not only a contributor to mass incarceration but also to disparities in mass incarceration across racial/ethnic and gender groups.

STPP as Natural Experiment

In addition to contributing to the literature on the link between suspension and incarceration, in this study, I take the opportunity to draw comparisons between results that include and exclude the use of propensity score matching. For better or worse, randomized

control trials have often been considered the gold standard in research. Among other things, experiments have been argued to enhance scientific quality, evidence-based policy, and causal inference (Weisburd, 2010; Weisburd, Mazerolle, & Petrosino, 2007). David Weisburd (2010) claims that the key limitation of non-experimental evaluation methods is that they require an assumption that all confounding factors related to treatment are identified in the statistical models developed. According to Weisburd, the key advantage of randomized experiments, is that this assumption can be relaxed. In other words, randomization into a treatment group is said to minimize selection bias and isolate the effect of a single variable while holding all other variables constant.

Randomized control trials can be time-consuming and expensive. It can also be unethical. Take the present study, for example. An experimental approach to investigating the relationship between school suspension and chances of incarceration would involve randomly assigning students to be suspended from school with knowledge of the detrimental consequences of suspension. Respondents are "assigned" to treatment groups without randomization in observational studies for causal effects. Those in the treatment group compared to those who are not may differ systematically with respect to relevant characteristics. The two groups may not be directly comparable without adequately accounting for the differences between them. In this study, the research suggests that Blacks and Hispanics are more likely to be suspended than whites. Therefore, in a bivariate study, it may be difficult to ascertain whether incarceration is caused by one's race or by being suspended. Various non-experimental, observational research methods have attempted to mimic the benefits of randomized control trials. Whether or not randomized control trials provide more accurate estimates of treatment effects than observational

studies is still with the jury. Propensity score methods are a set techniques that bridge experimental and non-experimental studies.

A propensity score is a conditional probability of assignment to a particular treatment given a set of observed covariates. Previous theoretical arguments and simulations suggest that creating matched samples using propensity scores approximates random assignment by balancing covariates across treatment groups (Rosenbaum & Rubin, 1984). In this study, I estimate respondents' propensity for being suspended based on a host of covariates that are known to be associated with both suspension and incarceration as suggested by the literature referenced above. By balancing on these known covariates, unknown covariates that are correlated with these known covariates are also accounted for. Individuals who have not been suspended are then matched to participants who have been suspended in order to create two groups with a similar propensity for, or likelihood of, being suspended. I compare results using propensity score matching to a more traditional method of utilizing observational data: multiple logistic regression without matching.

SUMMARY AND HYPOTHESES

In this study, I investigate how suspension impacts the likelihood of later incarceration among Black, Hispanic, and white adolescents and young adults. Additionally, I explore whether the impact that suspension has on later incarceration differs by race and gender. In other words, ask: for whom is the school-to-prison pipeline real? There are two main hypotheses. Each of these is in line with the theoretical underpinnings of the school-to-prison pipeline, wherein children of color are disproportionately funneled into the criminal justice system through school suspension. The hypotheses are as follows:

H1. Suspension from school during adolescence will be positively related to incarceration during young-adulthood.

H2a-d. Race and gender will moderate the relationship between suspension and incarceration such that the relationship will be stronger for a) Black males, b) Black females, c) Hispanic males, and d) Hispanic females relative to their white counterparts.

DATA AND METHODS

Data and Sample

To test the hypotheses stated above, I utilize data from rounds one through fourteen (1997-2010) of the National Longitudinal Survey of Youth 1997 cohort (NLSY97). The NLSY97 is an ongoing longitudinal nationally representative study of 8,984 respondents who were ages 12-17 in the first round of the survey. The sample consists of a nationally representative sample of 6,748 youths and an oversample of 2,235 Hispanic and non-Hispanic Black youth. The youth have been interviewed annually since the initial round of data collection. The NLSY97 includes questions that help document the transition from school to work and into adulthood. This study relies on complete cases analyses for Black males (N=725), white males (N=1,824), Hispanic males (N=603), Black females (N=747), white females, (N=1,688), and Latina females (N=598) which yielded a final analytic sample of 6,175 young adults. For the propensity score matched sample, I performed a 1:1 match of adolescents who had not been suspended (N=1,352) to those who had been (N=1,352) yielding a final matched sample of 2,704. The race gender group sizes following matching were 531 Black males, 838 white males, 361 Hispanic males, 347 Black females, 429 white females, and 198 Hispanic females. Results from the matched sample are privileged throughout the study and comparisons with the

unmatched sample are presented in a separate section. Logistic attrition analysis on the full sample were performed to assess whether individuals who were missing from the sample scored significantly different from any of the measures used in the analyses. The results demonstrated no significant predictors of attrition within the full sample, suggesting the data missing from the sample were missing at random. Thus, complete cases are used for the analyses. Descriptive statistics for all study variables are listed in Table 1.

The NLSY97 is well-suited to investigate the STPP. First, the NLSY97 is one of the few nationally representative surveys of a contemporary cohort that captures the expanded scope and prevalence of incarceration. Second, these data include incarceration data for youth beginning as early as age 12. Third, these data are longitudinal facilitating the ability to capture suspensions over a wider range of students' primary school years and observe the potential for incarceration several years following high school completion. Finally, the dataset captures a host of other contextual factors that aid in the approximation of more robust propensity scores in order to more accurately estimate the impact of suspension on chances of incarceration across race and gender groups. Despite these strengths, the NLSY97 is limited because it does not include information about why youth are suspended from school.

Table 1. Descriptive Statistics for all Study Variables (Matched Sample). National Longitudinal Survey of Youth – 1997 Cohort (N=2,704).

	Total Sample (N=2,704)		Not Suspended (N=1,352)		Suspended (N=1,352)	
Variables	**Mean/ Proportions**	**SD**	**Mean/ Proportions**	**SD**	**Mean/ Proportions**	**SD**
Incarcerated (1=yes)	.13	-	.11	-	.14	-
Suspended (1=yes)	.50	-				-
Race and Gender						
Black Male (1=yes)	.20	-	.19	-	.20	-
White Male (1=yes)	.31	-	.31	-	.31	-
Hispanic Male (1=yes)	.13	-	.14	-	.13	-
Black Female (1=yes)	.13	-	.13	-	.13	-
White Female (1=yes)	.16	-	.16	-	.15	-
Hispanic Female (1=yes)	.07	-	.07	-	.08	-
Health						
Self-rated Health (1=poor to 5=high)	3.99	.95	4.00	.93	3.97	.96
Emotional/Learning Problems (1=yes)	.14	-	.13	-	.14	-
School Delinquency						
Drug Use (0=none to 3=three drugs)	1.10	1.14	.95	1.10	1.24***	1.16
Gang Affiliation (1=yes)	.08	-	.08	-	.09	-
Victim of Bullying (1=yes)	.23	-	.23	-	.24	-
Fought in School (1=yes)	.30	-	.29	-	.31	-
Number of Absences (count)	5.65	8.82	5.57	8.88	5.72	8.76
Neighborhood Context						
School Climate (5=low to 20=high))	13.86	2.27	13.52	2.20	13.97	2.37
Own House (1=yes)	.68	-	.70	-	.66*	-
Southern Region (1=yes)	.38	-	.38	-	.38	-
Public School (1=yes)	.93	-	.92	-	.94	-
Urbanicity (1=yes)	.74	-	.72	-	.75	-
Family Background						
Age (years)	14.54	1.30	14.54	1.32	14.53	1.28
Parent's Education (years)	12.24	2.63	12.49	2.61	11.99***	2.62
Household Income (logged thousands $)	.74	.44	.74	.44	.75	.43
Two-parent Household (1=yes)	.43	-	.47	-	.40***	-
Mother's Age at First Birth (years)	24.67	5.19	24.62	5.06	24.72	5.31

*p<.05; **p<.01; ***p<.001.

Measures

Incarceration. The outcome measure for this study is incarceration status. Incarceration status is measured as a binary variable indicating whether respondents reported being incarcerated since the date of last interview. The window in which a respondent could report being incarcerated was limited to within 5 years after turning 18. In this case, each respondent had 5 years to be incarcerated but the years of this window varied depending on the age of the respondent in the first year of data collection. For example, the youngest respondents who were 12 during the baseline year of data collection (1997), have a binary variable indicating whether they were incarcerated between the years of 2003 and 2007. Respondents who were 17 during the baseline year of data collection have a binary outcome variable indicating whether they were incarcerated at some point between the years of 1998 and 2002. Beginning with the 2004 survey, NLSY97 reporters also reported whether the respondent was interviewed in jail or prison. Therefore, from 2004 and beyond, the incarceration measure reflects both incarceration post-conviction that occurs during the prior year and incarceration (including pretrial) that occurs during an interview. In the full (unmatched) sample, 7 percent of the sample reported spending some time in jail or prison. For the suspended group 16 percent of the sample had been incarcerated while only 5 percent of the group that had not been suspended had been incarcerated ($p<.001$) (Table A1).

Suspension. The main independent variable under consideration in this study is school suspension. Suspension also serves as the outcome variable when creating propensity scores. At each wave, the NLSY97 asked youth to report if they had received a school suspension in the prior year. Youth could respond either yes or no for each wave. It is worth noting that that the NLSY97 does not make a distinction between suspensions and expulsions. Similarly, to the

dependent variable in this study, suspension is a binary variable that indicates whether a respondent was suspended from school within a given window. That window is the period between the start of the survey and before the respondent turned 18. The window used means that the oldest respondents were limited to being suspended in the baseline year, while respondents who were 12 at baseline have a binary variable indicating a suspension between 1997 and 2002. Table A1 reveals that twenty-two percent of the unmatched sample reported being suspended before turning 18.

Moderating and Control Variables. Central to conversations on mass incarceration and the STTP are race and gender. Binary variables for Black, Hispanic, and white males and females are included in the analyses. White women serve as the reference group since they have the lowest rates of suspension and incarceration. Twelve percent of the total, unmatched sample are Black males. There are significantly more Black males in the suspended group (22 percent) compared to the not suspended group (9 percent; $p<.001$). The sample is 29 percent white Male, and there is no significant difference across suspension. While Hispanic males made up 10 percent of the entire sample, they made up 13 percent of the suspended sample and only 9 percent of the sample who had not been suspended ($p<.001$). Turning to females, 12 percent of the suspended and non-suspended groups are Black females. Twenty-seven percent of the total sample are white females. However, there are significant differences across groups, with white females making up 31 percent of the sample that has not been suspended and only 15 percent of the sample that has been suspended. Hispanic females (ten percent of the entire sample) also have lower representation in the suspended sample (8 percent) than in the non-suspended sample (10 percent).

Control variables, each of which are drawn from the baseline year of data collection, are categorized into four categories: health, school delinquency, neighborhood context, and family & background. Taking health first, literature has demonstrated that health is an important covariate of incarceration (Schnittker, Massoglia, & Uggen, 2012). In this study two measures of health are included, self-rated health, which measures respondents' feelings of their general health, ranging from poor (1) to excellent (5). Additionally, a binary variable indicating whether or not the respondent had an emotional or learning problem that limited their ability complete their school work is included.

Several measures of school delinquency are included. Delinquent youth behavior is a known predictor of both suspension and incarceration (Christle et al., 2005; Herrenkohl et al., 2000). A count variable is included for drug use which ranges from 0 (no drugs used) to 3 (has smoked cigarettes, drank alcohol, and smoked marijuana). Three additional binary variables are included, indicating whether respondents reported belonging to a gang, being a victim of bullying, and fighting in school. Lastly, truancy is captured by a continuous variable indicating the number of absences a respondent had in the previous school year.

Social disadvantage in Black and Hispanic neighborhoods has been linked to higher crime rates (Peterson & Krivo, 2005). Variables measuring neighborhood context in this study include respondents' perceptions of their school climate, home ownership, region, school type, and ubanicity. Perceptions of school climate range from 5 to 20, with higher scores representing a more positive climate. Home ownership is measured by a binary variable. Dummy variables that distinguish respondents who live in the south, attend public schools, and live in urban neighborhoods are also included.

Lastly, a set of background and socioeconomic characteristics are included in the analyses. Respondents age (continuous) is included in the analyses. Parental education is measured as the average highest number of years of schooling completed. The highest grade completed for one parent was used when information for only one parent was reported. Household income is measured in logged thousands of dollars to correct skewness. A binary variable indicating whether the respondent lived in two-parent household is included in the models. Lastly, a continuous variable indicating the respondent's' mothers age at first birth was used in the analyses.

Analytic Strategy

The first step in the analytic strategy was creating the propensity score matched sample. All moderating and control variables were used to estimate a logistic regression predicting suspension. An estimated probability (propensity score) of being suspended was then output to the data set for each individual respondent. The propensity scores were then used to match (1:1) respondents who had not been suspended to those who had been suspended using a caliper of .25. Non-matched individuals were removed from the data set. For comparison purposes, the rest of the analytic strategy was then carried out on both the original full sample and the propensity score matched sample.

The second step of the analytic strategy involved examining descriptive statistics. First, I examined the descriptive statistics for all study variables across the entire sample. Then, I compared means and proportions for study variables across suspended and non-suspended respondents. Next, because of the binary nature of the dependent variable, I estimated a series three of logistic regression models. The first model (Model 1) includes suspension and main effects for race-gender groups. White women are the omitted race-gender group and, therefore,

serve as the reference group. In the second model (Model 2), I include controls to be sure that the relationships uncovered in Model 1 are not explained by other key predictors of incarceration. Lastly, in the final model (Model 3), interaction terms are included to explore whether the relationship between suspension and incarceration varies across race-gender groups. The following sections are focused primarily on the results using the propensity score matched sample which are depicted in Table 2. A section is dedicated to drawing comparisons to the analysis of the full, unmatched sample, the results of which appear in Table 3.

RESULTS

Descriptive Statistics. It is important to first characterize the sample, highlighting key differences across the independent variable of interest. In this section, I present descriptive statistics from the propensity score matched sample. Recall that the goal of propensity score matching is to reduce selection bias, or eliminate differences across treatment groups. Descriptive statistics for the full sample are presented in Table A1. It is worth noting that all but three variables significantly differed across students who were suspended and those were not in the full sample. Propensity score matching eliminated all significant differences except four. In this section, I describe the matched sample from which the major conclusions of this study are drawn pointing out where significant differences remained across treatment groups.

In terms of the key independent, dependent, and moderating variables, 13 percent of the sample reported spending time in jail or prison within 5 years after turning 18. Because of propensity score matching (1:1 matching) 50 percent of the sample had been suspended before turning 18. After matching, the race-gender breakdown of the sample was as follows: 20 percent Black male, 31 percent white male, 13 percent Hispanic male, 13 percent Black female, 16 percent white female, and 8 percent Hispanic female.

Turning to controls, the sample rated their overall health fairly high (3.99 out of 5). Less than a quarter (14 percent) of the sample reported having an emotional or learning problem that limited their ability to do school work. Overall, the average drug use was 1.10. This is one variable where significant differences remained even after matching. The suspended sample reported more drug use (M=1.24, SD=1.16) than the non-suspended sample (M=.95, SD=1.10, $p<.001$). Eight percent of the sample reported that they belonged to a gang and nearly a quarter (23 percent) reported that they had been a victim of bullying. Thirty-percent of the sample had been in a fight in school. The average number of absences was 5.65. Respondents rated their school climate 13.86 on average on a scale ranging from 5 to 20. Homeownership is another variable that exhibited significant differences across groups after matching. While 68 percent of the total sample reported that their families owned their houses, significantly more respondents who had not been suspended (70 percent) reported own their houses compared to those who had not been suspended (66 percent) ($p<.05$). Thirty-eight percent of the sample lived in the south, 93 percent attended a public school, and 74 percent resided in an urban neighborhood. On average respondents were 15 at the baseline year of data collection. The average number of years of schooling completed by respondents' parents was 12.24, with the suspended group having lower levels of parental education (11.99 years) compared to the not suspended group (12.49 years) ($p<.001$). The average household in income in logged thousands of dollars was .74. A lower proportion of respondents who had been suspended (40 percent) compared to those who had been suspended (47 percent) reported living in two-parent households. And, lastly, respondents' mothers age at first birth on average was roughly 25 years old.

The impact of Suspension on Incarceration. Following descriptive statistics, I present the results of the logistic regression including main effects for suspension and race-gender groups.

As shown in Model 1, suspension is not associated with odds of incarceration when accounting for two of the biggest known covariates of incarceration: race/ethnicity and gender. There are significant main effects of race/ethnicity and gender, however. Relative to white women, Black men have a 242 percent greater odds of being incarcerated. Hispanic men have the second highest odds of being arrested, with 198 percent greater odds than white women. White men are also more likely to be incarcerated than white women (111 percent greater odds). Contrary to most demographic reports of state and federal imprisonment, Black women actually have a 66 percent lower odds of being incarcerated compared to white women. In Model 2, controls are introduced. The effects on the key independent variables remain substantively the same. There is no main effect of suspension on chances of incarceration. Black men have 263 percent greater odds of being incarcerated, Hispanic men have 145 percent greater odds, and white men have 129 percent greater odds of being incarcerated relative to white women. In Model 2, with controls, Black women still have lower odds (64 percent) relative to white women.

In terms of controls, having an emotional or learning problem that limited the ability the respondent's ability to do school work is associated with a 43 percent greater odds of incarceration. Drug use is also positively associated with incarceration. An increase of one unit (e.g. going from no drugs to reporting using one drug) is associated with a 23 percent greater odds of incarceration. Respondents who fought in school have 52 percent greater odds of incarceration. Contrary to expectation, respondent's whose family owned their house have a 57 percent greater odds of incarceration. Lastly, parental education and household composition are both significant predictors of incarceration. For every year increase in the average highest grade completed by respondents' parents, the odds of incarceration decrease by 10 percent. Respondent

who live in a two-parent household have a 37 percent higher odds of incarceration than those who have other household arrangements.

I turn next to the interaction terms between suspension and race-gender groups. Model 3 reveals two significant interaction terms. The interaction terms suggest that Black males who have been suspended have 162 percent greater odds of incarceration compared to white females who have not been suspended. White men who have been suspended have a 141 percent greater odds of being incarcerated. It is important to note that the odds ratio for the main effect of suspension decreases dramatically when interaction terms are included.

Figure 1 is a graphic depiction of the final model. In this figure, a few patterns are clear. First, males, both those who have and have not been suspended, have a higher probability of being incarcerated than women. Second, Black males have the highest probability of being incarcerated whether they have been suspended or not. Third, Black males experience the largest increase in odds of being suspended as a function on incarceration. And, lastly, for all female groups, there is no difference in chances of incarceration between those who have and have not been suspended.

Methodological Differences. Table 3 shows the results of the analysis on the unmatched sample. The results differ significantly. Model 1 and Model 2 reveal that there is a significant main effect of suspension on incarceration even after accounting for race/ethnicity and gender. Specifically, turning to Model 2, suspension is associated with 97 percent greater odds of incarceration. Model 1 and Model 2 do corroborate the findings in the propensity score matched sample in terms of race gender wherein Black males (401 percent), white males (204 percent), and Hispanic males (242 percent all have higher odds of incarceration compared to white females. In the full sample, Black and Hispanic females' odds of incarceration do not differ from

white females. Finally, the lack of significant interaction terms in the full model suggest that there are no moderating effects of race/ethnicity and gender. The implications of these results and their difference from the results of the matched sample are discussed in the following section.

Table 2. Odds Ratios for Incarceration Accounting for Suspension by Race and Gender (Matched Sample). National Longitudinal Survey of Youth – 1997 Cohort (N=2,704)

	Model 1 (no controls)		Model 2 (controls)		Model 3 (Interactions)	
Variables	O.R.	(95% CI)	O.R.	(95% CI)	O.R.	(95% CI)
Suspension	1.23	(0.98, 1.55)	1.10	(0.87, 1.40)	0.53	(0.25, 1.15)
Race and Gender						
Black Male[a]	3.42***	(2.23, 5.24)	3.63***	(2.28, 5.77)	2.25**	(1.22, 4.15)
White Male[a]	2.11***	(1.39, 3.21)	2.29***	(1.48, 3.56)	1.48	(0.82, 2.67)
Hispanic Male[a]	2.98***	(1.89, 4.71)	2.45***	(1.48, 3.56)	1.70	(0.87, 3.31)
Black Female[a]	0.44*	(0.22, 0.88)	0.46*	(0.22, 0.95)	0.39	(0.15, 1.03)
Hispanic Female[a]	0.70	(0.34, 1.46)	0.56	(0.26, 1.21)	0.64	(0.25, 1.64)
Health						
Self-rated Health			0.90	(0.79, 1.02)	0.90	(0.79, 1.02)
Emotional/Learning Problems			1.43*	(1.05, 1.95)	1.43*	(1.05, 1.96)
School Delinquency						
Drug Use			1.23*	(1.09, 1.38)	1.23***	(1.09, 1.39)
Gang Affiliation			1.32	(0.91, 1.93)	1.32	(0.90, 1.94)
Victim of Bullying			1.15	(0.87, 1.51)	1.15	(0.88, 1.52)
Fought in School			1.52*	(1.18, 1.96)	1.53*	(1.19, 1.97)
Number of Absences			1.00	(0.99, 1.01)	1.00	(0.99, 1.02)
Neighborhood Context						
School Climate			1.03	(0.97, 1.09)	1.03	(0.97, 1.09)
Own House			1.57*	(1.19, 2.07)	1.58*	(1.20, 2.09)
Southern Region			0.90	(0.69, 1.55)	0.90	(0.69, 1.18)
Public School			1.42	(0.98, 1.18)	1.43	(0.84, 2.43)
Urbanicity			0.94	(0.71, 1.25)	0.95	(0.71, 1.26)
Family Background						
Age			1.01	(0.85, 1.20)	1.01	(0.85, 1.21)
Parent's Education			0.90***	(0.85, 0.95)	0.90***	(0.85, 0.95)
Household Income			0.64	(0.40, 1.03)	0.64	(0.40, 1.03)
Two-parent Household			0.63***	(0.48, 0.83)	0.63***	(0.48, 0.83)
Mother's Age at First Birth			0.99	(0.96, 1.01)	0.99	(0.97, 1.01)
Interactions						
Black Male X Suspension					2.62*	(1.08, 6.36)
White Male X Suspension					2.41*	(1.00, 5.78)
Hispanic Male X Suspension					2.11	(0.82, 5.47)
Black Female X Suspension					1.41	(0.34, 5.97)
Hispanic Female X Suspension					0.67	(0.13, 3.31)
Pseudo R^2	0.07		0.15		0.15	

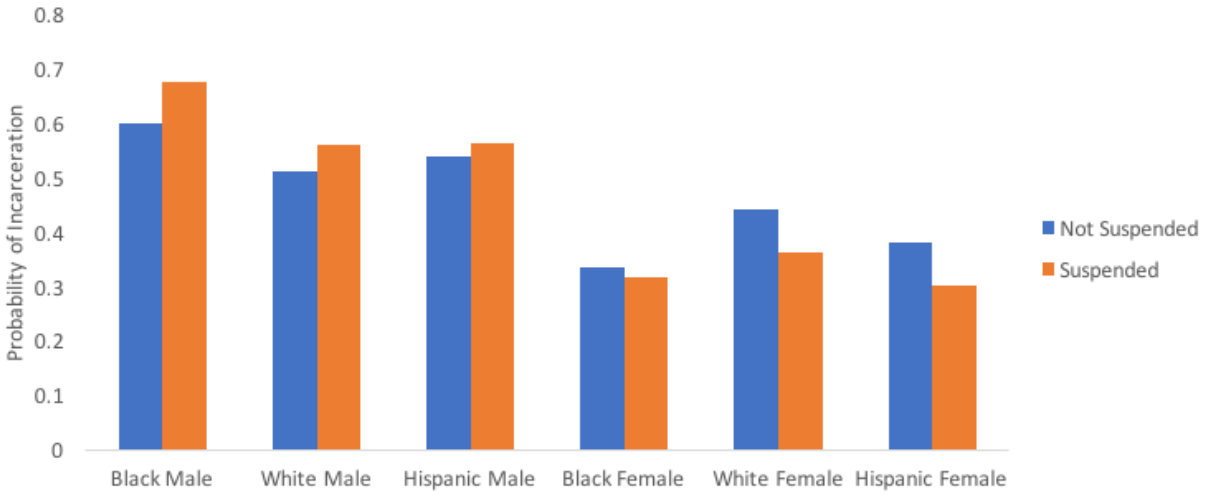
Note. CI = confidence interval; O.R. = odds ratio
[a]Reference category is white females.
*p<.05; **p<.01; ***p<.001.

Table 3. Odds Ratios for Incarceration Accounting for Suspension by Race and Gender (Unmatched Sample). National Longitudinal Survey of Youth – 1997 Cohort (N=6,175)

	Model 1 (no controls)		Model 2 (controls)		Model 3 (Interactions)	
Variables	O.R.	(95% CI)	O.R.	(95% CI)	O.R.	(95% CI)
Suspension	2.94***	(2.39, 3.62)	1.97***	(1.57, 2.48)	1.59	(0.78, 3.23)
Race and Gender						
Black Male[a]	6.10***	(4.21, 8.82)	5.01***	(3.36, 7.46)	4.62***	(2.81, 7.59)
White Male[a]	3.01***	(2.11, 4.28)	3.04***	(2.11, 3.37)	2.61***	(1.68, 4.05)
Hispanic Male[a]	4.84***	(3.27, 7.16)	3.42***	(2.22, 5.26)	3.50***	(2.09, 5.86)
Black Female[a]	0.70	(0.38, 1.27)	0.57	(0.31, 1.05)	0.57	(0.26, 1.23)
Hispanic Female[a]	1.06	(0.60, 1.88)	0.74	(0.40, 1.36)	0.81	(0.40, 1.62)
Health						
Self-rated Health			0.91	(0.82, 1.02)	0.91	(0.81, 1.62)
Emotional/Learning Problems			1.44*	(1.08, 1.91)	1.43*	(1.08, 1.91)
School Delinquency						
Drug Use			1.27***	(1.14, 1.41)	1.27***	(1.14, 1.41)
Gang Affiliation			1.32*	(0.91, 1.93)	1.46*	(1.02, 2.09)
Victim of Bullying			1.12	(0.87, 1.42)	1.12	(0.88, 1.43)
Fought in School			1.94***	(1.54, 2.46)	1.94***	(1.53, 2.45)
Number of Absences			1.00	(0.99, 1.02)	1.00	(0.99, 1.02)
Neighborhood Context						
School Climate			0.96	(0.92, 1.01)	0.96	(0.92, 1.01)
Own House			1.34*	(1.05, 1.71)	1.35*	(1.06, 1.72)
Southern Region			1.04	(0.83, 1.31)	1.04	(0.83, 1.31)
Public School			1.32	(0.83, 2.08)	1.31	(0.83, 2.07)
Urbanicity			1.04	(0.81, 1.34)	1.04	(0.81, 1.34)
Family Background						
Age			0.88	(0.75, 1.02)	0.88	(0.75, 1.02)
Parent's Education			0.89***	(0.85, 0.93)	0.89***	(0.85, 0.93)
Household Income			0.56**	(0.37, 0.86)	0.56**	(0.46, 0.86)
Two-parent Household			0.58***	(0.46, 0.73)	0.58***	(0.46, 0.73)
Mother's Age at First Birth			0.99	(0.96, 1.01)	0.99	(0.96, 1.01)
Interactions						
Black Male X Suspension					1.23	(0.57, 2.89)
White Male X Suspension					1.52	(0.69, 3.33)
Hispanic Male X Suspension					1.02	(0.43, 2.41)
Black Female X Suspension					1.07	(0.31, 3.78)
Hispanic Female X Suspension					0.71	(0.18, 2.74)
Pseudo R^2	0.14		0.21		0.21	

Note. CI = confidence interval; O.R. = odds ratio
[a]Reference category is white females.
*p<.05; **p<.01; ***p<.001.

Figure 1. Graph of Interaction between Race-Gender and Suspension



DISCUSSION

Overall, the goal of this study was to examine the impact of school suspension on chances of incarceration. Particular attention was given to exploring the race/ethnicity differences in this relationship using longitudinal data from the NLSY97. An additional goal was to compare a quasi-experimental analytic method using propensity score matching to a more traditional use of observational data. Results differed based on the method used. Results from the more traditional and commonly used method suggested that suspension is an independent predictor of chances of incarceration even after controlling for the strong association between race/ethnicity and gender and incarceration. Results using propensity score matching, a technique believed to be more refined and robust (Rosenbaum & Rubin, 1984), suggest that suspension is not a universal predictor of incarceration. Instead, the effect of suspension is conditioned by race/ethnicity and gender. These findings are in line with the school-to-prison pipeline theoretical metaphor but offer some nuance. The results of the propensity score matched sample are privileged in the discussion of the results.

The study was guided by two hypotheses. The first hypothesis, that overall suspension from school will be associated with later incarceration, was not supported. Propensity score matching, which preceded the substantive analysis removed all differences between those who had and had not been suspended on variables included in this study. When those differences are removed, there appears to be no significant association between suspensions and odds of incarceration later in life. This finding is in direct opposition to one other quantitative study that has attempted to link school discipline to criminal justice involvement (e.g. Mowen & Brent, 2016). This may be, in part due to methodology. While the present study differs from this previous study in variable selection (i.e. exploring incarceration rather than arrests and using a different time frame), the larger issue may be the way confounding effects are handled. In an ordinary, unmatched logistic regression, suspension remains intertwined with a host of other covariates that may drive it toward significance. This is supported by the results of the unmatched sample in this study. Similar to Mowen and Brent (2016), these results reveal a significant main effect of suspension on criminal justice involvement that cuts across race-gender groups.

Depending on the analytic method used, contrasting results could be obtained. On the one hand, if a researcher were to stop at the results from the propensity score matched sample suggesting an insignificant main effect of suspension, they might conclude that the school-to-prison pipeline is not real. Further, they might conclude that race/ethnicity and gender alone explain chances of incarceration. On the other hand, if a researcher stopped in the same place, exploring only the main effect of suspension on chances of incarceration in an unmatched sample, they might conclude that the school-to-prison pipeline is real for everyone; that being suspended from school increases the chance that a youth will end up in prison as a young adult or

sooner. This is where the Mowen and Brent study stopped. However, this study went a step further.

In this study, there is some support for Hypothesis 2, that race/ethnicity and gender will moderate the relationship between suspension and later chances of incarceration. This is true of the propensity score matched sample only. Typically, scholars who have focused on the school-to-prison pipeline have focused on racial differences in the funneling of children from school into the criminal justice system (Figlio, 2006; Lochner & Moretti, 2004; Meiners, 2011; Raible & Irizarry, 2010). The findings presented here from the propensity score matched sample suggest that the focus on race is warranted. However, the findings also reveal that gender should be an important part of the conversation. In this study, the school-to-prison pipeline was true for Black and white males. Black males, however, had the highest chances of incarceration as a function of being suspended. For Black males, who also experience the highest rates of suspension, the disparity is deepened by the fact that they are the most likely group to find themselves in jail or prison when they have been formally punished in schools.

It is clear, then, that schools are a contributor to the disproportionally high rates of incarceration for Black men (NAACP, 2014). This study also makes it clear that the source of the problem begins in childhood. The reality of the STPP over other groups may largely be due to the disciplinary gaze of teachers and administrators in schools lingering from the historical hyper-policing and over-surveilling of Black (male) bodies (Raible, 2010). Based on the marginalized status of Hispanic males and their overrepresentation in school discipline and the criminal justice system, it is reasonable to suspect that the school-to-prison pipeline applies to this group as well. However, the findings here do not support that connection. More work is

necessary to uncover whether and how this group fits into the school-to-prison pipeline conversation.

Recently, scholars have paid considerable attention to Black girls' school discipline (Blake et al., 2011; Wallace et al., 2008; Wun, 2016). Among females in this study, Black girls did have the highest rates of suspension as suggested by the literature. However, Black girls did not experience an increase in the chances of being incarcerated following suspension from school. In fact, the school-to-prison pipeline does not appear to apply to women at all. One explanation for this may be derived from speculated differences in incarceration rates between men and women. That is, female students, teachers, and administrators may believe that girls have more to lose from suspension. As a result, girls either tend to engage in less offensible activities or experience less of a disciplinary gaze from teachers and administrators in schools (Stacey & Spohn, 2006; Starr, 2014). Research has demonstrated that Black girls in particular are more likely to be subjected to punishment for nonviolent infractions (Wun, 2015). These infractions qualify as disobedient and defiant, such as having an attitude with the teacher, but do not necessitate escalation to punishment from the criminal justice system. Future work is necessary to expand the scope of understanding of the consequences of school discipline for this group.

The results of this study, specifically those drawn from the propensity score matched sample, suggest that discipline within the school has the potential to significantly increase future contact with the criminal justice system. The caveat, 'for some' must be added. Labeling theory would suggest that this link is due to the internal and external detachment that occurs as a result of being punished in schools (Becker, 1963). That is, once the negative label of being deviant is applied, the mechanisms associated with punitive school discipline –increased surveillance,

exclusionary policies, and reduced opportunities – increase the chances Black and white male youth will wind up in prison. While this process, infamously known as the school-to-prison pipeline, is real for both Black and White male youth, it must be contextualized in the higher rates of suspension for Black males. Moreover, in addition to the link between suspension and incarceration being stronger for Black males, the process occurs more frequently for Black males based on their increased odds of being suspended in the first place. While schools were once touted as the great equalizer, this study suggests that the educational system in its current state is incriminated in the racial and gender disparity in imprisonment that is endemic to our society. Previous studies, like the analysis of the full sample in this study, mask this reality. The confluence of factors that are intertwined with both suspension and incarceration hide this inequity. When Black males are made to look like all other race-gender groups in terms of their delinquent behavior, socioeconomic background, and many other characteristics, they find themselves disenfranchised by two systems allegedly meant equalize and protect.

Despite the contributions of this project, there are also limitations. First, I note that information about the nature of the suspension variable is limited in the NLSY97. It is possible that the results uncovered here can be explained away by the type of suspension (i.e. suspension versus expulsion) or by the reason that the student was suspended (e.g. fighting versus giving the teacher an attitude). Additionally, the presence of criminal justice based mechanisms to sanction directly in schools is not accounted for in the present study. For example, schools in the U.S. have experienced a significant increase in the presence of school resource officers (Robers et al., 2015). It is possible that youth who are suspended in school were also arrested in school. I am unable to disentangle this type of suspension-incarceration relationship from later incarceration. Second, this study does not consider mediational relationships. For example, a life course

perspective might suggest that a suspension during a critical life transition period may disrupt other prosocial influences such as employment or marital status, that in turn impact chances of incarceration (Tyndall & Christie-Mizell, 2016). Future work should assess how suspension can disrupt the normal transition to adulthood for youth, which can impact future experiences with the criminal justice system.

Third, in this study, I focus on incarceration. However, there are other important forms of criminal justice involvement that might add understanding to its relationship with school discipline. For example, students who are suspended for disrespecting the teacher may be arrested by a school resource officer but never convicted and incarcerated. Nevertheless, these forms of criminal justice involvement can be just as harmful for future life chances and warrant consideration in school-to-prison pipeline researarch. (Sugie & Turney, 2017). Lastly, due to the lack of ability to aggregate to the school level, I am unable to account for school level factors that might create a difference in the reality of the STPP. It is possible that some schools discipline more fairly and consistently than other schools (see Arum and Velez, 2012. For example, schools with higher levels of Black students or Black faculty may be less likely suspend students for 'deviant' behavior and also less likely to report that behavior to criminal justice authorities.

CONCLUSION

The findings presented here support the school-to-prison pipeline. Black and white males who experience exclusionary disciplinary practices are more likely to spend time in jail in the years following school completion. Prior work on the link between school discipline and formal criminal justice sanctioning suggests that this is a real phenomenon for all youth (see for example Mowen & Brent, 2016). However, the findings here suggest that 'for whom?' is an

important question to answer. These findings deepen our understanding of one the sources of the dismal life chances of Black men in America. This study offers support for the fact that Black males are both suspended and incarcerated at rates higher than any other race-gender group. It also suggests that Black males exhibit the strongest link between being disciplined in school and finding themselves in jail later in life. It has been estimated that Black males have between a 1 in 3 and 1 in 4 chance of going to jail before turning thirty years of age. Despite this, scholars, policy-makers, practitioners, and activists must refuse to abandon these and other underserved youth to such pessimistic foregone expectations. Schools are one social institution that needs attention in order to address the epidemic that is mass incarceration. Teachers, administrators, and law enforcement officials must redirect their gaze from the hyper-surveillance of underserved students. Instead of viewing them as problematic, expecting them to engage in delinquent behavior, and/or mislabeling their behavior as delinquent, attention should be given to the ways in which social institutions meant to equalize and protect are failing.

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APPENDIX

Table A1. Descriptive Statistics for all Study Variables (Unmatched Sample). National Longitudinal Survey of Youth – 1997 Cohort (N=6,175)

	Total Sample (N=6,175)		Not Suspended (N=4,794)		Suspended (N=1,381)	
Variables	**Mean/ Proportions**	**SD**	**Mean/ Proportions**	**SD**	**Mean/ Proportions**	**SD**
Incarcerated (1=yes)	.07	-	.05	-	.16***	-
Suspended (1=yes)	.22	-				-
Race and Gender						
Black Male (1=yes)	.12	-	.09	-	.22***	-
White Male (1=yes)	.29	-	.29	-	.31	-
Hispanic Male (1=yes)	.10	-	.09	-	.13***	-
Black Female (1=yes)	.12	-	.12	-	.12	-
White Female (1=yes)	.27	-	.31	-	.15***	-
Hispanic Female (1=yes)	.10	-	.10	-	.08**	-
Health						
Self-rated Health (1=poor to 5=high)	4.08	.90	4.12	.88	3.97***	.96
Emotional/Learning Problems (1=yes)	.10	-	.08	-	.16***	-
School Delinquency						
Drug Use (0=none to 3=three drugs)	1.00	1.11	.93	1.09	1.24***	1.16
Gang Affiliation (1=yes)	.04	-	.03	-	.10***	-
Victim of Bullying (1=yes)	.20	-	.18	-	.24***	-
Fought in School (1=yes)	.16	-	.11	-	.34***	-
Number of Absences (count)	4.61	6.87	4.25	6.11	5.86***	8.92
Neighborhood Context						
School Climate (5=low to 20=high))	14.34	2.19	14.51	2.12	13.77***	2.32
Own House (1=yes)	.75	-	.77	-	.67***	-
Southern Region (1=yes)	.36	-	.36	-	.37	-
Public School (1=yes)	.91	-	.90	-	.95***	-
Urbanicity (1=yes)	.71	-	.70	-	.76***	-
Family Background						
Age (years)	14.93	1.38	15.06	1.39	14.49***	1.27
Parent's Education (years)	12.73	2.82	12.94	2.84	12.00***	2.61
Household Income (logged thousands $)	.62	.49	.58	.49	.76***	.43
Two-parent Household (1=yes)	.54	-	.58	-	.39***	-
Mother's Age at First Birth (years)	22.87	4.81	23.22	4.80	21.66***	4.67

*p<.05; **p<.01; ***p<.001.

CHAPTER III

99 Problems, is Depression One?

Racial Variations in the Effect of Arrest History on Depressive Symptoms

INTRODUCTION

Popular media has ushered in a heightened awareness of the mass incarceration problem in the United States (Jewkes, 2014). Though imprisonment as a form of criminal punishment in the United States has been widespread since the American Revolution, recent decades have left little doubt regarding dramatic growth and recent stabilization in incarceration rates. (Travis, Western, Redburn, 2014). On the heels of a wave of police violence and organizing in its opposition, the imprisonment rate for the country increased five-fold in a period of 40 years. In the mid-1970s, the imprisonment rate was 100 per 100,000 people and by the mid 2000s it had increased to roughly 500 per 100,000 individuals (Wakefield & Uggen, 2010). The increase in imprisonment has led to the United States being home to over a quarter of the world's prisoners, despite making up only five percent of the world's total population (Glaze & Parks, 2014; Maurer and King, 2007; NAACP, 2014; Western & Pettit, 2010). Given the rapid expansion of imprisonment in the country, research on the consequences of criminal justice involvement is pertinent.

In response to the increase of prisoners in America, literatures documenting the consequences of criminal justice involvement for the employment, family life, and civic engagement of formerly incarcerated men have also grown. Mostly, these literatures have specifically chronicled negative consequences of incarceration (Wakefield & Uggen, 2010). Scholars have found that being incarcerated harms subsequent labor market prospects (Pager, 2003; Western, 2006), disrupts household composition and relationship status (Braman, 2004;

Nurse, 2002; Western, 2006), and impedes reintegration into civil society (Uggen, Manza, & Thompson, 2006). In addition to these disruptions in social roles, scholars have also begun to document associations between incarceration and health. Indeed, negative health outcomes, including hypertension, functional limitations, infectious and stress-related diseases, and poor overall-general health have all been associated with time spent behind bars (Massoglia 2008; Schnittker & John, 2007; Wang et al., 2009; for an exception see Patterson 2010). Moreover, incarceration has been directly related to a reduction in life-span (Binswanger et al., 2007; Patterson, 2010; Patterson, 2013).

While there has been tremendous growth in research on imprisonment and criminal justice involvement in recent years, there remain substantial gaps in the empirical literature on the consequences of criminal justice involvement. First, mental health as a consequence is relatively under-researched (for some exceptions see Schnittker, Massoglia, & Uggen, 2012, Sugie & Turney, 2017, and Turney, Wildeman, & Schnitker, 2012). Nevertheless, there have been a few studies that highlight the importance of concentrating research efforts on the mental health of formerly incarcerated individuals (Schnittker, Massoglia, & Uggen, 2012). This research finds that psychiatric disorders are a precursor to incarceration. Even after taking into account this causal relationship, incarceration appears to have a lasting impact on mood disorders, including depressive symptoms.

Second, more research that focuses on interactions with the criminal justice system in the early, formative years of development is needed. While current work on adult mental health provides significant insight, important questions persist about how exposure to the criminal justice system early in the life course may proliferate into interpersonal problems and compound mental health issues as youth age into adolescence and adulthood. One of the most notable

aspects of depressive symptomatology, for example, is that the initial onset increases the risk of future expression of depressive symptoms (Kendler, Thornton, and Gardner, 2000). Given that prior depressive symptoms predict future relapses, assessing the relationship between criminal justice involvement and mental health earlier than adulthood might be a way to improve mental health and, perhaps, even avoid future interactions with the criminal justice system.

Third, given that racial and ethnic minorities, especially males, are disproportionately involved in the criminal justice system, the differential effects of criminal justice involvement on mental health by race-gender status is worthy of study in and of itself (Brame et al., 2014; Lerman and Weaver, 2014; Spjeldnes and Goodkind, 2009). It has been well established that race, ethnicity, and gender affect the chances of interacting with the criminal justice system (Lundman & Kaufman, 2003; Sugie & Turney, 2017). There is an abundance of evidence that Blacks' interaction with the criminal justice system far exceeds that of any other racial group, which is confirmed by the high rates of arrest and incarceration for this group (Harris et al., 2014). Among black men living in impoverished neighborhoods and with low-levels of education, criminal justice system has become a normative part of life (Freeman, 1996; Irwin and Austin, 1994; Petit & Western, 2004). Given this overexposure, it is important to better understand whether there are differential consequences. Does this overexposure result in more negative consequences for African American men or does it harden them, making them less susceptible to its pathogenic effects?

One of the most glaring gaps is that much of the scholarship around health outcomes stemming from involvement in the criminal justice system has focused solely on incarceration. Little work focuses on its more prevalent precursor – being arrested (Sugie & Turney, 2017). Criminal justice involvement includes many forms of interaction with criminal justice agencies,

such as being arrested, being convicted, and being incarcerated. Focusing on the health consequences of incarceration only fails to capture the scope of the criminal justice system and its role in perpetuating inequality (Sugie & Turney, 2017). It possible that the effect of being recently formerly incarcerated, as is commonly studied in criminal justice research, diverge from the effect of being arrested multiple times over the course a few years. Given that arrests are one of the most common forms of criminal justice involvement and that two-thirds and three-quarters of prisoners are rearrested within three and five years of release, respectively, it is important to better understand the effects of having a history of arrests rather than only exploring the effects of incarceration during a sentence and immediately upon release (National Institute of Justice, 2014). This importance compounds when considering individuals with repeat arrests within the first 20 formative years of their lives, and also when considering African Americans who have the highest exposure to this endemic social justice issue. Adequately addressing each of these gaps is imperative for advancing research on the topic and illuminating the pathogenic effects of increasing criminal justice involvement.

The purpose of the present study is to expand the current understanding of the consequences of criminal justice involvement. I do so by examining how an individual's arrest history during adolescence and young adulthood impacts the presence of depressive symptoms later in life. Relying on longitudinal nationally representative data, this study explores whether the impact of having an arrest history on depressive symptoms differs by race and gender for Black, Hispanic, and white men and women. The results of this study have ramifications for health disparities present and future.

BACKGROUND AND THEORY

In this study, the outcome of interest was young adult depressive symptomatology. Depression and depressive symptomatology are one of the most common mental health issues in the United States (National Institute of Mental Health, 2013). The effects of depressive symptoms are enduring. Depressive symptoms include frequent sadness, feelings of hopelessness, decreased interest in activities, persistent boredom, social isolation, low self-esteem, poor concentration, major changes in eating and sleeping habits, and thoughts of suicide (Christie-Mizell, Pryor, & Grossman, 2008; National Institute of Mental Health, 2013). Although the symptoms cycle over time and can, sometimes, completely disappear, the initial onset of depressive symptoms increases the risk of future episodes (Kendler, Thornton, and Gardner, 2000). Further, youth with a depressed mood are more likely to be clinically depressed as adults and to experience comorbidity with physical impairments, difficulty in sexual relationships, low socioeconomic attainment, and involvement in criminal behavior (Christie-Mizell, Pryor, & Grossman, 2008; Kessler et al., 2003; Merikangas et al., 2007). For these reasons, mental health and, more specifically, depressive symptomatology, is an important addition to the research on the consequences criminal justice involvement. The far-reaching and cyclic effects of a depressed mood and entry into the criminal justice system make it especially important to study the relationship between the two among a relatively young population, as early interactions with the criminal justice system can lead to a life of physical and mental impairments and diminished social and psychosocial well-being (Turney, Wildeman, Schnittker, 2012).

There has been evidence linking incarceration to a plethora of psychiatric disorders, concomitant psychological dysfunction, and diminished socioeconomic opportunities. However, there has been little work done to examine whether the relationship between incarceration and

these consequences function the same for everyone. Racialized differential exposure to the criminal justice system is well documented (Lundman & Kaufman, 2003). For instance, scholars have begun to more seriously consider the connection between education and incarceration – especially for Black youth in the United States. Literatures and analyses surrounding an alleged "school-to-prison pipeline" or "prison-track" for Black students have increased tremendously over the past few decades (Figlio, 2006; Lochner & Moretti, 2004; Meiners, 2011; Raible & Irizarry, 2010)**.** The school-to-prison pipeline is a metaphor used to illuminate the expansive network of relations that normalizes the movement of children of color from elementary, middle, and high schools and into under-employment, unemployment, and forms of permanent detention (Meiners, 2011). More specifically, it highlights how disproportionate disciplinary practices is schools target Black and Brown students leads to these students being suspended or expelled from school, and ultimately, entering the criminal justice system. Not only does the school-to-prison pipeline provide some context for differential exposure to the criminal justice system, it also provides a mechanism for early exposure to the criminal justice system.

The societal processes driving the school-to-prison pipeline in schools are mirrored by processes outside of schools. Racial disparities in drug sentencing, mandatory minimum sentencing, and traffic stops also lead to Black and Latino people being overrepresented in jails and prisons (Mauer & King, 2007; Steffensmeier & Demuth, 2001). Together, these disparities result in an incarceration rate for Blacks that is six times that of whites (Bonczar, 2003; NAACP, 2015). While overall the incarceration rate increased fivefold between 1970 and the mid-2000s, incarceration rates increased faster for Blacks than for any other group (Wacquant, 2005). When considering race and gender simultaneously, estimates reveal that if current trends persist, one in three Black males born today can expect to spend time in prison during his lifetime. The same is

true for 1 in 20 white men (NAACP, 2014). Additionally, research reveals that Blacks are more likely to be stopped by the police (Lundman & Kaufman, 2003). The burden of police stops and police contact falls predominately on young Black and Latino males (Geller et al., 2014). Similar to Blacks, Hispanics are overrepresented in the criminal justice system. In 2015, Hispanics represented about 21.6% of all state and federal prisoners (Bureau of Justice Statistics, 2015), far exceeding the Latino portion of the entire US population, 17.1%, (US Census Bureau, 2014). Due to frequent misclassification of Hispanics for crime-reporting purposes into the "white" racial category, estimations of their representation in the criminal justice system are likely deflated (Steffensmeier & Demuth, 2001).

These trends raise questions regarding whether the consequences of interactions with the criminal justice system operate differently for Blacks, specifically Black men, and Hispanics relative to others. On the one hand, Blacks have an increased likelihood of being stopped, arrested, and incarcerated. This not only impacts individuals who are stopped, arrested, and incarcerated, but it also the people and communities surrounding them whom they traditionally rely on for various forms of support (Brown, Bell, & Patterson, 2016). Therefore, one might expect the mental health consequences associated with criminal justice involvement to be more pronounced for them relative to other groups. On the other hand, high rates of risk promote management strategies among Blacks that can mitigate the adverse effects of a high prevalence of risks. The same, then, could be true for the negative side effects of incarceration such as depressive symptomatology. Considering the differential rates of criminal justice involvement is important for advancing theory and our understanding of the expanding social phenomena that is mass incarceration. Stress process theory is particularly useful is for understanding the

differential effects of criminal justice involvement on the mental health outcomes and variations by race and gender.

Stress Process Model

The Stress Process Model guides this study (Pearlin, 1999; Pearlin et al., 1981). The model consists of three key parts: stressors, moderators/mediators, and outcomes. Stressors refer to events, difficulties, or problems that prevent normal adaptation. Moderators and mediators are psychosocial resources that individuals are able to draw on to help reduce or eliminate stressors. Outcomes are the observed health effects of stressors after accounting for moderators. An abundance of extant literature has used the stress process to demonstrate how stressors are a product of the distinctive social contexts characterizing the lives of disadvantaged groups and how differential exposure to these stressors contributes to health and life inequalities (e.g. Christie-Mizell, Pryor, Grossman, 2008; Pearlin, 1999; Sugie & Turney, 2017; Thoits, 2010). In this study, I focus only on stressors and outcomes. Though I do not employ traditional moderators/mediators (e.g. self-esteem, mastery, and social support), the stress process paradigm can still be used as a tool for investigating how criminal justice involvement can lead to an increase in mental health problems.

Within the Stress Process Model, being arrested would be considered an important source of stress for individuals. That being arrested is a prevalent source of stress is especially true for African Americans and Hispanicss and men, given the concentrated prevalence of criminal justice involvement among these groups and other disadvantaged communities. For youth, for whom being arrested or incarcerated would represent a major disruption to transitions into and through adulthood, being arrested would also be considered a source of stress. A seminal study by Turney, Wildeman, and Schnittker (2012) on the trajectory of depression as a function of

recent incarceration and current incarceration found the stress process to be effective for explaining the immediate and enduring effects of being incarcerated. However, potential differential effects by race and gender was not at the center of this study. Another study by Sugie and Turney (2017), which also utilizes the stress process, does test for differences across race using nationally representative longitudinal data. Drawing on fixed effects modeling, this study concludes that the association between various forms of criminal justice involvement and poor mental health is the same across race and ethnicity. The present study is also framed by the Stress Process Model but attempts to provide a bit more texture.

A major aspect of the stress process model suggests that exposure to stressors, including criminal justice involvement, is socially patterned. Stressors tend to be concentrated among individuals with disadvantaged social statuses, such as racial/ethnic minorities (Pearlin, 1989). For example, incarceration, which is commonly conceptualized as a stressor within the stress process model, is concentrated among racial/ethnic minority men. Estimates suggest that 3 percent of white men, compared to 20 percent of Black men spend time in prison by their mid-30s (Pettit and Western, 2004). Men are also incarcerated at more than 10 times the rate of women (Bureau of Justice Statistics, 2010). Arrests, like incarceration, vary across race/ethnicity and gender. The highest concentration of arrests is among Black men. By age 23, 38 percent of white males have been arrested, while the same is true for 49 percent of Black males and 44 percent of Latino men (Brame et al., 2014).

Another relevant component of the stress process model is the compounding nature of stressors (Pearlin, Aneshensel, & LeBlanc, 1997). Having a run-in with the criminal justice system is known to be an important source of *stress proliferation* (Pager, 2003; Turney, Wildeman, & Schnittker, 2012; Western, 2006). Stress proliferation, a component within the

process paradigm, describes the presence of primary and secondary stressors and links the two through social processes (Pearlin, Aneshensel, & LeBlanc, 1997). According to stress proliferation, primary stressors (e.g. job loss) trigger a series of secondary, stressors (e.g. bankruptcy and/or martial problems). These two types of stressors both separately and jointly have deleterious consequences for mental and physical health. Furthermore, when a primary stressor occurs, it triggers secondary stressors that can have even stronger health outcomes due to the number and severity of the multiple secondary stressors. For example, being stopped by the police can be a stressor that exacerbates poor health through both initial stressors of trauma and physical contact (Geller et al., 2014; Sewell et al., 2016), and additional stressors such as limited access to medical facilities (Brayne, 2014). In other words, criminal justice involvement is believed to operate similarly to job loss, as a primary stressor. Entering the criminal justice system through being arrested may trigger a series of social function and role disruptions that negatively impact a person's mental health above and beyond the physical and psychosocial consequences that result from spending time in a total institution after being arrested. Therefore, it is important to take into consideration the contagious manner in which it may act as a stressor in people's lives.

Being arrested and entering the criminal justice system can be conceived of as a primary stressor. There are a number of reasons being involved with the criminal justice system could impact health. The stigma associated with being arrested is one way that criminal justice involvement may negatively impact mental health (Hatzenbuehler, Phelan, & Link, 2013; Lerman & Weaver, 2014). Additionally, the actual interaction with police (e.g. being searched or receiving disparaging or derogatory remarks) can be a traumatic event that triggers stress (Brunson & Weitzer, 2009). Spending some length of time in prison may also be a primary

source of stress. Some have suggested that the stress of incarceration occurs as a result of sudden changes in lifestyle, isolation, and the threat of danger present in the prison environment (Sykes, 2007). A long line of research has studied the psychological consequences of spending time behind bars. The term *prisonization* refers to the ways in which inmates develop coping mechanisms to combat the onset of psychiatric disorders (Goffman, 1961; Sykes, 2007). Scholars suggest there are adverse consequences associated with coping in these circumstances (Sykes, 2007). The ways in which inmates cope with experiences faced while being in police custody may be beneficial while a person is behind bars but can be damaging once one leaves the prison environment.

There may also be secondary stressors associated with incarceration that link it to mental health. Obtaining a criminal record is associated with the loss of social roles that are critical for psychological health and social well-being. Scholars have documented a range of deleterious effects of having a criminal record. We now know that having a criminal record impacts employment, intimate relationship status, drug use, and education (Western, 2002). Specifically, this research suggests that criminal justice involvement decreases the likelihood of receiving a call back for an interview, increases the risk of divorce and diminishes relationship quality, decreases the likelihood of receiving proper treatment for drug abuse, and decreases educational attainment (Braman, 2004; CASAColumbia, 2010; Nurse, 2002; Pager, 2003; Uggen, 2104; Western, 2002; Western, 2006). All of these disruptions, in turn, are correlated with increases in depressive symptomatology (Burgard, Brand, and House, 2007; Hallfors et al., 2004; Zimmerman, 2016; Zlotnick et al., 2000). Therefore, we must consider that entering the criminal justice system by being arrested has the potential to proliferate stress through its direct impact on depressive symptoms as well as through its impact on secondary stressors. The secondary

stressors of interest in this study are self-rated mental health and alcohol use. Self-rated health represents an internalization of the amalgamation of one's physical and mental health (DeSalvo et al., 2006). Scholars have also found that formerly incarcerated individuals report lower general self-rated health (Thomas & Torrone 2006). In turn, a large body of research has demonstrated that poor self-rated health is a consistent predictor of mortality, functional ability, and disease (Bond et al., 2006; Idler, Russell, & Davis, 2000). However, the potential of self-rated health to predict cognitive decline has not been widely investigated in longitudinal studies (Bond et al., 2006). Research has also demonstrated that formerly incarcerated individuals report more drug use, including alcohol (CASAColumbia, 2010). Alcohol use has, in turn, long been linked to decreased mental health (Aneshensel, & Huba, 1983; Neff & Husaini, 1982) A recent study of teens in the National Longitudinal survey of Adolescent Health corroborated this relationship, concluding that youth who engage in any drinking, smoking, and/or sexual activity experienced significantly increased odds of depression, suicidal ideation, and suicide attempts (Halfors et al., 2004)

SUMMARY AND HYPOTHESES

In this paper, I use the Stress Process Model to investigative how arrest history impacts the presence of depressive symptoms among Black, Hispanic, and White young adults. Additionally, I explore whether the impact of arrest history on depressive symptoms differs by race and gender. In doing so, I take into account the assumption that the experience of being arrested operates according to stress proliferation. Being arrested may both directly and indirectly, through secondary stressors, effects the manifestation of depressive symptoms. Though many of the literatures referenced above deal with clinically diagnosed depression, it is important to note that this study, in lieu of a clinical diagnosis, focuses on the presence of depressive symptoms

which have been demonstrated to be a reliable measure of mental health, specifically depression and anxiety (Thorsen et al., 2013). There are three main hypotheses, each of which is guided by the Stress Process Model. Two hypotheses are associated with the stress proliferation theory and one hypothesis intends to expand our current understanding of the main relationship in question and advance our understanding of the relationship between criminal justice involvement and mental health outcomes. The hypotheses are as follows:

H1. Arrest history will be positively associated with depressive symptoms. (*Primary stressor hypothesis)***.**

H2a-b. Arrest history will have indirect effects on depressive symptoms through a) negative effects on self-rated health and b) positive effects on alcohol use. (*Secondary stressor hypothesis)*.

H3. Race and gender will moderate the relationship in hypothesis 1 such that the effect of arrest history on depressive symptoms will be larger for racial/ethnic minorities compared to their white counterparts.

Hypothesis 1 is guided by the *primary stressor* portion of stress proliferation theory and the literature that demonstrates criminal justice involvement, itself, impacts mental health due to discontinuity of socially acceptable behaviors and attitudes (e.g. Brunson & Weitzer, 2009; Hatzenbuehler, Phelan, & Link, 2013; Sykes, 2007; Toch and Adams, 2002). The *secondary stressor* portion of stress proliferation theory guides Hypothesis 2, wherein arrest history disrupts a number of social processes that in turn cause stress. This study focuses specifically on how being arrested impacts depressive symptomatology through its effect on self-rated health and alcohol use. Lastly, and likely the most important contribution of this study, I examine whether race and gender modifies the main effect of arrest history on the expression of depressive

symptoms. The Stress Process Model generally posits that stressors are a product of the distinctive social contexts characterizing the lives of disadvantaged groups and that differential exposure to these stressors contributes to health and life inequalities (Pearlin, 1989). Extant literature on the consequences of incarceration do not adequately address differential consequences of criminal justice involvement by race and gender. While some studies acknowledge that criminal justice involvement is concentrated among lower status groups, including racial/ethnic minorities (Sugie & Turney, 2017), little work has highlighted how the impact on mental health may differ by race. Criminal justice involvement may have a more negative impact on racial/ethnic minorities due to perceptions of the criminal justice system as a racialized institution (Peffley & Hurwitz, 2010) and as an extension of racial discrimination (Williams & Mohamed, 2009). In this research, I test whether the mental health consequences associated with arrest history are more pronounced for African Americans given their increased likelihood of being arrested. The mental health consequences of being arrested may be especially pronounced for Black males, who have the highest rates of criminal justice involvement of all race-gender groups (Brame et al., 2014).

DATA AND METHODS

Data and Sample

This research uses rounds one through fourteen (1997-2010) of the National Longitudinal Survey of Youth 1997 cohort (NLSY97) to examine variations in the relationship between arrest history and mental health. The NLSY97 is an ongoing longitudinal nationally representative study. The NLSY97 has collected data about the transition from school to work and into adulthood, including information on criminal activity, interactions with the criminal justice system, and health status drawn from the youths' parents, the youths themselves, and school

records. The study provides researchers with rich health data which enable precise modeling of health causes and consequences over the life course. The study consists of 8,984 respondents who were ages 12-17 in the first round of the survey of which 2,235 were an oversample Hispanic and non-Hispanic Black youth. This study relies on complete cases analyses for Black (N=1,169), Hispanic (N=960), and White (N=2,434) respondents, which yielded a final analytic sample of 4,563 young adults. Table 1 presents descriptive statistics for the entire sample.

Table 1. Descriptive Statistics for all Study Variables

Variables	Total Sample (N=4,563) Mean/ Prop.	SD	Black Males (N=502) Mean/ Prop.	SD	White Males (N=1,311) Mean/ Prop.	SD	Hispanic Males (N=449) Mean/ Prop.	SD
Dependent Variable								
Depressive Symptoms *(5=low to 20=high)*	9.41	1.88	8.92	1.92	9.14	1.78	8.89	1.77
Independent Variable								
Arrest History *(1=yes)*	.22	-	.33	-	.28	-	.28	-
Self-Rated Health *(5=excellent to 1=poor)*	3.89	.92	3.98	.97	4.06	.87	3.89	.92
Alcohol Use (*Number of Drinks per sitting)*	1.02	1.01	.67	.90	1.34	1.05	1.07	1.07
Controls								
Age *(years)*	21.90	1.38	21.90	1.35	21.85	1.38	21.86	1.39
Married *(1=yes)*	.08	-	.02	-	.05	-	.08	-
Education *(0=none to 7=PhD)*	1.53	.88	1.34	.93	1.60	.84	1.38	.93
Employed (1=yes)	.54	-	.42	-	.57	-	.51	-

Table 1 (continued). Means, Percentages, and Standard Deviations (SD) for All Study Variables

Variables	Total Sample (N=4,563) Mean/ Prop.	SD	Black Females (N=502) Mean/ Prop.	SD	White Females (N=1,311) Mean/ Prop.	SD	Hispanic females (N=449) Mean/ Prop.	SD
Dependent Variable								
Depressive Symptoms *(5=low to 20=high)*	9.41	1.88	9.77	1.97	9.73	1.83	9.74	1.91
Independent Variable								
Arrest History *(1=yes)*	.22	-	.15	-	.15	-	.13	-
Self-Rated Health *(5=excellent to 1=poor)*	3.89	.92	3.73	.98	3.85	.90	3.71	.94
Alcohol Use (*Number of Drinks per sitting)*	1.02	1.01	.58	.81	1.08	.95	.77	.37
Controls								
Age *(years)*	21.90	1.38	21.94	1.45	21.91	1.37	21.92	1.36
Married *(1=yes)*	.08	-	.04	-	.10	-	.17	-
Education *(0=none to 7=PhD)*	1.53	.88	1.45	.91	1.65	.90	1.46	.88
Employed (1=yes)	.54	-	.44	-	.61	-	.51	-

The NLSY97 is an ideal data set for investigating the relationship between arrest history and mental health. First, the NLSY97 is one of the few nationally representative surveys that captures early interactions with the criminal justice system, starting as early as age 12. Second, the NLSY97 contains measures of both mental health and criminal justice involvement. Third, data on both experiences were collected consistently overtime, from youth into adulthood, facilitating the use of models that accurately account for temporal ordering. Finally, the NLSY97 contains a host of additional potential stressors that facilitate explorations of the way in which stress proliferates to have a cumulative impact on mental health.

In this study, I use data from the initial wave of data collection (1997) through the thirteenth wave of data collection (2010). Background demographic characteristics and control variables are taken from the baseline wave, arrest history is taken from 1997 through 2001, secondary stressors were taken from 2002, and mental health variables were taken from 2004 through 2010. This wide data collection timeframe not only captures criminal justice interactions from age 12 through 21, but it also reflects the time it might take for stress to proliferate and impact mental health status. Thirteen years of data are used in total, capturing respondents who range from age 12 to age 30 over the period of study. Across this wide timeframe, inevitably some independent and dependent variables are missing a relatively small amount of data. Complete cases analyses are presented, again representing 4,743 young adults, since results of multiple imputation did not differ significantly.

Measures

Depressive Symptoms. The primary dependent variable for this study is a cumulative average measure of depressive symptoms. Depressive symptoms are measured using five items from the Mental Health Inventory (MHI-5). The MHI-5 has been demonstrated to be a reliable

measure of depressive symptoms (Thorsen et al., 2013). The inventory queries how often respondents felt "nervous", "calm and peaceful", "downhearted and blue", "happy", and "so down in the dumps that nothing could cheer you up" within the past month. Response options ranged from 4 = none of the time to 1 = all of the time. The responses for "nervous" and "downhearted and blue" and "so down in the dumps that nothing could cheer you up" were reverse coded so that higher numbers would represent a more negative response. For years 2004, 2006, 2008, and 2010, each individual item was summed, ranging from 5 to 20, such that higher numbers represented greater depressive symptoms. The Chronbach's Alphas were .79 in 2004 and 2006, .80 in 2008, and .81 in 2010. The mean level of depressive symptoms across all four rounds is 9.41. This average value is used as the dependent variable in subsequent analyses. It is important to note that there were no significant differences among racial/ethnic groups in depressive symptoms in bivariate analyses.

Arrest History (Primary Stressor). The primary independent variable in this study is arrest history. The variable is dichotomized such that respondents who reported having been arrested anytime between 1997 and 2001 were coded as 1. Arrests that occurred before the respondent turned 12 are not included. Nearly a quarter of the sample reported being arrested at least once during this time period. There are important race-render variables in this form of criminal justice interaction. Black men have the highest rates of arrest during this period, while white women have the lowest.

Self-Rated Health and Alcohol Use (Secondary Stressors). Measures of self-rated health and alcohol use are used as both dependent and independent variables in this study. Both measures were taken in 2002, before the earliest measure of depressive symptoms and after the last date of the incarceration history construction. The measure of self-rated health is derived

from a measure that asks respondents to rate their general health. Response options range from 5=excellent to 1=poor. Self-rated health has long been used as a valid and reliable measure of overall generally health though it is generally thought of as an indicator of physical health. The importance of self-rated health in this study is derived from its predictive power of future health and independence from depressive symptoms (Han, 2002). Alcohol use is derived from two survey items, one that asks respondents whether they have had a drink since the date of the last interview and a follow-up that asks, of respondents who reported drinking since the last interview, in the last 30 days, how many days the respondent drank one or more drinks. Respondents who reported that they have not drink since the date of the last interview were given zeros. For respondents who reported drinking, their number of days spent drinking was extracted from the follow-up question. The final variable is logged in subsequent analyses to account for over-dispersion.

Controls. A number of controls, measured prior to the dependent variable, are included in the analysis. To account for the fact that marital status has implications for depressive symptoms, I created a dummy variable for married persons (1=yes) and compared them to all other relationship configurations (Zlotnick et al., 2000). Roughly eight percent of this young sample is married. A variable indicating the highest degree is included, as education is known to be correlated with depressive symptoms (Ross and Wu, 1995). The variable is ordinal categorical and ranges from 1=none to 7=professional degrees. The mean of the sample just over 1.5. Employment is also known to have implications for depression and depressive symptoms with employed individuals exhibiting less depressive symptoms than those without jobs (Burgard, Brand, and House, 2007). A dummy variable that compares employed persons (1=yes) to those who are unemployed is included in analyses. Over half the sample is employed (54.22%). Race

and gender are also controlled for by running separate analyses for each race gender group. The six race-gender groups in the study are Black males, white males, Hispanic males, Black females, white females, and Hispanic females. This is central to the study given that Black men are the most highly incarcerated population and the fact that men are incarcerated at a rate nearly ten times higher than women (Prison Policy Initiative, 2012). Lastly, the average age of the sample is 21.90 in 2004, the year of the earliest measure of depressive symptoms in this sample.

Analytic Strategy

The first step of the analytic strategy involved presenting descriptive statistics. First, I examined the descriptive statistics for all study variables across the entire sample. Then, I compared means and proportions for study variables across the six race-gender groups explore comparing each group to white women who are the group with the lowest arrest rates. Next, to explore race-gender variations in the relationship between arrest history and depressive symptoms, I conducted a multi-sample structural equation model (SEM). This approach was most appropriate for a number of reasons. Specifically, this approach facilitated the simultaneous estimation of direct and indirect effects, which are the foundation of stress proliferation within stress process theory. The model also allowed me to simultaneously estimate separate estimations for each race-gender group. In other words, multi-sample SEM permits the simultaneous estimation of moderation effects through the use of constraints on pathways across multiple samples. This is key to exploring whether the proposed model, the proposed relationship between arrest history and depressive symptoms, varies across race-gender groups as expected. It is worth noting that growth curves were also estimated in an attempt to model the trajectory of depressive symptoms as a function of arrest history, as suggested by Turney, Wildeman, and Schnittker (2012). However, due to the lack of a consistent growth pattern in

depressive symptoms across years or ages, latent growth curves proved to be an inappropriate analytic technique. It is also important to note I only included variables that were significant predictors of depressive symptoms in a full model as potential secondary stressors.

The structural equation model was specified such that the direct pathway between arrest history and depressive symptoms was constrained across models (i.e. Black males, white males, Hispanic males, Black females, white females, and Hispanic females). All other pathways were unique to the separate models. Assuming that the Lagrange Multiplier statistics do not suggest releasing the constraint as a significant improvement to model fit, the coefficient for the constrained pathway will indicate support for Hypothesis 1. The Langrage Multiplier statistics will also indicate whether there is support for Hypothesis 3. Lastly, support for Hypothesis 2a and Hypothesis 2b will be indicated separately for each race-gender by the separate path coefficients from arrest history to alcohol use and self-rated health and from each of those variables, in turn, to depressive symptoms. The following section provides the results of the analysis. Results are presented in both table form in Table 2 as in graphic form in Figures 1-6, depicting reduced models excluding controls.

RESULTS

Model Fit. The proposed multi-sample structural equation, exhibited acceptable levels of model fit. The Langrange Multiplier Statistics for Releasing Equality Constraints did suggest that releasing the constraint for the direct effect between arrest history and depressive symptomatology for at least one of the models would improve the fit of the model. The implications of this as they relate to the hypotheses are discussed further in the following sections. After making this one modification, the models exhibited fit that were above all recommended thresholds ($\chi 2=24.12$, df=28; p=n.s.). The chi-squared to degrees of freedom ratio

is well below the recommended 5 to 1 ratio, and even further, the chi-squared is non-significant (Barret, 2007). Additionally, the Bentler and Bonett's (1980) normed fit index (NFI) is above the accepted .9 threshold.

Arrest History and Depressive Symptoms: Primary Stressor. I turn first to the portion of the structural equation models estimating depressive symptoms as a function of the primary stressor, arrest history. According to the fit statistics, specifically, the Langrange Multiplier Statistic for Releasing Equality Constraints, model fit was improved by allowing the pathway from arrest history to depressive symptoms to be estimated freely for white males. After removing this constraint, according to the arrest history coefficients in Model 3 for each race-gender group, there is a positive effect of having an arrest history on depressive symptoms for Black and Hispanic males and Black white, and Hispanic females (b=.36, se=.08, p<.001). In other words, having an arrest history increases the expression of depressive symptoms for individuals belonging to these racial groups. For white males, there is no direct effect of having an arrest history on depressive symptoms (b=-.06, se=.12, p=n.s.).

Based on these results, there is support for Hypothesis 1, that arrest history will be positively related to depressive symptoms, for all race-gender groups except white men. However, given that the Langrange Multiplier Statistic for Releasing Equality Constraints did not suggest releasing constraints for white women as well, there is no support for Hypothesis 3, that the main effect of arrest history on depressive symptoms is larger for racial/ethnic minorities compared to their white counterparts. This finding is consistent with a recent study conducted by Sugie and Turney (2017) which concluded that the association between various forms of criminal justice involvement and poor mental health is the same across race and ethnicity.

Stress Proliferation: Secondary Stressors. Next, I turn to the portion of the structural models estimating the proliferating manner in which arrest history impacts depressive through secondary stressors, alcohol use and self-rated health. The indirect effects for these secondary stressors are depicted across multiple models: Model 1 and Model 2 (indicating whether self-rated health and alcohol use, respectively, are impacted by having an arrest history) and Model 3 (indicating whether the secondary stressors impact depressive symptoms). Given that the pathways associated with the stress proliferation hypotheses were estimated uniquely for each race-gender group, I take each race gender-group in turn starting with males. For Black males, being arrested is negatively associated with self-rated health (Model 1: b=-.22, se=.09, p<.05) and positively associated with alcohol use (Model 2: b=.32, se=.10, p<.01). Self-rated health, then, negatively impacts depressive symptoms (Model 3: b=-.43, se=.09, p<.001), while alcohol use has a positive impact (Model 3: b=.20, se=.08, p<.05). For white males, being arrested is negatively associated with self-rated health (Model 1: b=-.18, se=.06, p<.01) and positively associated with alcohol use (Model 2: b=.35, se=.07, p<.001). However, only self-rated health is, in turn, associated with depressive symptoms (Model 1: b=-.61, se=.23, p<.001). For Hispanic males, both self-rated health (Model 1: b=-.20, se=.10, p<.05) and alcohol use (Model 2: b=.23, se=.11, p<.05) are impacted by arrest history. For them, though, only self-rated health is a significant predictor of depressive symptoms (Model 3: b=-.36, se=.09, p<.001).

Turning to females, Black females specifically, having an arrest history is not associated with self-rated health. Arrest history is, however, associated with alcohol use (Model 2: b=.23, se=.09, p<.01). In turn, in terms of secondary stressors, only self-rated health is associated with depressive symptoms (Model 3: b=-.37, se=.08, p<.001). The models for white women suggest that while being arrested in associated with decreased self-rated health (Model 1: b=-.37, se=.07,

p<.001) and increased alcohol use (Model 2: b=.35, se=.07, p<.001, those two secondary stressors are not significant predictors of depressive symptoms. Finally, for Hispanic females being arrested is associated with increased alcohol use (Model 2: b=.32, se=.12, p<.01) but not with self-rated health. Self-rated health, is however negatively associated with depressive symptoms (Model 3: b=-.49, se=.09, p<.001). Alcohol use is positively associated with depressive symptoms for Hispanic women (Model 3: b=.24, se=.09, p<.01).

There were additionally a number of significant control variables. For Black males, age is positively associated with alcohol use (b=.14, se=.03, p<.001). For white men, being married decreases alcohol use (b=-.28, se=.14, p<.05). Education is also positively associated with both alcohol use (b=.08, se=.05, p<.05) and self-rated health (b=.17, se=.03, p<.001). Being employed is negatively associated with depressive symptoms for Hispanic men (b=-.39, se=.17, p<.05). Additionally, as education increased, self-rated health increases for Hispanic men (b=.10, se=.05, p<.05). Age is associated with increases in alcohol use for Black women (b=.09, se=.02, p<.001). For white women, increased in education is associated with decreased in depressive symptoms (b=-.17, se=.06, p<.01). Additionally, education (b=.17, se=.03, p<.001) and age (b=.15, se=.02, p<.001) are both positively associated with alcohol use. Being married was associated with decreased in alcohol use for white women (b=-.59, se=.08, p<.001). Self-rated health is also positively associated with education (b=.18, se=.03, p<.001). Lastly, for Hispanic women, being employed is associated with lower depressive symptoms (b=-.28, se=.09, p<.01). Education (b=.15, se=.05, p<.01) and age (b=.06, se=.03, p<.05) are positively associated with alcohol use. Married women report less alcohol use (b=-.24, se=.11, p<.05).

Table 2. SEM for Relationship Between Arrest History and Depressive Symptoms. NLSY97 (N=4,563).

	Black Males (N=502)			White Males (N=1,311)			Hispanic Males (N=449)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
	SRH	Alcohol Use	MHI-5	SRH	Alcohol Use	MHI-5	SRH	Alcohol Use	MHI-5
Independent Variables	*b*	*b*	*b*	*b*	*b*	*b*	*b*	*b*	*b*
	(se)	*(se)*	*(se)*	*(se)*	*(se)*	*(se)*	*(se)*	*(se)*	*(se)*
Arrest History	-.22**	.32**	**.36***	-.18**	.35***	-.06	**.20****	.23*	**.36****
	(.09)	(.10)	**(.08)**	(.06)	(.07)	(.12)	**(.10)**	(.11)	**(.08)**
Self-Rated Health			-.43***			-.61***			-.36***
			(.09)			(.06)			(.09)
Alcohol Use			.20*			.07			.14
			(.08)			(.05)			(.08)
Controls									
Married		-.15	.18		-.28*	-.22		-.04	-.09
		(.33)	(.62)		(.14)	(.23)		(.19)	(.31)
Highest Degree Completed	.08	.01	-.18	.17***	.08*	.02	.10*	.07	-.08
	(.05)	(.05)	(.09)	(.03)	(.05)	(.07)	(.05)	(.06)	(.09)
Employed			.05			-.16			-.39*
			(.17)			(.10)			(.17)
Age	-.02	.14***	-.03	-.03	.16	.00	.00		.00
	(.03)	(.03)	(.06)	(.02)	(.02)	(.04)	**(.06)**		(.06)
Bentler NFI	.98			.99			.98		

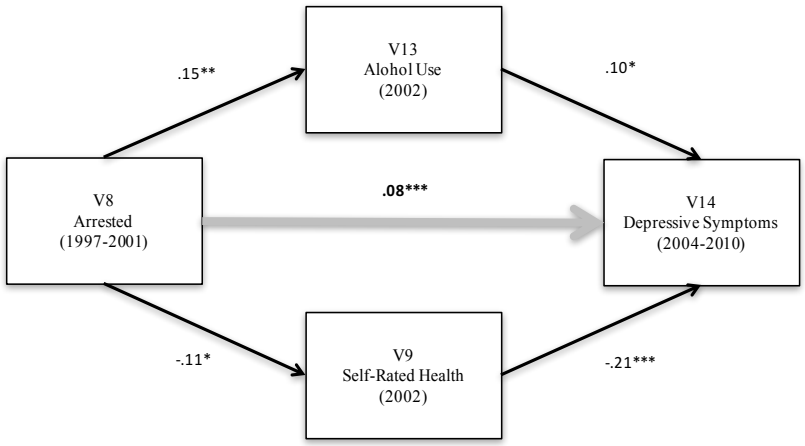
*p<.05; **p<.01; ***p<.001.
Chi-Square = 24.12, df = 28; p =.68.; Bentler NFI=.989; Bentler NNFI=.999, Bentler CFI=.999
Bold Pathways are Constrained Across Models

Table 2 (continued). SEM for Relationship Between Arrest History and Depressive Symptoms. NLSY97 (N=4,563).

	Black Females (N=667)			White Females (N=1,303)			Hispanic Females (N=511)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
	SRH	Alcohol Use	MHI-5	SRH	Alcohol Use	MHI-5	SRH	Alcohol Use	MHI-5
Independent Variables	*b*	*b*	*b*	*b*	*b*	*b*	*b*	*b*	*b*
	(se)	*(se)*	*(se)*	*(se)*	*(se)*	*(se)*	*(se)*	*(se)*	*(se)*
Arrest History	**.**00	-.23 **	.36***	**-.38****	.35***	.36	-.21	.32**	.36***
	(.11)	(.09)	**(.08)**	**(.07)**	(.07)	(.08)	**(.13)**	(.12)	(.08)
Self-Rated Health			-.37***			-.59***			-.49***
			(.08)			(.05)			(.09)
Alcohol Use			.16			.03			.24**
			(.09)			(.05)			(.09)
Controls									
Married		-.22	.45		-.59***	-.01		-.24*	-.40
		(.15)	(.36)		(.08)	(.16)		(.11)	(.23)
Highest Degree Completed	-.01	.06	.02	.18***	.17***	-.17**	.04	.15**	-.28**
	(.04)	(.04)	(.09)	(.03)	(.03	(.06)	(.05)	(.05)	(.09)
Employed			-.16			-.12			.14
			(.15)			(.10)			(.17)
Age	.00	.09***	-.04	.00	.15***	.02	-.01	.06*	.07
	(.03)	(.02)	(.05)	**(.02)**	(.02)	(.04)	**(.03)**	(.03)	(.07)
Bentler NFI	.98			.99			.98		

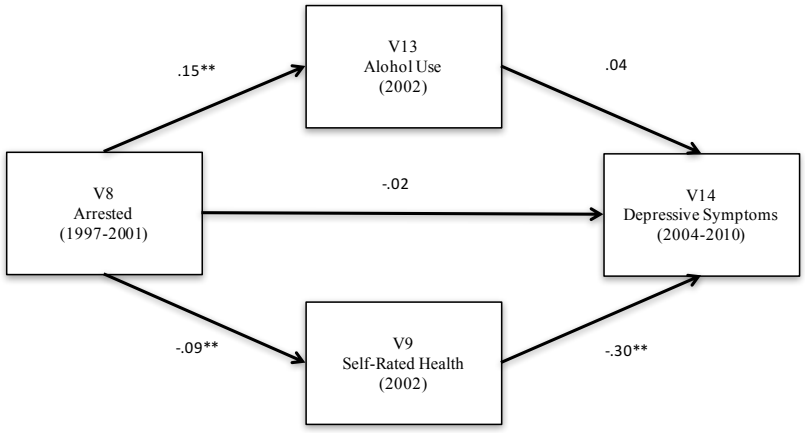
*p<.05; **p<.01; ***p<.001.
Chi-Square = 24.12, df = 28; p =.68.; Bentler NFI=.989; Bentler NNFI=.999, Bentler CFI=.999
Bold Pathways are Constrained Across Models

Figure 1. Structural Equation Model for Relationship between Incarceration and Depressive Symptoms. Black Males (*N = 502*).



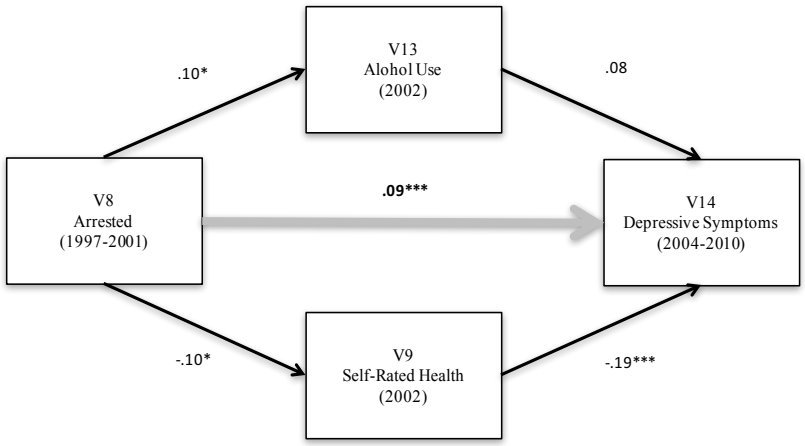
Note: Diagram does not include control Variables.
Thick grey line represents consrtained pathway across Black males, Hispanic males, Black females, White females, and Hispanic females
*p<.05; **p<.01; ***p<.001. Chi-Square = 24.12, df = 28; p = n.s..; Bentler NFI=.989

Figure 2. Structural Equation Model for Relationship between Incarceration and Depressive Symptoms. White Males (*N = 1,311*).



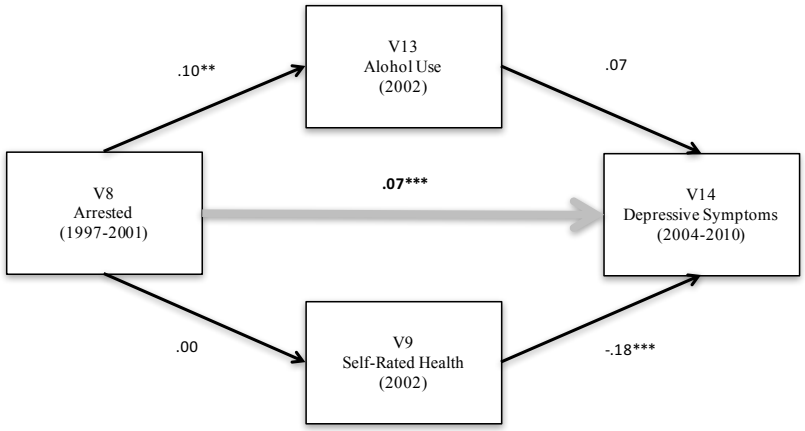
Note: Diagram does not include control Variables.
Thick grey line represents consrtained pathway across Black males, Hispanic males, Black females, White females, and Hispanic females
*p<.05; **p<.01; ***p<.001. Chi-Square = 24.12, df = 28; p = n.s..; Bentler NFI=.989

Figure 3. Structural Equation Model for Relationship between Incarceration and Depressive Symptoms. Hispanic Males (*N = 449*).



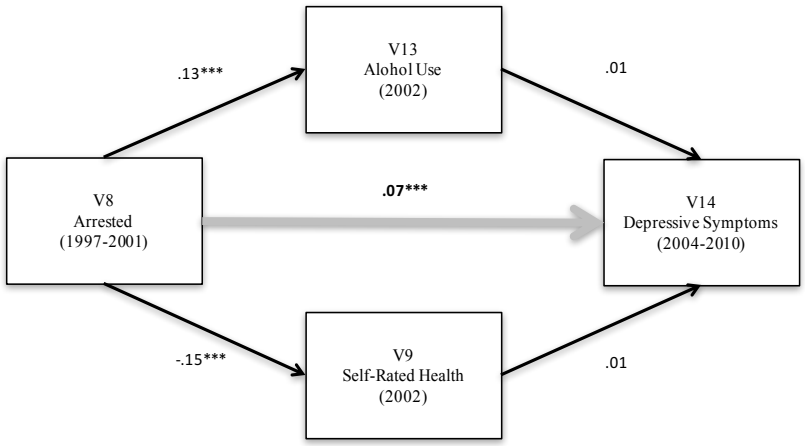
Note: Diagram does not include control Variables.
Thick grey line represents consrtained pathway across Black males, Hispanic males, Black females, White females, and Hispanic females
*p<.05; **p<.01; ***p<.001. Chi-Square = 24.12, df = 28; p = n.s..; Bentler NFI=.989

Figure 4. Structural Equation Model for Relationship between Incarceration and Depressive Symptoms. Black Females (*N = 667*).



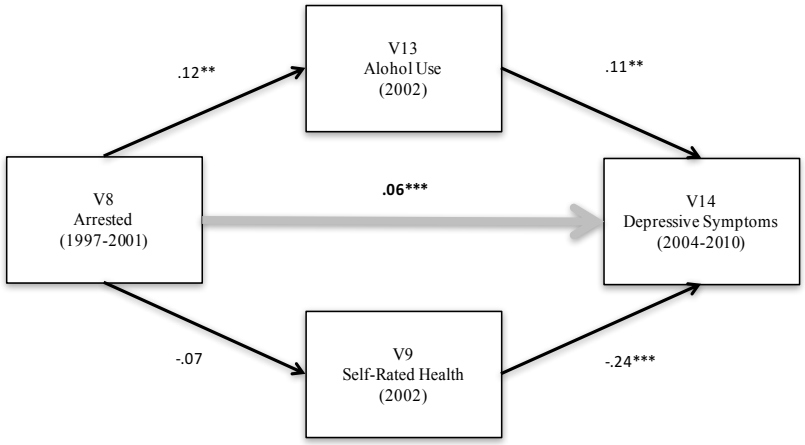
Note: Diagram does not include control Variables.
Thick grey line represents consrtained pathway across Black males, Hispanic males, Black females, White females, and Hispanic females
*p<.05; **p<.01; ***p<.001. Chi-Square = 24.12, df = 28; p = n.s..; Bentler NFI=.989

Figure 5. Structural Equation Model for Relationship between Incarceration and Depressive Symptoms. White Females (*N = 1,303*).



Note: Diagram does not include control Variables.
Thick grey line represents consrtained pathway across Black males, Hispanic males, Black females, White females, and Hispanic females
*p<.05; **p<.01; ***p<.001. Chi-Square = 24.12, df = 28; p = n.s..; Bentler NFI=.989

Figure 6. Structural Equation Model for Relationship between Incarceration and Depressive Symptoms. Hispanic Females (*N = 511*).



Note: Diagram does not include control Variables.
Thick grey line represents consrtained pathway across Black males, Hispanic males, Black females, White females, and Hispanic females
*p<.05; **p<.01; ***p<.001. Chi-Square = 24.12, df = 28; p = n.s..; Bentler NFI=.989

DISCUSSION

In this study, I use data from the National Longitudinal Survey of Youth 1997 Cohort to explore the relation between arrest history and depression. Relying on this longitudinal dataset consisting of individuals who were young adults during the baseline wave of data collection, the findings contribute to a better understanding of how involvement with the criminal justice system is detrimental to mental health status. Drawing from the stress process framework, I developed and tested three hypotheses. The results have implications for understanding the far-reaching effects of the pervasive social process that is criminal justice involvement.

Some existing research, especially work focusing on physical health, suggests that criminal justice involvement leads to health benefits (Spaulding et al., 2011). The findings in this study focusing on mental health, however, suggest that, for most individuals, criminal justice involvement in the form of being arrested is a health deteriorating experience. Within the stress process, then, the experience of being arrested is a primary source of stress, corroborating several recent studies on the topic (Schnittker, Massoglia, & Uggen, 2012, Sugie & Turney, 2017, and Turney, Wildeman, & Schnitker, 2012). One of the ways that this study furthers the understanding of criminal justice involvement as a stressor is by intentionally asking whether this relationship is the same across not only race but also gender groups. In doing so, the findings reveal that being arrested is not a universal primary stressor. White men appear to be shielded from the deleterious direct effects of this form of criminal justice involvement. For all other race-gender groups, the stigma associated with being arrested (Lerman and Weaver, 2014; Hatzenbuehler, Phelan, and Link, 2013), the physical contact and degrading commentary endured while being arrested (Brunson and Weitzer, 2009), feeling of powerlessness while being arrested (Lerman and Weaver, 2014), and the anticipation of future events (e.g. loss of a job, not

seeing loved ones) as a result of being arrested (Pearlin and Bierman, 2013) may all trigger depressive symptoms. Additional work is necessary to uncover the reasons why white men might be shielded from this deleterious experience.

Another way that this study expands what we already know about the mental health consequences of criminal justice involvement is by considering racial variations in its far-reaching consequences. Stress proliferation suggests primary and secondary stressors coexist and links the two through social processes (Pearlin, Aneshensel, & LeBlanc, 1997). Incarceration has been linked to a plethora of secondary stressors which are impacted by incarceration and, in turn, impact major depression or depressive symptoms (Braman, 2004; Nurse, 2002; Pager, 2003; Pager, Western, and Sugie, 2009; Western, 2002, 2006; CASAColumbia, 2010) In this study the secondary stressors of focus are self-rated health and alcohol use. The results reveal that the manner in which stress proliferates as a function of being arrested is, indeed, patterned by race and gender. In other words, there is evidence that race-gender groups are uniquely impacted by being arrested.

While white men's depressive symptoms are not directly influenced by having been arrested, being arrested does proliferate to impact mental health through their self-rated health. In fact, for all male racial groups, there is either a direct relationship between criminal justice involvement and mental health or an indirect effect. For Hispanic males, like white males, the indirect effect is through self-rated health. Self-rated of health is a consistently used measure of global health and often combines physical and mental health status. What is true about self-rated health is that it is a strong predictor of later mental health, which is supported by the findings in this study. Black men, too experience the proliferation of the stress of being arrested through reductions in self-rated health. However, for Black men increased alcohol use is another indirect

way in which arrest history impacts mental health, creating three pathways for criminal justice involvement to deteriorate mental health. Increased alcohol use is important considering that, generally, Blacks drink less than whites (Barnes, Welte, Hoffman, 2002), representing an important health indicator on which Blacks typically outperform whites. Drinking as a function of being arrested can then, in a host of ways, undo this health benefit.

Though all women in this study experience increases in depressive symptoms following arrests, for Black women and white women there is no evidence of stress proliferation considering the secondary stressors of this study. The findings reveal that, for Hispanic women, being arrested does increased alcohol use which, in turn increases depressive symptoms. The lack of evidence of stress proliferation for white women and Black women may be related to the facets of life that are affected for women differently from men and may represent a limitation of the study.

In addition to clarifying the race and gender variation in the far-reaching compounding and complex consequences of arrest history on mental health, this study also gives us a glimpse of how early exposure to the criminal justice system can be the start of a downhill health trajectory. By using a nationally representative sample of young adults this study sheds light on how a cohort of individuals, 22 percent of whom were arrested by age 22, become entangled in spiraling system of poor social and health outcomes. Studies that focus on time spent in jails and prisons as adults, for example, may have missed the starting line for experiences that inevitably led them to imprisonment. In conjunction with the diverging ways in which this study has demonstrated that arrests impact health, we must consider the racial and gender differences in exposure to arrests and the criminal justice system more broadly. The results suggest that being arrested has not become normalized experience among young Blacks and Hispanics as some

might expect given the disproportional prevalence of exposure for these communities. And in fact, the effects linger into their adult lives. Stress process theory suggests that stressors are a product of the distinctive social contexts characterizing the lives of disadvantaged groups and that differential exposure to these stressors contributes to health and life inequalities (Pearlin, 1989). Young Black males not only experience the highest likelihood of having run-ins with the police (Bonczar, 2003; NAACP, 2014), but, according to this study, they exhibit the highest number of indirect pathways through which being arrested negatively impacts health. We must keep in mind that even though this study and these data did not demonstrate that Black and Hispanic males and females experience a heightened direct effect of arrests on depressive symptoms relative to whites, it also does not suggest that these young people have become desensitized to the problem that is mass incarceration. This study still finds that criminal justice involvement has far-reaching consequences, and large-scale inequities in health can still result merely based on the number and proportion of African Americans who become involved with the system.

Notwithstanding the strengths and advancements of this study, there are important limitations. For one, the novelty the young age of the sample can also be conceived of as a limitation. For instance, the lack of variation across race in depressive symptoms may be a function of the age of the respondents during the period examined. The same may be true for control variables in the study such as employment and marital status where the relatively young age of the sample may explain the lack of significance despite literature claiming these variables are critical pieces of the equation. Future studies might examine variables that are likely to have more variation among young adults such as social stigma or more relevant relationship configurations such as cohabiting. Other limitations exist. For example, I would be remiss not to

acknowledge that the relationship between depressive symptoms and arrests may be driven by selection into criminal justice involvement rather than arrests itself. Many people experience psychiatric disorders, financial hardships, and social miscues prior to becoming involved with the criminal justice system. I do not directly account for that bias or reverse causation in this study. However, the aggregate nature of the arrest history variable and depressive symptom variables used in this study as well as the covariance structure of the structural equation models may reduce the prevalence of selection bias here. Future studies might adjust for known (and unknown) covariates across those who have and have not been arrested using, for instance, propensity score matching to gain a better estimate of the effects of being arrested. Sugie and Turney (2017) do conduct supplemental analyses to their study to suggest that reverse causality is not driving similar relationships between criminal justice involvement and mental health. Lastly, this study does not capture the depressive symptoms of those persons who were arrested, convicted, and incarcerated during the period of study, and, therefore, did not return into the survey sample. Arguably, excluding that sub-sample of individuals from the sample leads to an underrepresentation of the proliferating impact of being arrested on mental health. These limitations invite further study through the collection and use of additional data sources and through additional analyses.

CONCLUSION

It has become increasingly clear that our criminal justice system is broken. In the recent century, the system has been focused far too often on criminalization, retribution, and incarceration and far too little on rehabilitation and injustice. This has led to a dramatic increase in the number of individuals who become involved with the criminal justice system. This study highlights an undeniable connection between this involvement and depressive symptoms, adding

to the growing understanding that the system needs to be fixed. The strong connection between criminal justice involvement and poor mental health is particularly worrisome given the disproportionality of criminal justice involvement by race/ethnicity and gender. Combining this disproportional involvement, wherein Black men are by and large more overrepresented than any other group, with the findings of this study, which suggest that the impact of criminal justice involvement on mental health is not universal, we become more aware of how the current criminal justice system is widening the health disparities gap. As early as 12 years old, the criminal justice system sets Black men on a trajectory of poor mental health through multiple social processes. Given the importance of mental health for other life course outcomes, such as physical health, socioeconomic status, and later chances of incarceration, those interested in well-being and public health should continue to focus efforts on the criminal justice system; or risk going another generation with growing health disparities.

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CHAPTER IV

Black Identity Matters: Arrest History and Psychological Well-Being Among African Americans, Caribbean Blacks, and Whites

INTRODUCTION

The recent non-indictments of police officers who have used deadly force against unarmed Black men have incicted popular and scholarly discussions on racial-injustices in our legal system, racialized police violence, police misconduct, and a disregard of the well-being Black people in America (Jee-Lyn Garcia & Sharif, 2015). The Black Lives Matter Movement has been at the forefront of these discussions. Black Lives Matter is an international network of more than 30 chapters working to rebuild the black liberation movement and affirm the lives of all black people – specifically black women, queer and trans people, people who are differently abled, and those who are undocumented and formerly incarcerated (Black Lives Matter, 2018). The deaths of Eric Garner, an unarmed Black man strangled to death by police in Staten Island, New York and Michael Brown, an unarmed Black adolescent shot to death by police in Ferguson, Missouri are two key events around which Black Lives Matter has centered. To race and health scholars, these avoidable deaths serve as two recent examples of racial inequity in well-being that has plagued our country for centuries.

In some ways, Black Lives Matter can be thought of as a contemporary response to one of the most firmly established patterns in the distribution of health status in the United States: that Blacks have higher rates of death, disease, and disability than whites (Williams, 1999). This pattern suggests that Black lives in this country do not matter, or that they matter less and our criminal justice system acts accordingly. That Black people exhibit poorer health than whites has long been noted. In his classic book, *The Philadelphia Negro,* written in 1899, W.E.B. Du Bois

(1967) indicated that higher levels of poor health for Blacks was one important indicator of racial inequality. This early pattern discovered by Du Bois would be continually documented by scholars of nearly all social science disciplines in the years to come, enduring the test of time.

To better understand health disparities that fuel that Black Lives Matter movement and a host of academic research alike, important questions remain. Patterns of health disparity have been most firmly established for physical health status (Williams & Sternthal, 2010). Indicators of psychological well-being, on the other hand, show inconsistent patterns (Williams et al, 1997). One important question is what are the factors contributing to these inconsistent patterns. Further, the traditional mode of conducting research aimed at uncovering this inconsistency has focused on the Black-white binary. Relatively little attention has been given to factors within racial groups that contribute to inconsistent patterns of mental health status (Williams, Neighbors, & Jackson, 2003; for exception see Ida & Christie-Mizell, 2012; Sellers et al., 2006). As a result, there is a continuing need to direct attention to the diversity of histories and social circumstances subsumed within Black lives, as well as on resources, that may differentially pattern the impact stressful life circumstances have on psychological well-being. One such resource that is linked to history and social circumstance is racial group identity, which serves as the focus of the present study.

This study focuses on the experience of being arrested and its impact on mental health among a sample of African Americans, Caribbean Blacks, and white Americans. The goal is to better understand racial heterogeneity in mental health status. An aspect of racial/ethnic minority self-concept (Jackson & Lassiter, 2001), racial group identity varies within racial/ethnic groups and has been the focus of debates regarding its stress-buffering abilities. There are at least two roles that scholars have suggested racial/ethnic group identity could play. One the one hand, a

strong racial/ethnic identity may be beneficial inasmuch as it provides a sense of belonging and serves a buffer against the detrimental impact of stressors (Banks & Kohn-Wood, 2007; Dagadu & Christie-Mizell, 2014). On the other hand, having a strong racial/ethnic identity may serve to emphasize differences from the dominant culture and heighten the stress of minority status. Highlighting these differences could then intensify the effect of stressors, especially those racial in nature (Sellers & Shelton, 2003). Being arrested by the police, an experience that pervades the racial history of the United States, has received an abundance of recent popular media attention, partially as a result the Black Lives Matter Movement. This study adds to conversations in the literature about involvement with the criminal justice system more broadly by considering racial/ethnic identity as a coping resource in the stress process linking arrests to mental health outcomes. In other words, this study asks: does racial/ethnic identity matter for individuals who have been arrested.

BACKGROUND AND THEORY

Theoretical Framework

The theoretical perspective that guides this research is the stress process model (Pearlin et al., 1981; Turner, 2010). The stress process model has become a dominant theoretical framework for conceptualizing both status differences in health and variations in the risk and protective factors implicated in these differences. Moreover, the stress hypothesis, and the subsequent stress process models designed to test it, have dominated studies in the sociology of mental health for decades. It has been used to identify the ways in which life stresses associated with individuals' social statuses explain variations in mental health outcomes. The central premise of the stress process is that social statuses determine the conditions of people's lives. Such conditions, then, create the context for differential exposure to stressful events and coping resources. Differences

in health conditions arise from variations in stress exposure and resource accumulation (Pearlin 1983; Pearlin 1989; Pearlin et al. 1981). As implicated in this summative statement, the stress process model involves three interrelated concepts: stressors, moderators, and health outcomes (Turner, 2009). The essential element of the sociological study of stress is the presence of similar types and levels of stress among people who are exposed to similar social and economic conditions, who occupy similar roles, and who come from similar situational contexts.

Stress" or "stressors" in the stress process model refer to any environmental, social, or internal demand which requires an individual to readjust his/her usual behavior patterns and stresses their coping strategies (Christie-Mizell, Leslie, Hearne, 2017; Dagadu & Christie-Mizell, 2014; Thoits, 1995). As stressors accumulate, individual's abilities to cope or readjust can be overtaxed. This overtaxing results in a depletion of their physical and/or psychological resources, which, in turn, increases the likelihood that deteriorated health will ensue. In other words, stressors impact mental health outcomes by creating strain on individuals' ability to cope and cause wear and tear on peoples psychological and biological systems leading to illness, disease, and mortality (Geronmius et al., 2006; Williams & Mohammed, 2009). In this study, being arrested is the stressor under investigation. Being arrested has become a widespread experience. Recent estimates suggest that 12.2 million individuals are arrested annually (U.S. department of Justice, 2013). By age 23, between 30 and 41 percent of individuals have been arrested (Brame et al., 2012). The Black Lives Matter movement situates criminal justice involvement as a stressor in the lives of African Americans, specifically. Numerous empirical studies have demonstrated that criminal justice involvement adversely affects physical and, more recently, mental health (Geller et al., 2014; Sewell et al., 2016; Sugie & Turney, 2017; Turney, Wildeman, & Schnittker, 2012). For example, conceiving of incarceration as a stressor is supported by

research from Turney, Wildeman, and Schnittker (2012). These authors found the stress process to be critical for explaining the immediate and enduring health effects of incarceration for all formerly and currently incarcerated people. However, few studies have parsed out whether criminal justice involvement, such as being arrested, is a universal stressor across racial and ethnic groups.

The second part of the stress process is moderators. Moderators are psychosocial resources (e.g. mastery, self-esteem, and social support) that help reduce the deleterious effects of stressors. It is now widely accepted that examining stressors alone cannot adequately address the effect of stressors on health outcomes. Instead, we must consider the variety of behaviors, perceptions, and cognitions that are capable of altering the difficult conditions or of buffering their impact. Moderators develop out of the social statuses individuals occupy and the conditions they inhabit (Turner & Avison, 2003). The moderators most frequently studied using the stress process model are mastery and self-esteem. Specifically, the stress process model purports that life events are likely to eventuate stress when they also result in a diminishment of these two dimensions of self (Christie-Mizell & Erickson, 2007; Pearlin et al 1981). While these two moderators and several others have dominated the literature, there is ample room to consider other psychosocial resources that will help better understand the stress process. In this study, the moderator under investigation is racial/ethnic group identity, measured as closeness to others in the same racial/ethnic group.

The final key component of the stress process is outcomes. Outcomes are the observed effects of stressors after accounting for the moderating process (Dagadu & Christie-Mizell, 2014; Ida & Christie-Mizell, 2012; Pearlin et al., 1981). While stress outcomes are, theoretically, unbounded, ranging from diastolic blood pressure to life satisfaction, in the sociology of mental

health specifically, the most common stressors examined are depressive symptoms and anxiety. The outcome for this study is mental health status, measured as both self-rated mental health and Major Depressive Disorder. In the following section, I describe the importance of examining mental health. This study, thus, includes all of the main components of the stress process model. The main goal, however, is to understand whether racial/ethnic group identity serves as a psychosocial resource, buffering the deleterious relationship between being arrested and mental health. A secondary goal is to investigate whether the stress process linking arrests, racial/ethnic group identity, and mental health varies among African Americans, Caribbean Blacks, and whites.

Mental Health Disparities

In a fundamental article on the sociology of mental health, Blair Wheaton (2001) makes a compelling case for the importance of mental health as research topic among sociologists. He also highlighted the importance of making it a stand-alone substantive research area within the field. Wheaton suggested that mental health is "everyone's ultimate dependent variable," (p.228). By this, Wheaton meant that an essential reason that sociologists are concerned with other topics, such as unequal access to wealth and resources or being arrested by the police, is because of their effect on mental health -- the state of well-being, suffering, misery, or outlook on life -- of people in disadvantaged social positions. The reason this study focuses on mental health is because of the importance of mental health in patterning future life chances. For example, although the symptoms of depression cycle overtime and can, sometimes, completely disappear, the initial onset of depression increases the risk of future episodes (Kendler, Thornton, and Gardner, 2000) and increases the risk comorbidity with disease and physical impairment

(Kessler et al., 2003; Merikangas et al., 2007). Better understanding what patterns mental health and, specifically, disparities in mental health status is imperative.

Major Depressive Disorder (MDD) is one of the most common and disabling psychiatric disorders in the United States (Kessler et al., 2005; Williams et al., 2007). It is the fourth leading cause of disability and the leading cause of non-fatal diseases (Ustun, 2004). Williams & Sternthal, 2010). Race is one well-researched factor known to pattern the distribution of MDD and other measures of mental health status. The prevalence of MDD among the U.S. population is certainly not evenly distributed across racial groups. However, unlike physical health, where clear disparities exist when comparing racial groups, indicators of psychological well-being show inconsistent patterns across race (Williams et al, 1997). Given the differential exposure to adverse life-circumstances, one might expect that Blacks would almost undoubtedly experience poorer mental health. In fact, we know that Blacks are overrepresented among high-need individuals, have reduced access to mental health services, and often receive a lower quality of care compared to whites (USDHS, 2001). However, studies have concluded that, compared with whites, Blacks have lower life-time rates of MDD and equal or lower rates of lifetime and 12-month MDD (Blazer et al., 1994; Kessler et al., 1994; Kessler et al., 2003; Williams et al., 2007).

Additional insight on several topics could help more systematically specify the complex relationship between race and mental health status. First, there is a continuing need to better understand how the criminal justice system affects mental health status. As mentioned previously, numerous empirical studies have demonstrated that criminal justice involvement adversely affects physical and, more recently, mental health (Geller et al., 2014; Sewell et al., 2016; Sugie & Turney, 2017; Turney, Wildeman, & Schnittker, 2012).

There have been several explanations for why being arrested impacts health outcomes. The stigma associated with being arrested is one way that criminal justice involvement may negatively impact mental health (Hatzenbuehler, Phelan, & Link, 2013; Lerman & Weaver, 2014). Some have suggested that the experience of incarceration which often follows an arrest, creates sudden changes in lifestyle, isolation, and introduces the threat of danger present in the prison environment (Sykes, 2007) which can adversely impact health. Though criminal justice involvement can be a stressful experience to people of any race or ethnicity, the larger sociological context of unfair police treatment and the Black Lives Matter movement help situate it as a source of racial discrimination for African Americans specifically. For this group, being stopped, searched, harassed, or arrested by the police could be thought of as an experience of discrimination. An abundance of studies has linked perceived discrimination based on race or ethnicity to mental health outcomes (e.g. Banks & Kohn-Wood 2007; Mossakowski 2003; Williams & Williams-Morris 2000; Williams et al. 1997; Williams et al 2010). What is missing from this literature currently is an understanding of the factors that might buffer or exacerbate the adverse impact of the discriminatory criminal justice system. This study intends to address this gap.

Second, heterogeneity among the Black population in the U.S. is a neglected aspect of mental health disparities broadly. Much of the research on health disparities aimed at disentangling this inconsistency has focused on the Black-white binary. Relatively little attention, however, has been given to factors within racial groups that contribute to inconsistent patterns of mental health status (Williams, Neighbors, & Jackson, 2003; for exception see Dagadu & Christie-Mizell, 2014; Sellers et al., 2006). This study considers racial heterogeneity

in two ways: by considering racial/ethnic identity as a psychosocial resource and by considering racial ethnic variations in the stress process.

Racial Group Identity as Psychosocial Resource

Racial group identification involves a sense of racial or ethnic pride, involvement in cultural or ethnic practices, and cultural commitment to one's racial/ethnic group (McGee & Martin, 2011). Racial group identity is derived from social-psychological identity theory, which purports that an individual has multiple identities that are organized in a salience hierarchy within the self (Pitt 2009; Serpe and Stryker 1987). Identity theory also suggests that the salience (likelihood of being invoked) of any given identity is based on an individual's commitment to a group. One such group is an individual's racial group. Racial group identity is shaped by socialization experiences such as messaging from parents about what I means to be a member of one's racial/ethnic group (Demo & Hughes, 1990); Scholars suggest that racial group identity may be a coping resource and serve in a protective capacity for health (Hughes et al., 2015; McGee & Martin, 2011; Sellers et al., 2003). Focusing on racial discrimination, this research suggests that commitment to ethnic relationships and, concomitantly, having a salient racial identity buffers the stress of racial discrimination. It does so by preventing negative stereotypes from permeating one's self concept. Racial/ethnic identity then could be a critical component of the stress process model as a psychosocial resource, though it has rarely been considered within the model (see Dagadu & Christie-Mizell, 2014 for an exception). In this study, racial identity is defined as how close individual's feel to others of their racial/ethnic group.

There are at least two competing hypotheses regarding the role of racial identity as buffering mechanism between racial discrimination and health. One hypothesis is that having a strong racial identity is beneficial to health because it provides a sense of belonging and serves as

a buffer against the detrimental impact of discrimination (Banks & Kohn-Wood, 2007; Dagadu & Christie-Mizell, 2012). A competing hypothesis is that stronger ethnic identification intensifies the maladaptive adjustments caused by discriminations by emphasizing one's difference from the dominant culture and escalating the stress of their minority status (Sellers & Shelton, 2003). Generally, literature on coping has focused on social support, mastery, and self-esteem as buffers of stressors rather than racial group identity (Thoits, 2010). Therefore, assessing whether racial/ethnic identity, too, acts as a buffer is an important contribution to the literature.

Evidence on the buffering effect of racial/ethnic identity can be extracted from studies that examine its role in the relationship between discrimination and mental health. The findings from these studies are mixed. That is, some studies do find that racial group identity acts as a buffer between racial discrimination and health while others do not. It is also the case that findings are divergent depending on the type of health outcome considered. For example, William and colleagues (1999) discovered that among African Americans, racial identity significantly buffered the stress of both acute and chronic everyday discrimination (not framed as necessarily racialized), such that chronic health problems decline with higher levels of racial identity. In the same study, however, they found that there was no buffering affect for general self-rated health. In a 1996 study by Sanders, the findings revealed that racial identity was not a significant modifier of the relationship between perceived discrimination and subjective distress. Sellers and Shelton (2003) conducted a study that moved away from considering racial identity to be exclusively tied to group identification and instead focused on racial identity as the significance and qualitative meaning that individuals attribute to being Black in their conceptualizations of self (racial centrality). They found that African American first year college

students with higher racial centrality were more likely to report experiencing discrimination while experiencing lower levels of depressive and anxiety symptoms. Additional work is necessary to clarify the buffering the role of racial/ethnic identity. This study attempts to add some clarity.

Ethnic Heterogeneity

Several factors could shape the relationship among criminal justice involvement, racial/ethnic group identity, and mental health. I focus on race/ethnicity. It is plausible that the moderating role of racial/ethnic identity in the relationship between criminal justice involvement could vary based on race/ethnicity. This variation, in addition to differences in racial/ethnic group identity, may add clarity to or deepen our understanding of how heterogeneity among Blacks factors into the stress process.

The prospect of the future demographic make-up of the United States has created major popular media headlines recently. In essence, those headlines suggested that if growth continued, within the next decade, minorities would be the new majority in terms of the demographic make-up of the U.S. Among minorities, the make-up of Blacks has been shifting. The visibility of foreign-born Blacks has increased steadily over the past 40 years. A large part of this growth can be attributed to Caribbean Blacks, who are the largest and most established of Black immigrant groups. An influx of Black immigrants, initially concentrated in specific cities (e.g. Miami and New York City), was the result of a series of changes in U.S. immigration laws in the 1970s. Recent estimates suggests the Black Caribbean immigrant group accounts for slightly more than 4% of the Black population in the United States (Kent, 2007; Takeuchi et al., 2007).

Despite the growth and prevalence of Black Caribbeans over the past few decades, ethnic heterogeneity among Blacks is understudied especially with respect to mental health (Dagadu &

Christie-Mizell, 2014; Griffith et al., 2011; Jackson et al., 2004; Williams and Jackson, 2000). Instead, Blacks are often treated as a monolithic group and compared to whites. Ethnicity refers to the state of belonging to a group of people tied to each other by common cultural traits such as language, nativity, history, traditions, values, and dietary habits (Dagadu & Christie-Mizell, 2014; Griffith et al., 2011; Smedley & Smedley, 2005). Caribbean Blacks constitute an ethnic group, and therefore represent a source of heterogeneity among Blacks. African Americans and Caribbean Blacks do overlap in many experiences such as their shared historical status as enslaved and oppressed peoples and their continued struggles with disadvantage relative to whites and discrimination in America today (Dagadu & Christie-Mizell, 2012; Ida & Christie-Mizell, 2012). However, comparing Caribbean Blacks to African Americans reveal some important differences. For example, Caribbean Blacks tend to occupy a higher social status relative to African Americans as measured by educational attainment, employment, and income (Griffith et al., 2011; Ida and Christie-Mizell, 2012; Kent, 2007).

The way that African Americans are treated relative to Caribbean Blacks may widen the disadvantage of African Americans compared to that of Caribbean Blacks. Research confirms that whites can and do distinguish between foreign-born and American-born Blacks (Griffith et al., 2011; Ida and Christie-Mizell, 2012). Police would be no exception to this rule. Within race breakdowns by ethnicity are uncommon in mass incarceration research and statistics. However, it would be reasonable to believe that police officers would consider the socioeconomic status of Caribbean Blacks compared to that of their African American counterparts in interactions. The present study, however, is concerned with how racial/ethnic identity might differentially moderate the impact these police interactions have on mental health. A study by Dagadu and Christie-Mizell (2014) found that the relationship between racial identity, as measured by racial

group closeness, and heart trouble diverges according to ethnicity among Blacks. Specifically, the authors found that, for African Americans, as closeness to Blacks increased, heart trouble increased while it decreased for Caribbean Blacks. The authors suggest that this pattern may be the result of social experiences and histories wherein closeness to other Blacks is a taxing proposition for African Americans who occupy a more tenuous status in the United States. The protective role that closeness plays among Caribbean Blacks then could also be true of other racial groups, such as whites, who may not necessarily attach criminal justice interactions to structural oppression. This study develops the context for understanding how racial/ethnic identity might play different roles within Black people and for Blacks compared to whites.

SUMMARY AND HYPOTHESES

In this study, I investigate whether being arrested by the police impacts mental health among a sample of African Americans, Caribbean Blacks, and whites. Additionally, I examine whether racial/ethnic identity serves as a moderator in this relationship. In doing so, I take the opportunity to draw comparisons between two measures of mental health, self-rated health and clinical diagnoses of Major Depressive Disorder. Using more than one outcome measure will facilitate avoidance of misspecification or misclassification, or finding people well on one measure when they may exhibit poor health outcomes using another (Brown et al., 2000; Turner, 2000). The research questions and hypotheses for this study are guided by the Stress Process Model. That is, this study situates being arrested as a source of stress, racial/ethnic identity as a psychosocial resource, and self-rated mental health and Major Depressive Disorder as manifestations of stress among African Americans and Caribbean Blacks. The research questions guiding this study are as follows:

1. What is the relationship between being arrested by the police and psychological well-being?
2. Does racial/ethnic identity moderate the relationship between being arrested and psychological well-being?

Based on these research questions and guided by the Stress Process Model, there are two main hypotheses, each of which apply to both mental health outcomes examined in this study. The hypotheses are as follows:

H1. Being arrested by the police will be inversely associated with psychological well-being.

H2. Racial/ethnic identity will moderate the relationship between being arrested by the police and psychological well-being.

I also assess whether race/ethnicity moderates the relationships observed in the relationships posed above. Specifically, I test whether the impact of an arrest differentially impacts the probability of reporting good health for African Americans, Caribbean Blacks, and whites. I also assess whether the moderating role of racial/ethnic identity varies across race/ethnicity and gender. For tests of racial/ethnic variation in the moderation process, I do not hypothesize a direction across the moderating groups. Although prior research suggests race/ethnic heterogeneity are important to consider, existing research and theorizing in this area is currently complex and unresolved. The aim of this study is to fill this gap in the literature and provide a more nuanced understanding of the way the criminal justice system is contributing to deteriorating health. Finally, in the models developed below, I also control for factors that vary among Blacks and whites living in the United States that abundant prior research has shown are associated with mental health status including age, socioeconomic status, marital status, and region of residence. While I originally believed it would be important to account for the place of

birth of Caribbean Blacks in the sample (Griffith et al., 2011). However, supplementary analyses revealed that 82% of the Caribbean Black sample was foreign born, compared to less than one percent of the African American population. Since being foreign-born and Caribbean Black were nearly redundant (e.g. $r=.83$, $p<.001$), the coefficient for being foreign born was not significant in models and introduced collinearity and inflation of standard errors. Therefore, models presented below do not include measures of nativity.

DATA AND METHODS

Sample

The participants in this study were African American and Caribbean Black youth and their parents from the National Survey of American Life (NSAL). Data for this survey were collected between February 2001 and March 2003, using a slightly modified version of the Composite International Diagnostic Interview (Jackson et al 2004). The NSAL adult sample consisted of a Nationally representative survey of African American, Caribbean Black, and non-Hispanic white adult population and is based on a stratified, multi-stage area probability sample of the non-institutionalized civilian population in urban and rural areas throughout the united states.

The primary goal of the NSAL was to gather data on the physical, mental, emotional, structural, and economic conditions of the U.S. Black population (Jackson et al., 2004). The NSAL, thus, represents one of the most comprehensive investigations on psychological well-being of African Americans (N=3,750), Caribbean Blacks (N=1,621), and non-Hispanic whites (N=891). The term African American is used to describe people who self-identified as Black, but did not identify ancestral ties to the Caribbean. Caribbean Blacks are people who identified as Black and indicated that they were of West Indian or Caribbean decent, they were from a country

included on a list of Caribbean countries presented by NSAL interviewers, or that their parents or grandparents were born in a Caribbean country. Whites are non-Hispanic white people.

The sample was obtained using an integrated national household probability sampling method which NSAL researchers interviewed non-institutionalized individuals in both urban and rural areas. Researchers specifically selected a sample of 64 primary areas based on US Metropolitan Statistical Areas (MSAs) and counties and subsequently selected a sample of 456 area segments within the primary areas based on probabilities proportionate to counts of African American households in each area segmented to be interviewed. It is important to note that the white sample was a stratified, disproportionate sample of non-Hispanic whites residing in households located in census tracts and blocks that have a 10% or greater African American population. These whites represent 14% of the white population in the United States. This study relies on complete cases, cross-sectional data for the resulting adult subsample. Therefore, the analyses presented below consists of 3,329 African Americans, 1,371 Caribbean Blacks, and 816 non-Hispanic whites (Total N=5,516). The descriptive statistics and analyses for this study utilize weights that are designed to correct for disproportionate sampling, nonresponse, and population representation across various sociodemographic characteristics.

Measures

Mental Health. There are two primary dependent variables for this study. The first measure is self-rated mental health. Respondents were asked, "How would you rate your overall mental health at the present time." Response options were excellent (5), very good (4), good (3), fair (2), and poor (1). Based on the distribution of responses, the variable was dichotomized into a new variable representing good mental health by combining excellent, very good, and good options (coded 1) and fair and poor options (0).

The second measure comes from the Diagnostic and Statistics Manual of Mental Disorders, Fourth Edition (DSM-IV), psychiatric disorders that were based on the World Mental Health Composite International Diagnostic Interview (WMH-CIDI). This study specifically uses the endorsement of lifetime MDD. A variable was created representing respondents who were diagnosed with lifetime MDD (coded 1) compared to those had not been (coded 0). Recall that this study uses two measures of mental health to help establish evidence of the process under study and to avoid the risk of misclassification (Turner, 2009).

Arrest History. The primary independent variable in this study is a dummy indicator for whether or not a respondent reported being arrested in their lifetime. Respondents were asked, "Now I'd like to ask you some questions about any time you may have spent in jail or a detention center. Please remember that all answers to your questions will remain completely confidential. (In your lifetime) Have you ever been arrested?" Respondents who answered 'yes' were coded 1 while respondents who answered 'no' were coded zero.

Racial/Ethnic Identity. Racial/ethnic identity in the form of closeness to others of the same race/ethnicity serves as the key psychosocial resource and moderator in this study. The measure of racial closeness was based on respondents' ratings from 1 (not close at all) to 4 (very close) of their closeness in ideas and feelings to Blacks (for black respondents), whites (for white respondents), and Caribbean Blacks (for Caribbean Blacks).

Demographic and Socioeconomic Variables. This study includes controls for age, socioeconomic status, marital status, region of residence, nativity, and length of residence in the U.S. (for non-U.S. born Caribbean Blacks), known predictors of mental health status (Link & Phelan, 1995). Age is measured in years. Socioeconomic variables include income, employment, and education. Income was measured as household income in logged thousands of dollars.

Employment status is a dichotomous variable comparing those who reported being employed (1) to those who were not (0). Education is measured as a categorical variable ranging from (1) 0 to 11 years to (4) more than 16 years. Marital status is represented by a variable that compares those who are married (1) to those who are not (0). A binary variable is included that indicates whether respondents resided in a southern region. Lastly, two variables were created around nativity. These variables help parse out effects that may be related to the Hispanic paradox (Erving, 2017). One variable indicates whether respondents themselves were foreign born (coded 1). A second, conditionally relevant, variables captures the number of years a respondent reported living in the United States. The variable has five categories ranging from less than 5 years (1) to 20 or more years (4). This variable only applies to those who reported being born outside of the United States.

Analytic Strategy

The purpose of this study is to explore the moderating role of racial/ethnic identity in the relationship between arrests and mental health status. This study also assesses whether this moderating role differs across race/ethnicity and gender. The analytic strategy for the study proceeded in two major steps. First, I produced descriptive statistics for the entire sample and for the arrested and not arrested subsamples to observe the distribution of key variables across the main independent variable under study. The second step involved estimating a series of two separate logistic regression models. Logistic regressions were used based on the dichotomous nature of both measures the dependent mental health variables. The first model presented contains direct effects for both the main independent variable, arrest, and moderator, racial/ethnic identity, net of key control variables. It is important to note that two models preceded this model but were not included in the final table.

One model contained only the main effect of arrest and the next model introduced only controls to be sure that the main effect of arrest was not explained by key controls. It is also important to note that effect of arrest did not significantly change when key moderator was introduced into the model. Those models are not presented here for the sake of clarity. In the second model presented here, an interaction term between arrest and racial ethnic identity is introduced to determine whether racial/ethnic identity plays a moderating role in the relationship between arrest and the two measures of mental health. To determine whether these relationships varied across race/ethnicity and gender, each of these models were estimated separately for African Americans, Caribbean Blacks, and whites and for men and women. As mentioned previously, descriptive statistics and analyses were weighted to ensure representativeness and to correct for the NSAL's complex sampling design.

RESULTS

The results of the descriptive statistics are presented in Table 1. With regard to the main stressor of interest, nearly one third (28%) of the sample reporting being arrested at some point during their lives. In terms of the health outcomes, those who had been arrested had lower mental health status compared to those who had not been arrested. A significantly higher proportion of those who had been arrested were diagnosed with MDD than those who had not been arrested (.15 and .19, respectively). Those who had not been arrested more frequently reported being in good health (.76) compared to those who had been arrested (.60). There was no significant difference in the psychosocial resource of interest between those who had and had not been arrested. The average level of racial/ethnic group closeness was 3.31 out 4. Sixty percent of the arrested sample was African American compared to 42 percent of the sample that had not been arrested. This difference was significant. After weighting, roughly 3 percent of the sample was

Caribbean Black and there were no significant differences across arrest history. In terms of control variables, there were several differences across the sample that had been arrested compared to the sample that had not been arrested. Women made up a larger proportion of the sample that had not been arrested compared to the sample that had been arrested (.64 and .30, respectively). The arrested sample reported less household income than the sample that had not been arrested ($26,842 and $31,500, respectively). Household income was logged in the analysis to correct for skewness. The average age for the respondents in the sample who had not been arrested was 44.08 years, which was significantly different from the sample that had been arrested 40.93 years. Roughly 70 percent of the sample had been arrested and roughly 47 percent of the sample reported being married. There were no significant differences in these two variables. The portion of the sample that reported an arrest reported lower levels of education than those who had not been arrested (2.14 and 2.60, respectively). Lastly, a higher proportion of those who had not been arrested (.57) lived in the south compared to those who had been arrested (.48).

Table 1. Descriptive Statistics for all Study Variables. National Survey of American Life (N=5,516).

Variables	Total Sample (N=5,516) Mean/ Proportions	SD	Not Arrested (N=4,047) Mean/ Proportions	SD	Arrested (N=1,469) Mean/ Proportions	SD
Lifetime Depression (1=yes_	.16	-	.15	-	.19***	-
Good Self-rated Mental Health (1=yes)	.72	-	.76		.60***	-
Stressor						
Arrest History (1=yes)	.28	-	-	-	-	-
Psychosocial Resource						
Racial/Ethnic Closeness (1=not at all to 4=very close)	3.31	.70	3.30	.68	3.32	**.75**
Race and Gender						
African American (1=yes)	.47	-	.42	-	.60***	-
Caribbean Black (1=yes)	.03	-	.03	-	.03	-
White (1=yes)	.50	-	.54	-	.37***	-
Controls						
Female (1=yes)	.54	-	.64	-	.30***	-
Income (logged thousands of dollars)	3.41	.93	3.45	.90	3.29***	.99
Age (years)	43.20	16.63	44.08	17.16	40.93***	14.83
Employed (1=yes)	.70	-	.71	-	.69	-
Married (1=yes)	.47	-	.48	-	.46	-
Education (1=yes)	2.47	1.04	2.60	1.03	2.14***	1.00
South (1=yes)	.54	-	.57	-	.48***	-

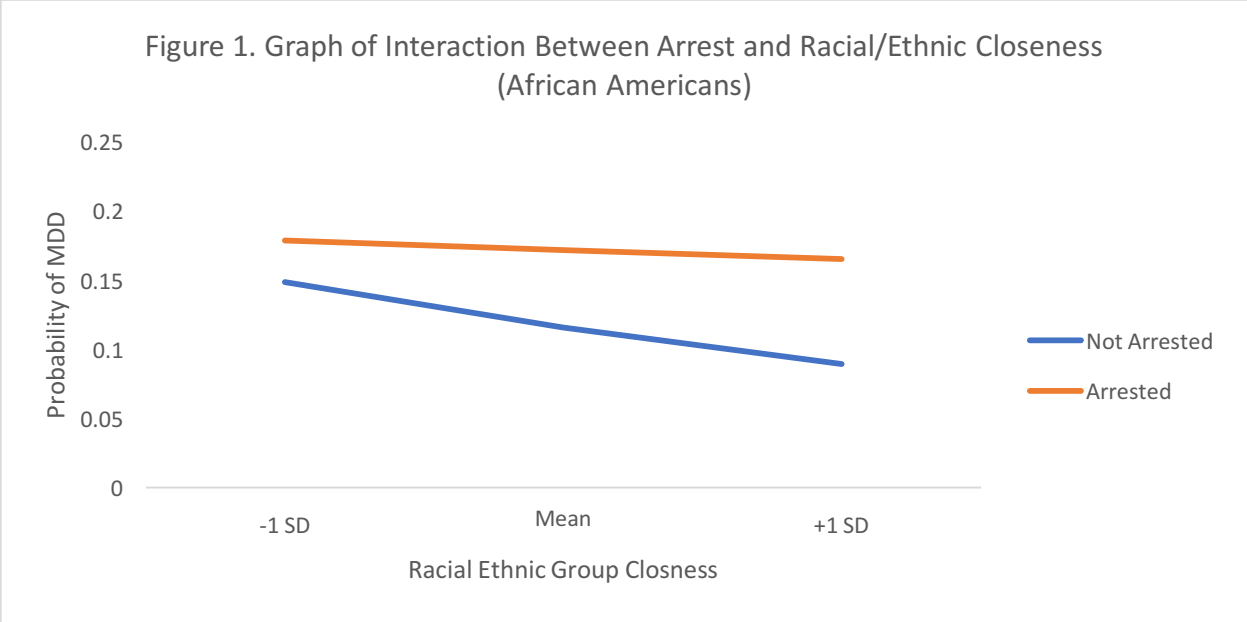
*p<.05; **p<.01; ***p<.001.

In terms of the main analyses, the results are depicted in Tables 2-4. I take each racial/ethnic group in turn, turning first to African Americans (Table 2). The main effects model (Model 1) for self-rated health demonstrates that being arrested is associated with a 44% lower odds of reporting good health ($p<.001$). There is no direct effect of racial/ethnic identity on self-rated mental health. In terms of the controls, women have lower odds of reporting good health compared to men (O.R.=.74, $p<.01$). Ever year increase in age is associated with a 2% lower odds of reporting good health. Income (O.R.=1.25, $p<.001$) and education (O.R.=1.27, $p<.001$) are both positively associated with reporting good health. The interaction model (Model 2) reveals that racial/ethnic identity does not moderate the relationship between arrest and self-rated mental health. For MDD, Model 1 demonstrates that being arrested is associated with a 61 percent greater odds of being diagnosed with MDD $p<.001$). Additionally, every unit increase in racial/ethnic identity is associated with a 23 percent lower odds of being diagnosed with MDD ($p<.01$). In terms of controls, women have 107 percent greater odds of being diagnosed with MDD ($p<.001$). Age (O.R.=.99, <.01), being married (O.R.=.67, $p<.01$), and living in the south (O.R.=.58, $p<.001$) are each inversely associated with MDD diagnosis. Model 2 suggests that racial/ethnic identity does moderate the relationship between being arrested and MDD (O.R.=1.41, $p<.05$). Figure 1 is a graphic representation of this interaction effect. The figure suggests that at low levels of racial group closeness, those who have not been arrested have a slightly lower probability of having a MDD diagnosis than those who have been arrested. However, as racial group closeness approaches the mean, the probability of reporting a MDD diagnosis decreases for those who have not been arrested but remains flat for those who have been arrested such that at high levels of racial ethnic group closeness the gap in MDD diagnosis is widest.

Table 2. Odds Ratios for Mental Health Regressed on Arrest History and Racial/Ethnic Identity for African Americans. National Survey of American Life (N=3,329).

	Self-Rated Mental Health				DSM IV – Major Depressive Disorder			
	Model 1		Model 2		Model 1		Model 2	
Variables	O.R.	(95% CI)	O.R.	(95% CI)	O.R.	(95% CI)	O.R.	(95% CI)
Arrested	0.56***	(0.46, 0.67)	0.62	(0.26, 1.48)	1.61***	(1.23, 2.11)	0.51	(0.26, 2.66)
Racial/ethnic closeness	1.11	(0.98, 1.25)	1.12	(0.95, 1.31)	0.77**	(0.65, 0.90)	0.66***	(0.54, 0.82)
Controls								
Female	0.74**	(0.46, 0.67)	0.75**	(0.62, 0.91)	2.07***	(1.57, 2.73)	2.02***	(1.53, 2.67)
Income	1.25***	(1.12, 1.40)	1.25***	(1.12, 1.40)	1.08	(0.93, 1.26)	1.08	(0.93, 1.26)
Age	0.98***	(0.97, 0.98)	0.98***	(0.97, 0.98)	0.99**	(0.98, 1.00)	0.99**	(0.98, 1.00)
Employed	1.18	(0.96, 1.45)	1.18	(0.96, 1.45)	0.86	(0.65, 1.14)	0.87	(0.65, 1.15)
Married	0.87	(0.72, 1.05)	0.87	(0.72, 1.05)	0.67**	(0.51, 0.87)	0.66**	(0.50, 0.86)
Education	1.27***	(1.15, 1.41)	1.27***	(1.15, 1.41)	1.06	(0.93, 1.22)	1.08	(0.94, 1.25)
South	0.96	(0.80, 1.15)	0.95	(0.80, 1.15)	0.58***	(0.46, 0.74)	0.60***	(0.47, 0.76)
Arrested X Racial/ethnic Closeness	-	-	0.97	(0.53, 0.96)	-	-	1.41*	(1.02, 1.95)
Pseudo R^2	0.11		0.11		0.06		0.07	

Note. CI = confidence interval; O.R. = odds ratio
*p<.05; **p<.01; ***p<.001.



For Caribbean Blacks' self-rated health, Model 1 (Table 3) reveals that there is no direct effect of being arrested. There is also no main effect of racial/ethnic identity on self-reported mental health. A few control variables are significant. Income (O.R.=1.22, p<.001) and marital

status (O.R.=1.71, p<.01) are both positively associated with self-reported mental health. Age is inversely related to self-reported mental health such that every year increase in age is associated with a 3 percent lower odds of reporting good mental health (p<.05). Model 2 suggests racial/ethnic identity does not moderate the relationship between arrests and self-rated mental health. Being arrested is associated with a 281 percent greater odds of being diagnosed with MDD for Caribbean Blacks (Model 1; p<.05). There is no main effect of racial/ethnic group identity on MDD diagnosis. Two control variables, income (O.R.=.78, p<.05) and residing in the south (O.R.=.79, p<.05), are significant predictors of MDD. In Model 2, there is no significant interaction between being arrested and racial/ethnic identity.

Table 3. Odds Ratios for Mental Health Regressed on Arrest History and Racial/Ethnic Identity for Caribbean Blacks – National Survey of American Life (N=1,371)

	Self-Rated Mental Health				DSM IV – Major Depressive Disorder			
	Model 1		Model 2		Model 1		Model 2	
Variables	O.R.	(95% CI)	O.R.	(95% CI)	O.R.	(95% CI)	O.R.	(95% CI)
Arrested	0.71	(0.29, 1.77)	1.96	(0.04, 2.84)	3.81*	(1.29, 9.25)	4.21	(1.39, 9.99)
Racial/ethnic closeness	0.89	(0.55, 1.45)	0.96	(0.56, 1.65)	1.11	(0.59, 2.09)	1.41***	(0.58, 3.39)
Controls								
Female	0.92	(0.40, 2.10)	0.89	(0.39, 2.06)	1.26	(0.43, 3.70)	1.23	(0.41, 3.63)
Income	1.22***	(1.01, 1.44)	1.29***	(1.01, 1.44)	0.78**	(0.54, 0.89)	0.78**	(0.54, 0.89)
Age	0.97*	(0.95, 1.00)	0.97*	(0.95, 1.00)	0.99	(0.96, 1.02)	0.99	(0.96, 1.02)
Employed	1.84	(0.75, 4.47)	1.84	(0.75, 4.47)	1.08	(0.33, 3.52)	1.12	(0.34, 3.68)
Married	1.71**	(1.10, 2.43)	1.81**	(1.10, 2.43)	0.44	(0.15, 1.24)	0.44	(0.15, 1.25)
Education	1.16	(0.81, 1.68)	1.17	(0.81, 1.68)	0.78	(0.73, 1.91)	1.19	(0.73, 1.93)
South	1.35	(0.59, 3.13)	1.37	(0.59, 3.18)	0.79*	(0.56, 0.90)	0.80*	(0.60, 0.92)
Arrested X Racial/ethnic Closeness	-	-	.74	(0.23, 2.29)	-	-	0.57	(0.86, 1.70)
Pseudo R^2	0.07		0.07		0.08		0.09	

Note. CI = confidence interval; O.R. = odds ratio
*p<.05; **p<.01; ***p<.001.

The results for whites are in Table 4. For whites, being arrested is associated with 59 percent lower odds of reporting good mental health (p<.001). Additionally, every unit increase in racial/ethnic group closeness is associated with a 38 percent grater of odds of reporting good health. In terms of controls, the status associated being a woman (O.R.=1.85, p<.001), income (O.R.=1.60, p<.001), being employed (O.R.=1.65, p<.01), education (O.R.=1.34, p<.001), and

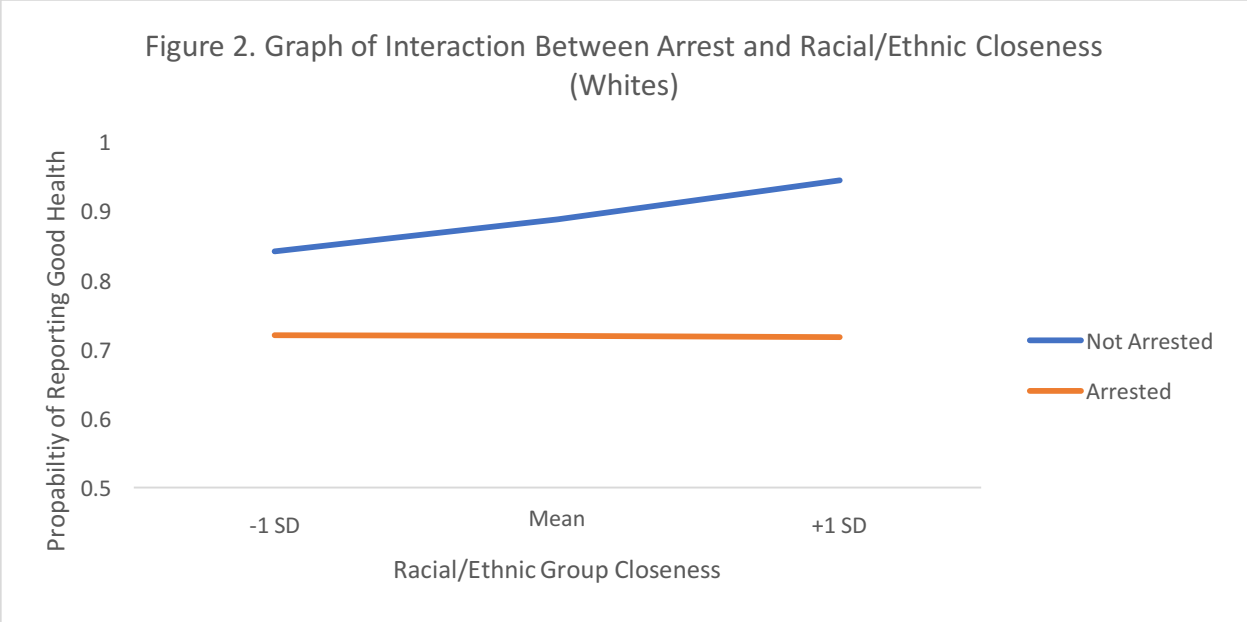
residing in the south (O.R.=1.38, p<.01) are all positively associated with reporting good mental health. Model 2 reveals a significant interaction effect for being arrested and racial/ethnic identity on self-rated mental health (O.R.=.57, p<.001). Figure 2 is a graphic representation of this interaction effect. The figure demonstrates that racial/ethnic group closeness moderates the relationship between arrest and self-reported mental health such that, at low levels of racial ethnic group closeness, respondents who have not been arrested report better health. However, as level of racial group closeness approaches the mean, the probability of good health increases for those who have not been arrested and remains flat for those who have been arrested such the gap in mental health status is highest at high levels of racial group closeness.

There is a significant main effect of being arrested on MDD. Specifically, being arrested is associated with a 101 percent greater odds of being diagnosed with MDD (p<.001). There is also significant main effect of racial/ethnic group closeness. Each unit increase in racial ethnic group closeness is associated with a 34 percent lower odds of having a MDD diagnosis. Several control variables are also significant. Women have 42 percent greater odds of being diagnosed with MDD (p<.001). Being employed (O.R. 1.34, p<.05) and education (O.R.=1.24, p<.001) are also positively associated with being diagnosed with MDD. Income (O.R.=.78, p<.001) and residing in the south (O.R.=.63, p<.01), on the other hand, are inversely associated with MDD. There is no significant interaction effect between being arrested and racial/ethnic group identity. The implications of these results are discussed in the following section.

Table 4. Odds Ratios for Mental Health Regressed on Arrest History and Racial/Ethnic Identity for Whites. National Survey of American Life (N=861).

	Self-Rated Mental Health				DSM IV – Major Depressive Disorder			
	Model 1		Model 2		Model 1		Model 2	
Variables	O.R.	(95% CI)	O.R.	(95% CI)	O.R.	(95% CI)	O.R.	(95% CI)
Arrested	0.41***	(0.33, 0.51)	2.42	(0.92, 6.37)	2.01***	(1.58, 2.56)	2.21	(0.82, 6.00)
Racial/ethnic closeness	1.38***	(1.20, 1.58)	1.62**	(1.38, 1.90)	0.66***	(0.57, 0.76)	0.66***	(0.56, 0.79)
Controls								
Female	1.85***	(1.51, 2.27)	1.82***	(1.48, 2.24)	1.42***	(1.16, 1.75)	1.53***	(1.24, 1.89)
Income	1.60***	(1.41, 1.81)	1.67***	(1.47, 1.90)	0.78***	(0.69, 0.89)	0.76***	(0.67, 0.86)
Age	0.99***	(0.98, 0.99)	0.99***	(0.98, 0.99)	1.00	(0.99, 1.01)	1.00	(0.99, 1.01)
Employed	1.65**	(1.31, 2.09)	1.67*	(1.32, 2.12)	1.34*	(1.04, 1.74)	1.31*	(1.01, 1.70)
Married	1.09	(0.88, 1.35)	1.11	(0.89, 1.37)	1.19	(0.96, 1.49)	1.15	(0.92, 1.44)
Education	1.34***	(1.22, 1.48)	1.34**	(1.01, 1.47)	1.24***	(1.12, 1.38)	1.24***	(1.12, 1.37)
South	1.38**	(1.14, 1.67)	1.35**	(1.11, 1.64)	0.63**	(0.52, 0.77)	0.64***	(0.53, 0.78)
Arrested X Racial/ethnic Closeness	-	-	.57***	(0.42, 0.76)	-	-	0.98	(0.56, 1.38)
Pseudo R^2	0.13		0.14		0.11		0.11	

Note. CI = confidence interval; O.R. = odds ratio
*p<.05; **p<.01; ***p<.001.



DISCUSSION

Using the stress process model, I explored the relationship between being arrested, racial/ethnic group identity, and mental health outcomes among African Americans, Caribbean

Blacks, and whites in the United States. I further explored whether this relationship differed among these three groups. The results reveal that the story is complex as suggested by previous research on racial mental health disparities (Williams et al, 1997). However, what this study contributes to the literature is an understanding that racial ethnic identity is an important psychosocial resource to be more consistently considered within the stress process model and that continued research efforts should be directed toward racial/ethnic variation. This study finds support for each of the hypotheses. However, this support differs according to race and ethnicity and depending on the mental health outcome under investigation.

In this study, I hypothesized that being arrested would be associated with poor mental health status. Mental health status was measured in two ways for this study: as self-rated mental health and by the endorsement of lifetime Major Depressive Disorder as measured by the Diagnostic and Statistics Manual of Mental Disorders. Generally, there is support for this hypothesis. African Americans and whites who experience an arrest in the course of their lives are more likely to have reported poor mental health and a Major Depression Disorder diagnosis. For Caribbean Blacks, having an arrest is associated with an increased odds of reporting major depression but not with self-rated mental health. In other words, in 5 out of 6 models for main effects, being arrested acts as a stressor. These findings corroborate a growing body of literature that links criminal justice involvement to poor health, and specifically mental health, outcomes (Geller et al., 2014; Sewell et al., 2016; Sugie & Turney, 2017; Turney, Wildeman, & Schnittker, 2012). The use of two different measures of mental health in this study help avoid the problem of misclassification and increase confidence that interacting with the police is indeed a negative experience in terms of health outcomes. Further, I use two measures of mental health in this study because researchers risk misjudging the effects of difficult life circumstances if the

interpretation of effects is based on a single outcome. The one insignificant finding for Caribbean Blacks suggest that it might be helpful to continue to expand the scope of mental health outcomes considered in this line of work. Though being arrested appears to be a universal stressor in this study, we must continue to consider that African Americans remain overrepresented in interactions with the criminal justice system, and are, therefore, more frequently exposed to this known stressor.

This study also took a careful look at racial/ethnic identity as a psychosocial resource in the stress process linking arrests to poor mental health outcomes. The second hypothesis was that racial/ethnic identity would moderate the relationship between arrests and mental health Racial/ethnic identity has received increased attention as coping resource among Blacks (Dagadu & Mizell, 2014; McGee & Martin, 2011; Sellers et al., 2003). In this study, I operationalized racial/ethnic group identity as how close respondents reported feeling to others of their race/ethnicity. Though I did not hypothesize a direction of this moderation across racial groups due to inconsistent findings in the literature, I presented two potential scenarios for the role that racial ethnic identity might play. Some have suggested that having a strong racial/ethnic identity could provide a sense of belonging and therefore serve as a buffer against the detrimental impact of stressors (Banks & Kohn-Wood, 2007; Dagadu & Christie-Mizell, 2012). Others have suggested that having a strong racial/ethnic identity could heighten the stress of minority status and intensify the effect of stressors due to an increased emphasis differences from the dominant culture for racial/ethnic minorities (Sellers & Shelton, 2003). This study, uncovered an alternative scenario. For African Americans, feeling close to other Blacks was only protective against MDD diagnoses for those who had not been arrested. Those who had been arrested experienced no gain or additional adverse mental health status as a result of variations in racial

group closeness. For Whites, a similar scenario occurred but with respect to self-reported mental health. For them, feeling close to other whites only served as a protective resource for those who had not been arrested. In each of these two cases, feeling close to others of the same race was significantly associated with a more positive mental health status. However, these interactions reveal that for African Americans and Whites, racial group closeness is a psychosocial resource only for those who have been not been arrested.

Those who have been arrested are not able to tap into its protective benefits. One reason may be that individuals who are arrested and subsequently incarcerated adopt a series of identities that are more salient than their racial/ethnic identity. For example, the term *prisonization* refers to the ways in which people who spend time incarcerated develop coping mechanisms to combat the onset of psychiatric disorders (Goffman, 1961; Sykes, 2007). One such coping mechanism is the development of a tough, strong, and dangerous identity to suppress weakness and emotional vulnerability (Toch & Adams, 2002). In addition, being arrested may threaten social roles. This threat may make other identities, such as those associated with being employee, spouse, or parent, more salient.

Ethnic group closeness is not directly associated with mental health status nor does it moderate the relationship between being arrested and mental health status for Caribbean Blacks. This pattern is in direct contrast to findings regarding physical health (measured as heart trouble) in a study by Dagadu and Christie-Mizell (2014). Several factors could account for these diverging results. The clearest factor is that this study focuses on mental health. Physical and mental health often do not follow the same pattern. A second factor is that the two studies used different measures of racial/ethnic group identity. In this study, I focused on how close respondents felt to people of their own race or ethnicity whereas Dagadu and Christie-Mizell's

study focused on closeness to Blacks and black group evaluation. For Caribbean Blacks, it is plausible that feeling close to Blacks broadly, or interpreted as African Americans, could serve a different role than feeling close to other Caribbean Blacks. Both studies could be replicated with different conceptualizations of racial/ethnic group closeness.

Taken together, these findings make several contributions to the literature. First, this study adds to the growing, yet still relatively small body of research that focuses on the mental health consequences of criminal justice involvement. Specifically, it adds two additional mental health outcomes each of which support existing work. Second, this continues conversations about the utility of bringing racial/ethnic identity into the mix as a psychosocial resource in the stress process. Unfortunately, the results to do not paint a definitive picture of its universal role. However, the results do offer a new perspective on how it might act as a buffer and they certainly highlight the need for its at its continued consideration as a psychosocial resource and source of racial heterogeneity. Lastly, this study considers racial/ethnic variation in the stress process linking arrests to mental health outcomes. Black Caribbeans are the largest immigrant group among Blacks and their presence continues to grow (Kent, 2007; Takeuchi et al., 2007). This study and a handful of others have begun the conversation about not treating Blacks as monolithic and more fully considering ethnicity as an important source of variation. Previously, the research on both health disparities and the problems of criminal justice involvement have largely hinged on a Black-white binary. These findings suggest that we should continue to concentrate effort on ethnic variation and other sources of racial heterogeneity.

Notwithstanding the strengths of this study, there are some limitations. First, the cross-sectional nature of this data limit not only the ability to make causal assumptions but also the ability to test an additional role racial/ethnic group identity might play. Previous work has

suggested that poor mental health is a precursor to criminal justice involvement (Schnittker, Massoglia, and Uggen, 2012). This study is unable to account for directionality and a potential reciprocal relationship. However, research does suggest that even after taking this into account, criminal justice involvement is remains a significant predictor of poor mental health outcomes Schnittker, Massoglia, and Uggen, 2012).

As suggested by the stress process, psychosocial resources may also serve in a mediating capacity Christie-Mizell & Erickson, 2007; Pearlin et al 1981). It may also be the case that racial/ethnic identity mediates the relationship between arrests and mental health. Specifically, being arrested could trigger an awareness or increased salience of one's racial/ethnic identity, which could in turn impact mental health. The cross-sectional nature of this study does not permit properly testing for mediational effects. Second, this study is void of context regarding the arrests. Specifically, the NSAL does not contain information about why the respondent was arrested, when they were arrested, whether they felt the arrest was unfair, and what happened during the interaction. These variables could dramatically alter not only the impact on mental health but they could also contribute to whether and how racial/ethnic identity moderates that relationship. Next, this study is lacking context around racial/ethnic identity. For example, Banks and Kohn-Wood (2007) observed that the motivation behind racial/ethnic group closeness was important for unpacking its moderating role. For example, do people feel closer to those of their racial or ethnic group because they want to blend in or because they view race and ethnicity as core ideological or divisive concepts?

Next, this study does not capture the full range of within race heterogeneity. For example, gender could shape the relationship among criminal justice involvement, racial/ethnic group identity, and mental health, given that women are far less likely to ever become involved with

the criminal justice system compared to men (Bureau of Justice Statistics, 2010). Lastly, with respect to the relatively recent increase in attention on police brutality and injustice in the criminal justice system, these data are slightly outdated. Further, the benefit of these data are that it allows for the exploration of racial/ethnic heterogeneity. However, it may not be the best data set to explore criminal justice involvement as a stressor because it does not capture the renewed tension that exists in this country around mass incarceration and police brutality.

CONCLUSION

Mental health is an important component of well-being. Research continues to conclude that being involved with the criminal justice system is a deteriorating experience for mental health. This study corroborates this claim. While academic research on this topic trudges forward, social movements such as the Black Lives Matter movement continue to bring awareness to and take steps toward addressing racial disparities in criminal justice involvement and resulting poor health outcomes. This study extends what the Black Lives Matter Movement and academic research has demonstrated. Further, this work demonstrates that violence and death are not the only negative outcomes criminal justice involvement. Criminal justice involvement also robs individuals from being able to benefit from feeling close to others in their racial group.

This research also suggests that Black lives are not monolithic. Within Black lives, important sources of variation are racial/ethnic group identity and ethnicity. How close one feels to others of their racial group is an important source of variation and psychosocial resource that helps contextualize the impact of arrests on mental health. Race and ethnicity are also important factors in how this process works. Overall, being arrested remains an experience that diminishes well-being despite these variations. Given the rate at which Blacks are arrested compared to

whites, addressing the relationship between criminal justice involvement and health is central to eliminating health disparities.

While this study pushes the agenda on exploring variations in the process linking criminal justice involvement to poor mental health, there is still work to be done. For example, future research should focus on better understanding how criminal justice involvement might shape how close people feel to others of their race. It could be the case that being stopped by the police causes African Americans to feel a part of the racial problem in America and, therefore, closer to other African Americans. Additionally, work should investigate whether differences in interpretation of police interactions (e.g. as warranted or discriminatory) alter the way police interactions impact health. Finally, additional work should consider additional psychosocial resources and the ways in which becoming involved in the criminal justice system alter the availability of those resources. After these questions are addressed, we can more fully consider the extent to which a system meant to protect and serve can ultimately do the opposite for some. No matter the path of future research, we must hold tight to one fact. Research on this topic must continue to foreground the fact that Black people are far more likely to find themselves involved in a criminal justice system that has increasingly being considered health-deteriorating.

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CHAPTER V

CONCLUSIONS

In this dissertation, I explored school discipline as a cause and poor mental health as a consequence of criminal justice involvement in three separate studies. The goal of these studies was to examine racial, ethnic, and gender variation in the theoretically grounded processes linking cause and consequence to involvement with the criminal justice system. Each study built on hypotheses derived from literature and theory to add depth and clarity about who is most impacted by the mass incarceration crisis in America. For each study, I used nationally representative data to test the proposed hypotheses. In two of the studies, the data were also longitudinal and facilitated examination of cause in childhood and adolescence and consequence in adulthood. The aim of the dissertation as a whole was to provide clarity to the specific way in which disproportionate criminal justice involvement contributes to race/ethnicity and gender health disparities that exist across the life course.

One of the most firmly established patterns in social science research is that African American and Hispanic men are punished in the American penal system at much higher rates than their white and female counterparts (Sugie & Turney, 2017; Prison Policy Initiative, 2012; Western, 2006). This pattern is critical when considering that America is the leader in incarceration rates globally. Amidst a booming prison population, criminal justice involvement is concentrated among racial/ethnic minorities, men, the poor, and people with poor health (Sugie & Turney, 2017; Western, 2006). Estimates reveal that involvement for this these groups often occurs early in the life course. Nearly half of all Black males have been arrested at least once before turning age 23 (Brame et al., 2014). Incarceration rates for Black and Hispanic males *have* declined in recent years. However, this decline should not overshadow the severity of the

issue that remains. There are nearly 4 times as many black men incarcerated as women of all races in the U.S (Carson & Anderson, 2016).

Another firmly established pattern is that Blacks have higher rates of death, disease, and disability than whites. Patterns of health disparity have been most firmly established for physical health status (Williams & Sternthal, 2010). Indicators of psychological well-being, on the other hand, show inconsistent patterns (Williams et al, 1997). Given the differential exposure to adverse life-circumstances, one of which is incarceration, one might expect that Blacks would exhibit poorer mental health. However, studies have concluded that African Americans and Hispanics often have better mental health than whites (Blazer et al., 1994; Brown et al., 2000). Recent links between incarceration and mental health raise questions about the future of this pattern.

It is now well documented being arrested and incarcerated causes a range of deleterious outcomes. Having a criminal record impacts employment, intimate relationship status, drug use, and education (Western, 2002). Within the past decade, researchers have concentrated their efforts on better understanding the impact that criminal justice involvement has on health. Being incarcerated has been linked to a host of negative health outcomes including hypertension, functional limitation, infectious and stress-related diseases, and poor overall-general health (Massoglia 2008; Schnittker & John, 2007; Wang et al., 2009). Even more recently, several studies have demonstrated that incarceration and arrests lead to poor mental health as well (Geller et al., 2014; Sewell et al., 2016; Sugie & Turney, 2017; Turney, Wildeman, & Schnittker, 2012).

The STTP, labeling theory, and the stress process model help connect schools to disproportionate rates of criminal justice involvement and criminal justice involvement to health

disparities. The school-to-prison pipeline (STTP) is a term used to highlight the educational system's role in contributing to mass incarceration. The term describes the national response to 'zero tolerance' policies that result in Black and Hispanic children being disproportionally punished in schools (Meiners, 2011; Raible & Irizarry, 2010; Wun, 2015). STPP suggests that, as a function of this discipline, students eventually end up in jails and prisons. Labeling theory helps make this connection. Labeling theory purports that once a deviant label is applied to the Black and Hispanic youth, they either adopt deviant behavior or become targets of hypercriminalization by those around them (Becker, 1963; Liberman, Kirk, & Kim, 2014). The stress process model helps connect criminal justice involvement to poor health outcomes. The stress process model suggests that social statuses determine the conditions of people's lives through exposure to stressors and their impact on health (Pearlin et al., 1981; Turner, 2010). Unfortunately, criminal justice involvement is a stressor to which African Americans and Hispanic men are disproportionately exposed.

Guided by these concepts and theories, Chapters 2 through 4 were driven by three separate research questions that asked about the links between school suspension, criminal justice involvement, and poor mental health. While existing research shed some light on how these three social experiences are connected, one contribution was that the studies here consistently asked whether there was racial/ethnic and/or gender variation in the links between them. Therefore, for each of the three research questions, I asked whether the relationships under investigation differed by race/ethnicity and gender. The three research questions were as follows:

1) What is the relationship between school suspension and later chances of incarceration?
2) Does having an arrest history influence depressive symptoms among young adults?

3) What is the role of racial/ethnic group identity in the link between arrest history and mental health status?

Chapter 2 addressed question 1 by testing the hypothesis that being suspended would increase odds of being arrested and that the relationship between the two would be stronger for Blacks and Hispanics relative to whites. The study in Chapter 1 found evidence in support of the STPP (Meiners, 2011; Raible & Irizarry, 2010; Wun, 2015); one of the few studies to do so. However, the link is not universal, though not exactly as hypothesized. Being suspended from school only increased chances of being incarcerated during young adulthood for Black and White males. The relationship was strongest for Black males, suggesting that the label of deviant and criminal was more readily applied (Becker, 1963; Liberman, Kirk, & Kim, 2014).

Several conclusions can be drawn from this study about the relationship between suspension and criminal justice involvement. Schools represent a starting place for becoming involved with the criminal justice system. While white males exhibit a link between suspension and incarceration that is similar to Black males, the injustice lies in the rates of suspension. Even though one might expect the relationship to hold true for Hispanics men and women and Black females as well, the lack of a significant relationship must also be contextualized in the fact that these groups have higher rates of suspension than their white counterparts. The absence of a connection between suspension and incarceration for Black and Hispanic girls supports the notion that Black and Brown girls are often punished for non-violent offenses that do not necessitate an arrest (Wun, 2015). One suggestion that stems from these findings is that more thought should be given to suspension as a primary form of school discipline. A second suggestion is that a system should be developed in order to ensure that students are punished equally for deviant behavior and training should be developed on better understanding, labeling,

and disciplining deviant behavior. A third suggestion is that practitioners should help ensure that students are not subsequently labeled as deviant inside and outside of school as a result of being suspended.

Having established schools as a cause of criminal justice involvement, research question 2 investigated the consequences. This research question was addressed in Chapter 3 which applied stress process theory to the relationship between arrest history and depressive symptomatology. This study was especially concerned with arrests that occurred for youth between the ages of 12 and 21. This study treated this early involvement with the criminal justice system as a stressor in the stress process (Pearlin et al., 1981; Turner, 2010). This study also considered that being arrested might have both direct and indirect effects on depressive symptomatology, as suggested by the stress proliferation component of the stress process. According to stress proliferation, incarceration can have a direct effect on health and an indirect and cumulative effect by triggering secondary stressors. The secondary stressors tested in this study were alcohol use and self-rated health. Again, whether the process was similar across racial/ethnic and gender groups was a central question.

Using structural equation modeling to approximate the process of stress proliferation, this study corroborated several others that that directly link incarceration to poor mental health (Geller et al., 2014; Sewell et al., 2016; Sugie & Turney, 2017; Turney, Wildeman, & Schnittker, 2012). This was true for all groups except white men. For all other groups, incarceration directly and/or indirectly led to increased depressive symptoms. Singling out Black men, they were the only group that experienced adverse mental health directly as a result of being incarcerated and indirectly through both secondary stressors considered. In general, the findings from this study support the notion that the criminal justice system fails in its goal of rehabilitation. The findings

also suggest that more focus and attention should be given to mental health and wrap around services in order to prevent a cycle of imprisonment for returning citizens.

Chapter 4 expands findings from chapter 3 by examining the role of racial/ethnic identity as a moderator in the stress process linking criminal justice involvement to poor mental health. In the stress process, moderators are psychosocial resources (e.g. mastery, self-esteem, and social support) that help reduce the deleterious effects of stressors (Pearlin et al., 1981; Turner & Avison, 2003). Racial group identification is understudied in is moderating capacity in the stress process. It involves a sense of racial or ethnic pride, involvement in cultural or ethnic practices, and cultural commitment to one's racial/ethnic group (McGee & Martin, 2011). Scholars have suggested that racial group identity may be an important moderating resource inasmuch as it serves to buffers stressful situations by preventing negative stereotypes from permeating one's self concept (McGee & Martin, 2011; Sellers et al., 2003). In this study, racial/ethnic group identity was measured as how close one feels to others of their racial/ethnic group.

The study in Chapter 4 used cross sectional data from the National Survey of American Life which is a Nationally representative survey of the African American, Caribbean Black, and non-Hispanic white adult population. This study considered that Caribbean Blacks are the largest immigrant group among Blacks in the U.S. (Kent, 2007; Takeuchi et al., 2007). It questioned whether the role that racial/ethnic identity played in the relationship between arrests and mental health among African Americans, Caribbean Blacks, and whites. The findings revealed that being arrested led to poor mental health as measured by self-rated mental and Major Depressive Disorder for African Americans and Whites, but only Major Depressive Disorder for Caribbean Blacks. These findings, again, supported the notion that being involved with the criminal justice system is an unhealthy experience. The findings also reveal that for African Americans and

Whites, feeling close to others of your racial group was protective for mental health, but only for those who had never been arrested. In other words, this study did not find that feeling close to others of your racial group undoes the harmful effects of being arrested. However, it also did not find the opposite: that feeling close to others of your race exacerbates the harmful effects of criminal justice involvement.

Taken together, all three studies demonstrate how early experiences with the criminal justice system can trigger a poor well-being as measured by mental health later in life. Being suspended as early as age 12 increases the odds of spending time in jail as a young adult. And, being arrested, which precedes going to jail, triggers depressive symptoms. Depressive symptoms can, in turn, can lead to criminal behavior and arrests (Schnittker, Massoglia, and Uggen, 2012). These studies also suggest that this process looks different across race/ethnicity and gender groups and that racial/ethnic identity is not a buffer to the detrimental effects. What must be remembered as context for each of these studies is that African American and Hispanic men are the most at risk for findings themselves punished and set on a track toward poor mental health. In sum, America's penal system is a contributor to health disparities. The criminal justice system is deteriorating mental health, one of the few indicators of well-being on which African Americans and Hispanics top whites.

There remains a great deal of future research needed to better understand the causes and consequences of criminal justice involvement. On the consequences side, these studies are limited in that little information is provided regarding the nature of criminal justice involvement. Research has suggested that the type of involvement is important for fully understanding health outcomes (Sugie & Turney, 2017). Lifecourse theory would suggest that timing would matter (Dannefer 2003; Elder et al. 2003) For example, it could be the case that being arrested at 12 has

a different effect on mental health than being arrested at 21. While being arrested at 12 can be a traumatic and stressful experience, by age 21 individuals have adopted more social roles that may be impacted by having a criminal record. Additionally, these studies lack information regarding the meaning individuals attach to criminal justice involvement. Stress process theory suggests that for an event to be considered a stressor, it must be interpreted as stressful (Pearlin et al., 1981). Given the increased visibility of racial disparities in mass incarceration and police use of excessive force it is reasonable to assume that African Americans interpret being stopped, searched, or followed as an act of discrimination. Perceptions of discrimination are known to negatively impact mental health (Brown et al, 2000; Williams, Neighbors, & Jackson, 2003). Future research should incorporate the meaning individuals attach to being involved with the criminal justice system.

On the causes side, continued research is needed around school as a contributor to both mass incarceration and health disparities directly. Out-of-school suspension is merely one form of school discipline. Other common forms of discipline include in-school suspension and expulsion. These types of disciplines may exhibit diverging connections to the criminal justice system. Additionally, being suspended or expelled could be considered a stressful experience that impacts mental health itself. Stage-environment fit theory posits that negative psychological changes in adolescence are prompted by a mismatch between the needs of developing adolescents and the opportunities afforded to them by their social environments (Eccles & Midgley, 1989). Schools are social environment in which youth spend a lot of time. When students are suspended they are removed from their classroom and deprived of key elements necessary for successful development. Lastly, overpolicing students of color is not a phenomenon that occurs only in schools. Future research might investigate how policing and

surveillance outside of schools contributes to the school-to-prison pipeline. For example, research might explore whether the level of police presence in the neighborhood surrounding a school contributes to the disproportionate funneling of school-aged children into the criminal justice system.

In conclusion, this dissertation has demonstrated that schools are a cause and poor mental health is a consequence of criminal justice involvement. Being suspended from school is intimately linked to becoming involved with the criminal justice system, and being involved with the criminal justice system deteriorates psychological well-being. These relationships are especially true for African American males. The relationships become even more alarming when considered alongside the concentration of suspension and punishment among African Americans and Hispanics. As long as the processes linking suspension to criminal justice involvement and criminal justice involvement to poor mental health go unaddressed, they will continue to (re)produce disparities in health and well-being.

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