Racial Disparities in Physical and Mental Health: The Consequences of White Supremacist Organizing, Public Confederate Monuments, and Exposure to Lethal Police Encounters

By

Ryan Douglas Talbert

Dissertation

Submitted to the Faculty of the

Graduate School of Vanderbilt University

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Sociology

June 30, 2020

Nashville, Tennessee

Approved:

C. André Christie-Mizell, Ph.D.

David Cunningham, Ph.D.

Larry W. Isaac, Ph.D.

Hector F. Myers, Ph.D.

Evelyn J. Patterson, Ph.D.

For Caroline

ACKNOWLEDGEMENTS

I first want to thank the incredible scholars on my dissertation committee, Drs. André Christie-Mizell, David Cunningham, Larry Isaac, Hector Myers, and Evelyn Patterson for their time, energy, and dedication to the completion of this dissertation. I thank you all for writing countless letters of recommendation on my behalf, for the hours you spent reading drafts of each of these chapters, and for the helpful feedback you offered that has greatly enhanced the contributions of this dissertation.

I owe a great debt of gratitude to my Advisor, Dr. Christie-Mizell, for his tireless investment in my training. Dr. Christie-Mizell has been my most indefatigable advocate during my graduate career. I would not have made it this far without his unparalleled mentorship, his expertise in navigating the academy, and his holistic training in the craft of research. I sincerely appreciate Dr. Christie-Mizell's guidance, support, time, humor, and dedication to my development as a scholar.

Hosts of faculty members have influenced me through their teaching, mentorship, and research. Thank you especially to Drs. Evelyn Patterson, Bianca Manago, Josh Murray, Christy Erving, Dan Cornfield, Larry Isaac, Mekeila Cook, and Holly McCammon. Dr. Patterson devoted countless hours of her time into my scholarly development. I sincerely appreciate her intellectual curiosity, instruction within and outside of the classroom, and expertise in all things W. E. B. Du Bois. In addition, I am grateful to Dr. Manago who enriched my methodological prowess, was always willing to offer guidance on the job market, and successfully convinced me of the merits of Stata. I would also like to thank Pam Tichenor, Sandy Cherry, and the late Anne Wall for their tireless work and unmatched kindness within the sociology department. Thank you to La Tisha Moore for all of her work in the Dean's Office. I appreciate Drs. Mamadi Corra,

Andy Andrews, David Cunningham, Bob Edwards, Marieke Van Willigen, and Melinda Kane. All played significant roles in my intellectual development and gently pushed me to attend Vanderbilt University for my graduate training.

Many of my fellow graduate students have afforded me friendship during my time at Vanderbilt. I am particularly grateful to Cleothia Frazier, Amanda Brockman, Dasom Lee, Magdalena Sudibjo, Brittany Hearne, Quan Mai, Ashleigh Hope, Yu-Ri Kim, Meagan Rainock, Ashley Kim, and Ben Tyndall for their encouragement, inspiration, collegiality, and thoughtfulness at various points over the past five years.

I am indebted to the countless family members and friends who have offered constant love and support and coached me through disappointments. Thank you to Cody, Jarrell, and Kal'Ell Sanders; Eva, Dustin, and Larkin Foley; Todd, Sue, Zach, Kim, Tanner, and Tucker Kimrey; my loving parents and grandparents; Tyler Misenheimer; Jordan and Kartal Peel; Aaron Butler; Melanie and Randy Dover; Tambi and Paul Swiney; Steven Meriwether; and my Immanuel and West Jefferson families.

Last but certainly not least, I wish to thank my fearless, talented, and extraordinarily supportive wife, Caroline. Caroline, you are the most important person in my life. I am forever grateful for your unconditional love and support, for the direction you bring to my life, and for the innumerable sacrifices you have made over the past several years. You have been with me every step of the way, and I could not have asked for a better partner. Thank you for taking this journey with me.

TABLE OF CONTENTS

LIST OF TABLES

Chapter II. Ku Klux Klan Mobilization and Racial Disparities in Infant Mortality

Chapter III. Public Confederate Monuments and Racial Variation in Mental Health

Chapter IV. Lethal Police Encounters and Racial Inequalities in Cardiovascular Health

LIST OF FIGURES

Chapter III. Public Confederate Monuments and Racial Variation in Mental Health

Figure Page

Chapter IV. Lethal Police Encounters and Racial Inequalities in Cardiovascular Health

Figure Page

CHAPTER I

INTRODUCTION

Health disparities have existed in the United States between black and white Americans since indicators of morbidity and mortality were first formally recorded (Adler and Stewart 2010; Bailey et al. 2017; Du Bois [1897] 1996; Gee and Ford 2011; Reskin 2012; Smedley and Myers 2014; Villarosa 2018; Williams 2012; Williams and Jackson 2005; Williams and Mohammed 2013). Whites largely hold advantages over blacks when it comes to the onset, course, and outcomes associated with disease though important variation occurs along other systems of stratification. Outcomes such as infant mortality, physical health, hypertension, obesity, diabetes, and mortality risk from heart disease illustrate health advantages associated with whiteness (Center for Disease Control [CDC] 2019; Dagadu and Christie-Mizell 2014; Lukachko, Hatzenbuehler, and Keyes 2014; Malat, Mayorga-Gallo, and Williams 2018). Mental health patterns by race-ethnicity are more complex and often dependent on the outcome under study (Hearne and Christie-Mizell 2018; Turner 2013; Turner and Avison 2003). Black Americans generally have lower rates of diagnosed psychiatric disorder than whites but are on average disproportionately exposed to health-harming stressors (Erving and Thomas 2018; Erving, Thomas, and Frazier 2019; Hughes and Demo 1989; Hughes and Thomas 1998; Keyes 2007; Vega and Rumbaut 1991). However, symptoms associated with mental illness are often more severe, debilitating, and prolonged for black Americans compared with white Americans (Breslau et al. 2005; Williams 2018).

This three-study dissertation examines health outcomes as a function of civil rights era Klan mobilization, the placement of public Confederate monuments, and exposure to deadly police encounters. I primarily focus on health disparities between and among black and white

Americans for several reasons. First, scholars have asserted that black Americans occupy "the bottom of the well" (Bell 1993) while whites are generally thought to occupy the top of a socially constructed status hierarchy (see Bonilla-Silva 2017; Emirbayer and Desmond 2015; Feagin 2010; Williams, Lavizzo-Mourey, and Warren 1994). Examining groups thought to occupy opposing ends of a privilege-oppression continuum may offer insight into health stratification. Second, though much health research has focused on disparities between blacks and whites (see Bailey et al. 2017; Hughes and Thomas 1998; Williams and Sternthal 2010), explanations for the health patterning of these groups remains incomplete (see Williams 2018). Further, given the sociohistorical connection between outcomes for blacks and life in the U.S. South (Kramer et al. 2017), I bring an important regional focus to the ongoing scholarly conversations about racial health disparities. Third, black Americans tend to have equal or better mental health than whites, but evidence suggests that distress greatly differs among both groups by other stratifying characteristics such as socioeconomic status, age, and gender (Kim and Durden 2007; Sorkin, Pham, and Ngo-Metzger 2009). I focus on intergroup and intragroup variation among whites and blacks in hopes of offering new insight into health inequities and since racial classification tends to conceal heterogeneity. In what follows, I present the theoretical frameworks used in this dissertation and briefly outline the three research papers.

THEORETICAL FRAMEWORKS

This dissertation uses elements of the stress process model (see Pearlin 1989), life course perspective (see Elder et al. 2003), and cumulative inequality theory (see Ferraro, Shippee, and Schafer 2009) to examine the relationship between race and health while focusing on three key variables: Klan mobilization, the presence of Confederate monuments, and exposure to lethal police violence. According to the stress process framework, health disparities arise from one's

lived social context, individual histories, and current circumstances (Christie-Mizell et al. 2017; Dagadu and Christie-Mizell 2014; Pearlin 1989; Pearlin et al. 1981; Thoits 2010). The stress process model has served as a foundation for research into health disparities (Aneshensel 2009). In this dissertation, I rely extensively on insights provided by the stress process model because I argue that a primary mechanism linking Klan presence, Confederate monuments, and lethal police encounters to health is the stress response (Pearlin 1989; Pearlin et al. 1981; Turner 2010).

In its most elementary form, the stress process incorporates three elements: stressors, resources, and outcomes (Turner 2010). Stressors include events, circumstances, or conditions that can inhibit one's ability to cope with adversity (Christie-Mizell et al. 2017; Wheaton et al. 2013). Stressors can lead to physiological dysregulation, and consequently, premature morbidity and mortality (Geronimus, Bound, and Colen 2011). Chronically experienced stress is generally associated with poorer health. Stressors under analysis for this dissertation are Ku Klux Klan mobilization, public Confederate monuments, and exposure to police use of lethal force. Stressors shape health through the exposure to perceived danger (Williams 2018; Williams et al. 1994). The threat of exposure can heighten vigilance and harm health. Scholars refer to heightened vigilance as a state of psychological arousal in order to protect oneself from dangers in one's environment (Williams 2018; Williams et al. 1994). The unequal distribution of stress is one reason for persistent differences in health between blacks and whites (Avison, Ali, and Walters 2007; Ensel and Lin 2000; House et al. 1994; Lantz et al. 2005; Lin and Ensel 1989; Seeman and Crimmins 2001; Turner and Avison 2003; Turner and Lloyd 1995; Williams 2018). This study broadens conceptualization of the stress universe to include the ecological context or where people live, learn, congregate, play, and work.

Resources can alter the influence of stressors on health by providing individuals with means to manage distressing problems and events (Pearlin and Schooler 1978; Aneshensel

1992). For Paper One, I incorporate socioeconomic and political resources potentially available to communities that can alter the influence of Klan mobilization on health patterns. Different from the traditional stress process, resources used in Paper One are at the neighborhood level. Typically, the stress process relies on individual level resources. Examining resources available on a level above the individual offers a theoretical innovation to the research literature. In other words, the resources available to communities can also shape one's ability to manage stress. Resources incorporated into Papers Two and Three are at the individual level. These resources include healthcare access, educational attainment, and employment status. The factors I include are interrelated. Greater education is generally associated with higher rates of employment, better working conditions, and buffers against economic hardship (Vilorio 2016). Employment is tied to the ability to pay bills, acquire basic necessities, and have access to medical care (Church 2015). Healthcare coverage is associated with preventative health screening, the ability to pay for doctor visits, and afford prescriptions (Lines et al. 2014). Outcomes are the final part of the stress process. I focus on health outcomes in this dissertation—namely, infant mortality rates, mental health, and cardiovascular health. For Papers Two and Three, I use multiple measures to assess mental health and cardiovascular health in an effort to avoid misclassification and to offer a holistic image of people's health.

This dissertation also relies on insights from the life course and cumulative inequality perspectives. These two frameworks focus on the significance of the temporal and social context. Specifically, life course theory purports that health is shaped by events and transitions associated with aging (Elder et al. 2003). Aging is associated with exposure to racial bias occurring within a variety of successive contexts (e.g., primary school, labor market, and real estate) and with varying frequencies and forms (Brown 2018; Gee, Walsemann, and Brondolo 2012). The timing of health decline, disease onset, and mortality is shaped by social factors. Historical events can

also redirect social pathways and alter exposure to risk factors (Elder et al. 2003; Gee et al. 2012, 2019). The life course is useful for considering how the timing, variation, and chronicity of stress exposures shape outcomes (Ferraro and Wilkinson 2013). Similarly, cumulative inequality theory proposes that disadvantage accumulates across time (Ferraro et al. 2009). In Paper One, I use cumulative inequality theory to highlight how Klan mobilization shapes long-term health trajectories of southern counties. Paper Three relies on life course theory to explain the cardiovascular health significance of exposure to deadly police encounters. I rely on the concepts of linked lives and linked fates—or the interdependence of people (Elder et al. 2003) with the expectation that the vicarious experience of lethal police encounters will be associated with poorer cardiovascular health. Below, I briefly define concepts used in this dissertation before outlining the three papers.

CONCEPTUALIZATIONS

This dissertation examines whether and how extensions of white supremacy impact health disparities between and among black and white Americans. I conceptualize of white supremacy by combining insights from process and outcome theories. I borrow from Bonilla-Silva (2001), Feagin (2006), Fredrickson (1981), and Mills (1997) to conceive of white supremacy as a racialized social system that establishes and rationalizes the hegemony of whiteness via ideologies, practices, and policies. The outcome of this system is inequitably distributed power, privilege, risk, and resources to the advantage of populations socially identified as white. This dissertation classifies the Ku Klux Klan as an organizational extension of white supremacy, Confederate monuments as a material cultural extension of white supremacy, and police killings of unarmed black Americans as a behavioral extension of white supremacy. Health scholars have long held that socioeconomic status is a fundamental cause of

health outcomes (Link and Phelan 1995) with Williams and colleagues (1997) noting too that racism is an upstream factor that shapes inequities in health. Williams and Cooper (2019) have argued that structural racism shapes health through residential segregation, political disenfranchisement, wealth inequality, unemployment, underemployment, and education gaps. This dissertation adds organizational, cultural, and behavioral elements that link white supremacy to health disparities.

The World Health Organization (2020:1) defines health as a "state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." Health disparities are differences in health with modifiable causes by social location. Race is socially created and recreated (Bonilla-Silva 2017; Feagin 2010; Omi and Winant 2014). Hence, health disparities identified along racial lines are socially produced. Consistent with the research literature, I use the term disparity to indicate unjust and avoidable high levels of morbidity and mortality among black Americans disproportionate to white Americans (Adler and Rehkopf 2008; Aneshensel 2009). Research identifying social factors associated with health disparities between blacks and whites will assist in developing interventions that promote health equity.

OVERVIEW OF PAPER ONE

Paper One addresses two primary research questions: (1) Did civil rights era Ku Klux Klan mobilization in southern states influence infant mortality rates among nonwhites and whites? (2) Did the influence of Klan mobilization on infant mortality rates persist across time? Infant mortality—a key measure of population health—is highest among black Americans, southern U.S. residents, and persons of low socioeconomic status. Paper One of this dissertation utilizes county-level longitudinal data from ten former Confederate states spanning forty years (1960–2000) to assess the influence of civil rights era Klan mobilization—an archetypal hate

group most active circa 1965—on nonwhites' and whites' infant mortality patterns across time.

Paper One offers contributions to three areas of inquiry by quantifying the impacts of white supremacy on health, by extending theories positing the social determinants of infant mortality, and by identifying outcomes of social movement organizing. To explain how Ku Klan Klan mobilization impacts infant mortality, I apply insights provided by the stress process model and cumulative inequality framework (see Pearlin 1989; Ferraro and Shippee 2009). I propose that social contextual factors like the presence of Klan chapters in one's neighborhood shapes health patterns differently depending on the availability of resources that may dampen or alter its influence. Second, Paper One adds to research specifying the social determinants of birth outcomes by examining a key mechanism that links a social factor with disparities in infant mortality (see Giurgescu et al. 2011; Gortmaker and Wise 1997). A key contribution is that persistently poor infant mortality among nonwhites, specifically, and southern residents, generally, is related to the presence of third-wave Ku Klux Klan mobilization. Third, Paper One builds on literature identifying intended and unintended outcomes resulting from social movements (see Bosi and Giugni 2012; King and Pearce 2010; Kutz-Flamenbaum 2016; Giugni 2008). This study extends theory by demonstrating that social movements can adversely impact the health of communities even if altering health patterns was not an intended goal of the movement.

Paper One finds that nonwhite infant mortality rates increased in counties that experienced Klan mobilization and remained poorer a decade later. Additionally, some of highest increases in nonwhite infant mortality occurred in counties adjacent to but without their own Klan chapter. The presence of a Klan chapter in a county did not significantly impact white infant mortality rates. However, adjacent-county mobilization—a Klan inactive county sharing a border with a county that had Klan activity—increased infant mortality for whites. The stress

process model and cumulative inequality frameworks inform the findings. In the absence or depletion of community resources, Klan organizing acts as an ambient stressor for communities potentially leading to persistently elevated stress, physiological dysregulation, and higher likelihood of infant mortality. These poor outcomes are particularly pronounced for nonwhites, or the groups most targeted by the Klan's efforts. In addition, consistent with cumulative inequality theory, the disadvantage created by Klan mobilization in the 1960s shaped long-term trajectories in infant mortality.

The adjacent-Klan finding for white infant mortality was unexpected but can be explained with existing research. First, consistent with the stress process paradigm, Klan mobilization may have increased distress among noncommittal whites and worsened health given the intimidation and violence perpetrated by the organization. Although black Americans were the primary target of the Klan's efforts, whites opposed to the Klan's efforts were also targeted such as labor leaders, social progressives, and Jewish communities. An extreme example of this process is the civil rights workers killed in Greenville, Mississippi, during the Mississippi Freedom Summer. Second, I argue that the entrenchment of white supremacy in adjacent-present counties leads to greater opposition to health enhancing social programs. Whites in these counties may oppose policies perceived as simultaneously benefiting groups viewed as "undeserving" including black Americans (Quadagno 1994, 2010, 2012). Consequently, the health of white Americans is worse in these spaces (see Metzl 2019).

OVERVIEW OF PAPER TWO

The guiding research question for Paper Two is: (1) What is the relationship between the presence of public Confederate monuments and racial variation in mental health? Mental health patterns by race-ethnicity are generally more complex than racial disparities in physical health

and population health. Black Americans tend to be exposed to higher levels of daily stressors than whites but have similar or lower rates of mental illness (Erving et al. 2019; Erving and Thomas 2018; Hughes and Demo 1989; Hughes and Thomas 1998; Keyes 2007; Vega and Rumbaut 1991). Paper Two of this dissertation examines the association between exposure to public Confederate monuments and mental health using a census of Confederate monuments combined with a large, nationally representative sample of U.S. adults collected in 2015. The 2015 attack on the Charleston Emanuel AME church rapidly increased awareness of Confederate monuments positioned on public grounds across the U.S.

Research has documented how race and racism are tied to support for Confederate symbols, but little work has explored whether and how these monuments impact racial inequalities. Paper Two utilizes elements of the stress process model to examine the relationship between the presence of Confederate monuments and racial variation in mental health. Paper Two offers multiple contributions to the research literature. First, Paper Two offers a more holistic and updated representation of the black-white mental health paradox by examining multiple indicators of mental health. In doing so, Paper Two extends beyond misclassification concerns and allows mental health problems to arise via internalization, externalization, and subjective appraisal (see Brown 2003, 2008; Horwitz 2002; Turner 2013; Wheaton 2001). Second, this study expands the stress universe to examine mental health consequences of residence in spaces occupied by public monuments (Wheaton 1994). Confederate monuments reflect a cultural extension of white supremacy—the instillation of symbols and imagery that celebrate the oppression, marginalization, and dehumanization of black Americans (Williams, Lawrence, and Davis 2019). Third, this study carefully considers within group variation in mental health among black and white Americans. Research often compares mental health patterns between black and whites without also considering differences among these groups.

Paper Two finds support for the black-white mental health paradox with all outcomes under analysis. However, the mental health advantage experienced by black Americans for heavy drinking is eliminated in states with greater numbers of public Confederate monuments. In other words, monuments factor into black-white mental health patterns.

OVERVIEW OF PAPER THREE

Paper Three addresses one research question: (1) What is the relationship between exposure to lethal police encounters and racial variation in cardiovascular health? Black Americans on average have a higher lifetime risk of cardiovascular problems such as hypertension, heart attacks, cardiovascular disease, and higher body mass index (Brondolo et al. 2011; Chae et al. 2011, 2012; Dolezsar et al. 2014; Lewis et al. 2014; Lukachko, Hatsenbuehler, and Keyes 2014; Szanton et al. 2012; Williams 2012, 2018; Williams and Sternthal 2010). Furthermore, studies have demonstrated that unexpected stressors such as the death of a loved one are associated with worse cardiovascular health (Fagundes et al. 2018). Mortality resulting from police officers' actions averages three deaths per day in the United States, and black Americans are at a disproportionate risk of death due to police use of force (Buehler 2017; Sinyangwe, McKesson, and Packnett 2016). Additionally, blacks are five times more likely than whites to be killed while unarmed (Sinyangwe et al. 2016). Research on the effects of police use of force could yield insight into racial stratification in health given the persistent disparities in disease prevalence between blacks and whites. Paper Three of this dissertation examines whether exposure to police use of lethal force against unarmed black Americans is associated with the cardiovascular health of blacks and whites.

I conceptualize of exposure to deadly police encounters when the victim is black and unarmed as a stressor with potentially large implications for racial health disparities. This study

contributes to the literature in three ways. First, this study identifies the impact of an understudied stressor—the number of exposures to police killings—on multiple cardiovascular health outcomes. Second, this study simultaneously examines the impact of lethal encounters on blacks and whites. Police officers tend to engage blacks and whites differently (Bowleg et al. 2020; Voigt et al. 2017), and extrajudicial and legalized killings of black Americans are historically significant (Alexander 2012; Tolnay and Beck 1995). Consequently, the salience and health significance of these events will generally differ by race. Third, Paper Three identifies police-involved violence as having spillover consequences for individuals' health. While research has documented the health impacts of expansions in the criminal justice system (Kirk and Wakefield 2018; Lee et al. 2014; Patterson 2010, 2013; Sewell, Jefferson, and Lee 2016), less scholarship has focused on fatal police violence (Bor et al. 2018). Paper Three finds that exposure to unarmed police killings of black Americans is associated with greater increases in the probability of hypertension and stroke for blacks than whites. Results suggest police killings have an impact on cardiovascular health disparities between blacks and whites.

CONTRIBUTIONS

Evidence of racial-ethnic health disparities in the U.S. has existed since statistics were first formally recorded (Adler and Stewart 2010; Bailey et al. 2017; Gee and Ford 2011; Reskin 2012; Villarosa 2018; Williams 2012; Williams and Jackson 2005; Williams and Mohammed 2013). This dissertation focuses on stressors and their influence on health disparities. I utilize tenets of the stress process model and life course perspective to explain the mechanisms linking white supremacy to disparities in health. An overarching goal of this dissertation is to provide evidence for the influence of political-economic context in shaping health and well-being. In other words, context shapes the relationships among race, stress, and health disparities. Findings

generated from this dissertation will have implications for the current sociopolitical context. There were over 1,000 hate groups active in the United States in 2018 (Southern Poverty Law Center [SPLC] 2018), more than 1,700 Confederate monuments situated on public grounds (SPLC 2019), and approximately 1,200 people were killed due to police use of force between June 2015 and May 2016 (Banks et al. 2016). The findings generated from this three-paper dissertation suggest that white domestic terrorism, public symbols honoring the Confederacy displayed, and exposure to police killings are public health concerns with large implications for racial health disparities.

This dissertation offers several contributions to the research literature. First, it brings a novel and critical perspective to the study of health disparities. Persistent health disparities between and among blacks and whites are related to potentially hyper distressing though understudied phenomena in the form of Ku Klux Klan presence, the presence of public Confederate monuments, and lethal police killings of unarmed black Americans. Additionally, this dissertation creatively merges literatures with the sociology of health that are not often in conversation. The first paper merges research on social movements with the study of population health. The second paper combines the sociology of mental health with cultural sociology, and the third merges insights from the sociology of health with punishment and inequality. Ultimately, this dissertation makes a strong case for the reevaluation of health disparities from a critical perspective. Social factors are intricately tied to racial health disparities.

CHAPTER II

PAPER ONE: KU KLUX KLAN MOBILIZATION AND RACIAL DISPARITIES IN INFANT MORTALITY

ABSTRACT

Paper One uses county-level longitudinal data from ten former Confederate states spanning forty years (1960–2000) to assess the influence of civil rights era Ku Klux Klan mobilization on nonwhite and white infant mortality rates. Utilizing a fixed-effects design to model change in infant mortality occurring within southern counties, findings show that nonwhite infant mortality rates in counties that experienced Klan activity grew significantly worse following Klan mobilization and remained poorer a decade later. Additionally, some of highest increases in nonwhite infant mortality occurred in counties adjacent to, but without their own, Klan chapter. While direct Klan presence did not significantly alter white infant mortality rates, adjacent-county mobilization increased infant mortality for whites. The stress process model and cumulative inequality frameworks inform findings. In the absence or depletion of community resources, Klan organizing may act as an ambient stressor for communities potentially leading to persistently elevated stress, physiological dysregulation, and higher likelihood of infant mortality, particularly for nonwhites. In addition, consistent with cumulative inequality theory, the disadvantage created by Klan mobilization in the 1960s shaped long-term trajectories in infant mortality. There are at least two explanations for higher infant mortality among whites in adjacent counties. First, Klan mobilization may have increased distress among noncommittal whites and worsened health given the intimidation and violence perpetrated by the

organization. Second, the entrenchment of white supremacy in adjacent counties leads to greater opposition among whites in these spaces to health enhancing social policy given that the perception among typical whites is that groups deemed undeserving will also benefit. Ultimately, findings show that white supremacist organizing played a role in exacerbating racial inequalities in infant mortality across southern counties.

INTRODUCTION

Infant mortality, the death of an infant before the first birthday, is indicative of a population's health and tends to reflect broader social inequities (Matoba and Collins 2017; Wise and Pursley 1992). Infant mortality is highest among racial and ethnic minorities, among residents of the U.S. South, and among those with low socioeconomic status (SES) (Brosco 1999; Hirai et al. 2014; Marks et al. 1987; Menifield and Dawson 2008; Shin 1975; Chen et al. 2016). Studies of birth outcomes do not often account for residential context when assessing the influences of race, region, and SES. This study redresses this gap in the literature by examining how all three of these factors influence infant mortality rates and whether the civil rights era Ku Klux Klan organizing is a potential contributor to racial gaps in infant mortality. That is, focusing on counties in the U.S. South, I examine whether white supremacist organizing is a key element in understanding racial disparities in infant mortality.

The Klan, reemerging prominently for the third time during the 1960s (i.e., third-wave Klan mobilization), exemplifies an archetypal white supremacist organization created to maintain separate and unequal distribution of social, political, and economic resources. Research has documented far-reaching short and long-term consequences of Klan engagement such as higher violent crime rates, increased political polarization, and higher likelihoods of voting

behaviors mapping onto racial attitudes (Cunningham 2012; McVeigh and Cunningham 2012; McVeigh et al. 2014). Less research has examined the potential health effects of white supremacist organizing. Black Americans were the primary target of the Klan's efforts and were subjected to intimidation and physical violence (McVeigh and Estep 2019). Acts of terrorism took the form of harassment, cross burnings, beatings, bombings, and assassinations. Klan chapters across the South had their own "wrecking crews"—groups of Klansmen held in high esteem that were responsible for violent missions like murders, bombings, mutilations, whippings, and abductions (McVeigh and Estep 2019). Additionally, racial minorities in the South could not rely on local police or legal authorities because, as research shows, such officials were at best ambivalent to serving their law enforcement needs (Beck and Tolnay 1997; Cunningham 2009; Dittmer 1995; Payne 1995; McVeigh and Cunningham 2012; see Griffin 1993 for an exception). The Klan was also averse to other social groups that positioned themselves in opposition to the Klan's efforts (i.e., labor leaders, social progressives, and Jewish folks). While having a Klan chapter residing nearby was potentially a life or death experience, research has not caught up to whether the Klan's organizing efforts shaped the indirect and long-term health patterns of proximate communities.

In this paper, I examine infant mortality rates for "nonwhites" and "whites." Scholars generally agree that bi-racial stratification—in other words, white/nonwhite, though fundamentally rooted in black/white inequalities (Bonilla-Silva 2001, 2017)—characterizes the historical distribution of power, privilege, risk, and resources, particularly in the U.S. South (Du Bois [1904] 1989; Feagin 2010; Roediger 2007). Data limitations (discussed in more detail in the *Data and Methods* section below) also prevent further disaggregation of race/ethnicity beyond a nonwhite/white binary. However, it is important to note that black Americans primarily compose

the "nonwhite" group for all years under analysis. In 1960, 98 percent of the nonwhite population in the South was black American (Gibson and Jung 2002). For 1970, 1980, 1990, and 2000, black Americans made up 97, 86, 80, and 82 percent of the nonwhite population in the South, respectively (Gibson and Jung 2002; U.S. Census 2007). The inclusion of nonblack racial/ethnic groups within the "nonwhite" category likely leads to a more conservative estimation of the relationship between Klan presence and nonwhite infant mortality since, with some exceptions, nonblack populations of color tend to have infant mortality patterns more closely mirroring whites than black Americans (Matthews, MacDorman, and Thomas 2015).

The present study offers several important contributions to the research literature. First, this paper extends studies that seek to understand the effects of white supremacy on the health of nonwhites and whites. Here, I assess whether white supremacist organizing—conceptualized as a stressor—differentially influences infant mortality by race/ethnicity. Second, this paper adds to research specifying the social determinants of birth outcomes. Persistently poor infant mortality among nonwhites, specifically, and southern residents, generally, may be related to important contextual features of communities including Klan presence (see Bor et al. 2018; Novak, Geronimus, and Martinez-Cardoso 2017). While much research has documented disparities in birth outcomes, less scholarship has explored mechanisms such as white supremacist organizing that factor into such disparities (see Giurgescu et al. 2011; Gortmaker and Wise 1997). Third and related to the second, this study adds to a burgeoning literature specifying outcomes of social movements (Bosi and Giugni 2012; Giugni 1998, 2004, 2007, 2008; Isaac and Kelly 1981; King and Pearce 2010; Kutz-Flamenbaum 2016; Whittier 2004). To be precise, beyond studies that show the influence of specific health-related movements (e.g., mobilization for healthcare, reproductive rights, and AIDS research; see Brown et al. 2004), few studies have assessed how

social movements affect health patterns. By assessing how Klan organizing over a forty-year period impacts infant mortality for whites and nonwhites, this study will identify both the short and long-term health consequences of civil rights era Klan mobilization.

THEORY AND BACKGROUND

This study employs elements of the stress process model to investigate the association between Klan presence and infant mortality. According to the stress process framework, health disparities arise from social context, history, and current circumstances. This model incorporates three elements: stressors, resources, and outcomes (Christie-Mizell et al. 2017; Dagadu and Christie-Mizell 2014; Pearlin 1989; Turner 2013). Stressors include events, circumstances, or conditions appraised as uncontrollable that can inhibit one's ability to cope with adversity (Christie-Mizell et al. 2017); experiencing prolonged stressors can lead to physiological dysregulation, and consequently, premature morbidity and mortality (Geronimus et al. 2011). I use the stress process model to highlight the deleterious influence of a stressor—Ku Klux Klan mobilization—with potentially harmful health consequences at the community and individual levels. Stressors are differentiated by timing in the life course, severity, and unit of analysis at which they occur (Almeida et al. 2005; Pearlin et al. 1981; Pearlin 1989; Williams, Neighbors, and Jackson 2008; Wheaton 1994). Campbell (1983) noted that environmental or neighborhood factors are ambient stressors (e.g., vandalism, crime, and trouble with one's neighbors) (see also Aneshensel and Sucoff 1996; Pearlin 1989). Ambient stressors signal that one's residential area is unsafe, which generally increases distress and leads to worse health (Campbell 1983; Ross and Mirowsky 2009). In this study, Klan presence represents an ambient stressor for individuals that emanates from the meso-level and signals the presence of danger.

In the 1960s, leaders of the revitalized Ku Klux Klan organized working class whites in

the South against the civil rights movement. Similar to prior waves, the civil rights era Klan utilized racial threat to mobilize people at the grassroots level. Perceived threats to power arrangements led to the participation of tens of thousands of members (Cunningham and Phillips 2007). Indeed mobilization grew exponentially when recruitment efforts began to frame grievances that linked black militancy to communism (McVeigh and Estep 2019). FBI director J. Edgar Hoover (1966) took notice of the renascent Klan writing in 1966 that the Klan's resurgence in the South promoted violence that required vigorous policing. Interest in undoing the rising Klan led to a U.S. House on Un-American Activities inquiry into the Klan's efforts. A key to the Klan's early success in mobilization was that local authorities tended to give the Klan free reign to vigilante justice (Cunningham 2009; McVeigh and Cunningham 2012). Klan mobilization did not occur randomly. Rather, the Klan tended to find success in mobilizing areas where policing was laissez-faire, where black Americans tended to represent higher percentages of the total population, where whites perceived threats from the civil rights movement, and in places with a history of lethal racialized violence (Cunningham 2012). This study seeks to extend foregoing research to identify whether the Klan's organizing shaped the health of the communities in which they operated.

In its original form (Pearlin et al. 1981), the stress process model focused on interpersonal resources such as mastery, self-esteem, and social support, and how these factors dampen or modify the effect stressors have on health. As the model evolved, socioeconomic resources, to the extent that they stratify and determine exposure to stressors, are also recognized as important resources that may change the impact of stressors (Christie-Mizell et al. 2017; Dagadu and Christie-Mizell 2014; Pearlin 1989; Turner 2013). My focus in this study is on resources at the community level in the form of a county's average level of education, income,

wealth, and employment. These resources should dampen the effect Klan mobilization will have on community health because they increase the likelihood that communities have the means to handle the stress produced by the Klan.

Greater education (i.e., percent of the population with a college degree) is generally associated with higher rates of employment, better working conditions, buffers against economic hardship, improves psychosocial resources (e.g., mastery, self-esteem, and social support), and benefits health lifestyles (e.g., decreased smoking, increased exercise, and use of medical services) (Mirowsky and Ross 2015). Higher median family household incomes buffers against economic hardship (e.g., difficulty paying bills, acquiring necessities, and access to medical care). Higher family income also generally affords individuals with greater housing options. In turn, the percentage of homes owned as opposed to rented indicates the level of wealth available in a community. Wealth is largely tied to home ownership, and wealth gaps between whites and populations of color have existed since data were first recorded (Oliver and Shapiro 2006). Ultimately, greater access to resources such as education, income, and wealth will likely buffer against the toll of stressors on health.

An additional resource differentially available to communities is political power. LaVeist (1993) demonstrated that neighborhoods with greater black political empowerment had lower levels of black infant mortality. Political power is thought to influence infant mortality through community organization (La Veist 1993). In other words, an organized community generally improves the material conditions of black American lives; in turn, improved material conditions benefit infant mortality. In this study, I incorporate the total votes cast in the most recent presidential elections to capture the growing political empowerment of nonwhites in the South following the passage of the Voting Rights Act, consistent with the research literature (McVeigh

et al. 2014).

Finally, outcomes are the third part of the stress process and are a result of how effective resources are at altering the deleterious effects of stressors (Pearlin et al. 1981). The outcome studied here is infant mortality rates. Infant mortality varies by race/ethnicity, region of residence, and socioeconomic status. Infant mortality for non-Latino blacks remains exceptionally high at 11.11 infant deaths per 1,000 live births compared to whites' and Latinos' infant mortality rates of 5.06 and 5.00, respectively (Matthews et al. 2015). Research attempting to understand the link between community context and health has looked at how county-level income inequality, policies, and services shapes health (Kawachi et al. 1997; Kaplan et al. 1996; Osypuk and Galea 2007; Wen, Browning and Cagney 2003). Studies have highlighted the importance of context on racial-ethnic health disparities and have demonstrated that context influences many health outcomes (Browning, Cagney, and Wen 2003; Cagney, Browning, and Wen 2005; Morenoff et al. 2007; Robert and Ruel 2006; Yao and Robert 2008). Yet, few have assessed mortality as an outcome (see Yao and Robert 2008 as an exception). This study contributes to foregoing work by focusing on infant mortality. With few exceptions, researchers have found higher infant mortality for racial/ethnic minorities for as long as data have been available (Matthews et al. 2015). Additionally, infant mortality in the U.S. South also remains poorer relative to other regions (Hirai et al. 2014; Marks et al. 1987; Menifield and Dawson 2008; Shin 1975), and rates are worse for individuals of low SES (Chen et al. 2016).

Cumulative Inequality Theory

According to cumulative inequality theory—a derivative of cumulative (dis)advantage theory—historical structural disadvantage grows across time resulting in wider inequalities (Ferraro and Shippee 2009; McDonough et al. 2015). In other words, the effect of Klan

mobilization on infant mortality for whites and nonwhites will be cumulative across successive decades. For instance, if Klan mobilization is associated with poorer nonwhite infant mortality between 1960 and 1970, then the relationship will likely grow worse between 1960 and 1980. As a comparison, generations that come before and after individuals shapes one's life trajectory (McDonough et al. 2015; Robert, Cagney, and Weden 2010). Ferraro and colleagues (2009) contend that cumulative inequality theory links macro and micro processes that demonstrate how social systems influence inequality over time. These authors specify that cohorts provide the context for development that structures risk and opportunity; said differently, infants born to mothers during the height of the Klan's renaissance will experience the effects of that exposure across time. Research has shown that largescale events shape long-lasting effects and the longevity of poor health (Bor et al. 2018; Susser and Lin 1992; Preston, Hill, and Drevenstedt 1998). Ultimately, cumulative inequality theory specifies that inequalities will accumulate across time and that this process can be observed at the county-level.

Race, Community Context, and Health

Recent research has turned wider attention to how race and community context impact health (Galea et al. 2011; Gee and Ford 2011; Giurgescu et al. 2011; Harrell et al. 2011; Paradies et al. 2015; Williams and Collins 2001). One specific line of research has focused on residential environments. Community context is important because where people live determines access to jobs, education, safety, and social networks (Charles 2003; Sharkey 2008; Wilson 1987). For these reasons, scholars have argued that residential segregation is consequential for health (Collins and Williams 1999; Williams 2012). Acevedo-Garcia and colleagues (2003) showed that higher residential segregation accompanied by high concentrations of economic disadvantage led to adverse birth outcomes among nonwhites (see also Krieger and colleagues

2015, 2017). I incorporate a population proportions measure indicating the percentage of the population that is black to adjust crudely for residential segregation.

Further, living environments connect racialized experiences to health disparities. This insight is useful when considering that place of residence is a risk factor for infant mortality among racial/ethnic minorities beyond socioeconomic conditions and access to and quality of prenatal care (Collins and David 1992). In addition, Gorman (1999) found that contextual variables work directly and indirectly to influence adverse birth outcomes for infants. Mothers' characteristic played significant roles as well but not more so than the characteristics of the county in which the mother resided. Thus, the community context may be especially important in understanding racial disparities in health. I utilize county-level data to assess how community context shapes health outcomes. The focus on counties rather than a smaller or larger geographic space is intentional. Counties have served as meaningful political units in southern politics (Andrews 2004; Cunningham and Phillips 2007), and the Klan organized and operated at the county-level (Cunningham 2012; Cunningham and Phillips 2007; McVeigh and Cunningham 2012; McVeigh et al. 2014; Owens, Cunningham, and Ward 2015). Hence, outcomes of Klan mobilization will be most likely observed at the county level.

Race, Terrorism, and Health

The present study does not examine the health effects of specific events associated with Klan mobilization (e.g., cross burnings, church bombings, or public marches), but extant research provides insight into how such events can factor into health outcomes. Research has assessed whether mass trauma events (e.g., terrorist attacks, targeted social control efforts, natural disasters, and hate crimes) and interpersonal psychosocial traumas (e.g., microaggressions and exposure to racially biased media coverage) influence health outcomes.

Scholarship has narrowed this focus on the health impacts of stressors that disproportionately target specific racial/ethnic groups (Bailey et al. 2017; Bor et al. 2018; Harrell 2000; Novak, Geronimus, and Martinez-Cardoso 2017). One key study found that Arab and Muslim mothers in California were more likely to experience worse birth outcomes following the attacks of September 11, 2001 (Lauderdale 2006). In other words, the increasingly hostile environment and subsequent elevated stress levels for Arab and Muslim Americans in the aftermath of September 11 may have contributed to poorer birth outcomes. In addition, Novak and colleagues (2017) found that Latina mothers in Iowa had increased risk of adverse birth events following a major immigration raid in 2008. While previous research has offered insight to the relationship between traumatic events and racial/ethnic health disparities, it has generally neglected the role of white supremacist organizations intended to preserve the unequal distribution of risks and resources linked directly to health and well-being.

The notable absence in the research literature of the role of white supremacist organizing influencing infant mortality is striking for several reasons. First, infant mortality has long represented a key indicator of a population's health. Second, infant mortality acts as a social mirror reflecting a range of societal inequities, and third, birth outcomes are inextricably linked to social causes. This study addresses the aforementioned limitations in the literature by examining how white supremacist mobilization shapes infant mortality rates by race.

Social Movement Outcomes

The present study also offers important contributions to research examining how social movements matter by assessing whether Klan organizing affected short and long-term health patterns. Social movement scholars have long focused on the impact of social movements on political outcomes (Amenta 2014; Amenta et al. 2010; Bosi and Giugni 2012; Giugni 1998,

2004, 2007, 2008; Isaac and Kelly 1981; Isaac and Christiansen 2002; King and Pearce 2010; Kutz-Flamenbaum 2016; Whittier 2004), cultural outcomes (Isaac 2009; Van Dyke and Taylor 2018), individual and biographical outcomes (Isaac et al. 2020), and in some cases, health and mortality outcomes (Banaszak-Hall, Levitsky, and Zald 2010; Brown and Fee 2018; Brown et al. 2004; Crossley 2005; Klawiter 2005; Lipold and Isaac 2009). Yet, this narrow focus can miss the broader significance of social movements. Fewer studies have attempted to ascertain the broader outcomes associated with movements. To be precise, beyond studies that show the influence of specific health-related movements (e.g., mobilization for healthcare, reproductive rights, and AIDS research; see Banaszak-Hall et al. 2010; Brown et al. 2004; Crossley 2005), few studies have assessed how social movements directly impact health patterns. This study intends to link research examining social movement outcomes with literature on the social determinants of health.

Studies have shown that the civil rights era Klan for instance, did not attain their promoted goal of maintaining Jim Crow (Cunningham and Madsen 2015). However, Klan mobilization has been linked to significant changes in communities in which it organized decades after its decline. Klan-active counties tended to experience significantly higher violent crime rates, greater political polarization, and voting patterns that mapped onto racial attitudes (McVeigh et al. 2014; McVeigh and Cunningham 2012; Cunningham 2012). Extending this line of research, the current study examines whether the Klan shaped infant mortality patterns.

SUMMARY AND HYPOTHESES

The present study uses county-level longitudinal data to examine the degree to which civil rights era Klan mobilization is associated with white and nonwhite infant mortality rates

across time. To explain mechanisms linking Klan presence to birth outcomes, I rely on insights provided by the stress process model. The stress process would expect that Klan mobilization—a stressor—will harm health conditional upon a community's resources. To explain how the Klan's influence on infant mortality might persist across time, I use cumulative inequality theory. Cumulative inequality theory specifies that inequality accumulates across time resulting in wider health gaps. This study tests the following hypothesis derived from the stress process, cumulative inequality, and background research.

> *Hypothesis 1*: Klan presence will be associated with greater increases in infant mortality for nonwhites compared to whites.

In addition to testing the relationship in hypothesis 1, I carefully examine how long in a forty-year period the relationship persists. The next section details data and methods for the present study.

DATA AND METHODS

Data

This study focuses on counties in ten former Confederate states where the civil rights era Klan made concerted efforts to organize (i.e., Alabama, Arkansas, Georgia, Florida, Tennessee, North Carolina, South Carolina, Virginia, Louisiana, and Mississippi) (Cunningham 2012; McVeigh and Cunningham 2012; McVeigh et al. 2014). In all analyses, data are aggregated to the county-level. I use counties because they serve as meaningful political units in the U.S. South (Andrews 2004; Cunningham and Phillips 2007), and because Klan chapters operated at the county-level (Cunningham 2012; Cunningham and Phillips 2007; McVeigh and Cunningham 2012; McVeigh et al. 2014; Owens, Cunningham, and Ward 2015). Five time points of data

corresponding to a decennial year for each county are used in analyses, and these time points are collected around when the civil rights era Klan was considered disorganized (1960), active (c. 1965), and in abeyance (1970 and after) (see Cunningham 2012). Data come from multiple sources. Much of the data for this analysis are from the National Consortium on Violence Research project collected by Messner and colleagues (2000) and supplemented by McVeigh and colleagues (2014). Similar to the research literature, to maintain consistent units of space across time, I follow the clustering strategy used by McVeigh and colleagues (2014) and create 11 units out of 28 independent entities, or in some cases former counties, that experienced boundary changes between 1960 and 2000.

Births and infant deaths are censored for some counties by the National Vital Statistics due to the potential to identify individuals (see Bailey et al. 2016). Counties included in the present study meet at least one condition of the following for a given year: the population totals at least 10,000 people and/or the "nonwhite" population forms at least 10 percent of the total population. Given the changing nature of populations (e.g., fertility, mortality, and migration), counties sometimes meet these constraints for a given decade and then fail to do so for a subsequent timespan (County-year $N_{1960\text{-}1970} = 1{,}508$; $N_{1960\text{-}1980} = 1{,}528$; $N_{1960\text{-}1990} = 1{,}456$; $N_{1960\text{-}2000} = 1{,}532$). To maximize statistical power in analyses that follow, I include all available counties in each decade comparison even if a county does not meet the conditions for a prior or later timespan.

Infant Mortality Rates

The key dependent variable is the county-level infant mortality rate for nonwhites and whites. Infant mortality represents the total number of infant deaths less than a year old divided by the number of births in a given year multiplied by 1,000. Infant mortality is interpreted as the

number of infant deaths per 1,000 live births. Birth and infant death information primarily comes from the publicly available U.S. County-Level Natality and Mortality Data file collected by Bailey and colleagues (2016). Disaggregation by race is only available for whites and nonwhites. White/nonwhite racial classification is consistent with U.S. data collection protocols in the 1960s.

In a small number of cases, data were missing for county-level infant births and deaths in the Bailey et al. (2016) dataset but available in the publicly disseminated National Vital Statistics records. In these cases, I incorporated births and infant deaths as recorded by the National Vital Statistics reports (United States Public Health Service 1962-2002). For infant mortality rates, I use data from three-year increments to produce more stable calculations of infant mortality rates. For instance, the first time point of data represents births and infant deaths from 1960, 1961, and 1962. This analysis relies on overall birth and infant death counts and not linked infant birth-death files because such files were unavailable for the early portions of this study.

Table 1 presents descriptive statistics for key study variables. The 3-year infant mortality for nonwhites for 1960 was 47.53 (*SD*=14.59). On average and between 1960 and 1962, there were approximately 48 nonwhite infant deaths occurred per 1,000 live births in the counties under study. By comparison, the white infant mortality rate for the same period was 23.87 (*SD*=7.62). For whites and nonwhites, infant mortality declines through time, although nonwhite infant mortality is higher than the white infant mortality at each time point. In 1970, nonwhites had an infant mortality rate of 33.08 (*SD*=34.49). From 1980 to 2000, the nonwhite infant mortality rate dropped from 18.92 (*SD*=27.05) to 14.87 (*SD*=20.15) in 1990 and 10.861 (*SD*=10.50) in 2000. Over the same period, whites' infant mortality went from 10.68 (*SD*=5.83) to 8.01 (*SD*=5.28) in 1990 and 6.38 (*SD*=4.61) in 2000.

Table 1. Descriptive Statistics for Key Study Variables across Counties in Ten Former Confederate States where the Civil Rights Era Ku Klux Klan Made a Concerted Effort to Mobilize.[a]

Variables	*Percent/ Mean*	*S.D.*
Dependent Variables		
Nonwhite infant mortality rate, 1960–1962	47.51	14.59
Nonwhite infant mortality rate, 1970–1972	33.08	34.49
Nonwhite infant mortality rate, 1980–1982	18.92	27.05
Nonwhite infant mortality rate, 1990–1992	14.87	20.15
Nonwhite infant mortality rate, 2000–2002	10.86	10.50
White infant mortality rate, 1960–1962	23.87	7.62
White infant mortality rate, 1970–1972	18.77	7.89
White infant mortality rate, 1980–1982	10.68	5.83
White infant mortality rate, 1990–1992	8.01	5.28
White infant mortality rate, 2000–2002	6.38	4.61
Ku Klux Klan Mobilization, 1964–1966		
Klan presence (1=yes)	35.40	—
Klan presence in an adjacent county (1=yes)	34.70	—
Political and Socioeconomic Resources		
Total votes cast in most recent election, 1960	9,837.23	22,293.58
Total votes cast in most recent election, 1970	13,639.26	29,602.66
Total votes cast in most recent election, 1980	18,541.20	39,040.84
Total votes cast in most recent election, 1990	25,793.20	53,251.23
Total votes cast in most recent election, 2000	26,454.73	54,957.95
Median family household income, 1960	3,249.98	1,061.00
Median family household income, 1970	6,435.01	1,452.91
Median family household income, 1980	15,155.89	2,970.25
Median family household income, 1990	26,540.78	6,134.87
Median family household income , 2000	33,338.52	8,400.55
Percent college degree, 1960	4.75	2.25
Percent college degree, 1970	4.87	2.87
Percent college degree, 1980	6.63	3.90
Percent college degree, 1990	10.58	6.3
Percent college degree, 2000	14.84	7.82
Percent home ownership, 1960	52.73	9.36
Percent home ownership, 1970	61.48	7.67
Percent home ownership, 1980	64.88	7.43
Percent home ownership, 1990	64.21	7.70
Percent home ownership, 2000	74.52	8.10
Percent unemployed, 1960	5.03	1.74
Percent unemployed, 1970	4.41	1.99
Percent unemployed, 1980	6.90	2.20
Percent unemployed, 1990	7.09	2.73
Percent unemployed, 2000	6.18	2.68

Note: Standard Deviations (*S.D.*) are presented for continuous variables.
[a] Infant mortality rates are calculated using births and infant deaths across 3 years.

Klan Presence and Adjacent Klan Presence

Klan presence data were originally tabulated from the House on Un-American Activities (1966), which provides an FBI census of Klan chapters in the United States. For this study, these data were supplemented by McVeigh and colleagues (2014). Scholars have noted the committee's error rate of identifying Klan chapters as less than 10 percent (Cunningham and Phillips 2007), and have argued that any Klan chapter that went unnoticed by the FBI likely was not influential on its surrounding community (McVeigh et al. 2014). Consistent with the research literature, I measure Klan presence as a dichotomous variable (1=yes) that indicates whether a county had at least one United Klans of America (UKA) chapter given that the UKA was the most stable of Klan organizations during the civil rights era. In three states—Florida (i.e., United Florida Ku Klux Klan), Louisiana (i.e., Original Knights of the Ku Klux Klan), and Mississippi (i.e., White Knights of the Ku Klux Klan)—parallel organizations were either strongly organized and/or demonstrated considerable membership overlap with the UKA. In these three states, counties are coded as having a Klan or adjacent Klan present (1=yes) if they had a UKA chapter or a chapter with membership overlap with the UKA (Cunningham and Phillips 2007; McVeigh et al. 2014).

Adjacent Klan presence indicates that a Klan did not itself have a chapter but a county with which it shared a border did. Table 1 shows that 35 percent of counties under study had at least one Klan chapter between 1964 and 1966. Sixty-seven percent of North Carolina counties had a Klan in the 1960s. Sixty-three percent of South Carolina counties, sixty-five percent of Mississippi counties, and fifty percent of Louisiana parishes had at least one Klan chapter. Additionally, approximately 35 percent of counties did not have a Klan chapter within it but did have one adjacent to it. Klan presence and adjacent Klan presence are mutually exclusive

categories. In total, approximately 70 percent of counties either had a Klan in its own borders or shared a border with a Klan present county.

Socioeconomic and Political Resources

I incorporate multiple resources into the multivariate models presented below. Resources include the percent of the population with a college degree, median family household income, percent of the population that owns their home, unemployment rates, and total votes cast in the most recent presidential election. Consistent with the stress process model, resources should dampen the effect Klan mobilization will have on community health, because they increase the likelihood that communities have the means to handle the stress produced by the Klan. Four variables represent socioeconomic resources (i.e., percent of the total population with a college degree, median family household income, percent of the population that owns their home, unemployment rates).

An additional resource differentially available to communities is political power. Voting data are not generally available for all counties across southern states by race in 1960. Consequently, I incorporate the total number of votes cast at the county level in the most recent federal election. An increase in this measure across time generally reflects the growing enfranchisement of black southerners after passage of the Voting Rights Act (see McVeigh et al. 2014). In other words, increases in the total votes cast primarily reflect growing political power of black Americans and could dampen the influence Klan activism has on infant mortality particularly for nonwhites. For 1960, the total votes cast represent votes for Richard Nixon and John F. Kennedy in the 1960 presidential election; the 1970 wave indicates votes cast for the 1972 Richard Nixon, George McGovern election; the 1980 collection point reference votes cast in the Ronald Reagan, Jimmy Carter presidential race; 1990 is votes for 1992 race between

George H. W. Bush and Bill Clinton; and 2000 reflects votes for George W. Bush and Al Gore. The total number of votes at the county level is logged given its skewed distribution.

Covariates

I also incorporate control measures derived from the National Consortium on Violence Research project and its supplemented version (Messner et al. 2000; McVeigh et al. 2014). Covariates include a logged measure of total population and median age, which have been used in extant research investigating Klan outcomes (McVeigh et al. 2014; McVeigh and Cunningham 2012). Additionally, I include each county's percentage of black residents, which represents a crude measure of racial segregation. Unfortunately, data are not available to calculate dissimilarity indices for counties in the earlier years of this analysis. I also include a measure the percentage of the female population of childbearing age (15 to 44) for nonwhites and whites, which should factor into "risk" of giving birth, and hence, partly explain infant mortality. The percentage of the female population of childbearing age comes from the Natality and Mortality detail file (Bailey et al. 2016). Finally, I include a dichotomous variable in each multivariate model that indicates whether observations derive from the latter data collection point (e.g., 1970=1; 1960=0) to ensure that patterns are not simply a reflection of fluctuating infant mortality rates unrelated to Klan mobilization.

Analytic Strategy

The primary analyses utilize fixed-effects regressions to analyze the influence of Klan mobilization on white and nonwhite infant mortality at the county level for multiple time spans: 1960 to 1970, 1960 to 1980, 1960 to 1990, and 1960 to 2000. Analyzing multiple time spans first assesses whether or not the Klan influenced nonwhite and white infant mortality, and if so, whether the influence endured. The fixed effects design explicitly allows for the modeling of

change occurring in the dependent variable within the same unit across time (Allison 2005). A strength of fixed-effects modeling is that it controls for all constant but unmeasured heterogeneity across cases (Allison 2005). Hence, each regression model utilizes data collected at two points in time—one collected before the Klan emerged prominently (e.g., 1960), and one collected after the general decline of Klan mobilization (e.g., 1970). In this estimation, the coefficient for Klan mobilization will represent the change in infant mortality rates specifically attributable to Klan activism. The fixed effects strategy used in this paper is consistent with research examining the outcomes of Klan mobilization across time (McVeigh et al. 2014; McVeigh and Cunningham 2012).

RESULTS

Multivariate Results

Table 2 shows stepwise multivariate models estimating change in infant mortality for nonwhites and whites across counties in ten southern states where the Klan made a concerted effort to mobilize between 1960 and 1970. Stepwise models are useful for presented fixed effects models given that formal tests of mediation typically used in Ordinary Least Squares regressions do not operate similarly in these models. Sample sizes change across models due to counties meeting or failing to meet at least one of two conditions for inclusion: having a population of 10,000 people or 10 percent of the population being nonwhite. Model 1a shows that nonwhite infant mortality grew by approximately 3.28 (*SE*=1.85) in counties that experienced Klan mobilization; adjacent counties were also impacted. Counties that experienced adjacent Klan presence experienced an average increase of 3.19 more nonwhite infant deaths per 1,000 live births (*SE*=1.90). The county-year dummy variable indicates that nonwhite infant mortality

declined by approximately 16.70 between 1960 and 1970 (*SE*=1.52). Model 2a shows that the introduction of political and socioeconomic resources does not alter the substantive impact of Klan presence on nonwhite infant mortality. In Model 2a, Klan presence and adjacent Klan presence are still associated with average increases in nonwhite infant mortality by 3.13 (*SE*=1.87) and 3.43 (*SE*=1.92), respectively.

Model 3a introduces the full model estimating nonwhite infant mortality. Counties that experience Klan presence between 1960 and 1970 experienced an increase in their nonwhite infant mortality by 3.87 nonwhite infant deaths per 1,000 live births (*SE*=1.89) controlling for covariates. Counties without a Klan chapter were also affected. The nonwhite infant mortality rate in counties with an adjacent Klan chapter had on average of 4 more infant deaths per 1,000 live births between 1960 and 1970 (*b*=4.09; *SE*=1.95). Median age and the dummy county-year indicator showed significant association with nonwhite infant mortality. A unit increase in the median age between 1960 and 1970 was associated with a decline in infant mortality for nonwhites (*b*=−1.16; *SE*=.41). The period indicator showed that nonwhite infant mortality generally declined between 1960 and 1970 after controlling for covariates (*b*=−13.98; *SE*=2.19).

Models 1b through 3b estimate change in white infant mortality between 1960 and 1970. Adjacent Klan presence was associated with an increase in the white infant mortality rate by 2.10 (*SE*=1.12). The county-year measure shows that white infant mortality generally declined between 1960 and 1970 (*b*=−3.27; *SE*=.89). Model 2b shows that adjacent presence impact is robust to the introduction of political and socioeconomic resources; adjacent presence remained associated with average increases in white infant mortality by approximately 2.32 (*SE*=1.12). Additionally, a unit increase in the unemployment rate was associated with a small decrease in white infant mortality by .36 (*SE*=.22). Model 3b incorporates that full model. Counties that had

an adjacent Klan chapter averaged an increase of 2.31 more white infant deaths per 1,000 live births between 1960 and 1970 controlling for covariates (*SE*=1.13). Model 3b also shows that the increases in the unemployment rate was associated with average decreases in white infant mortality by .37 (SE=.22). Similar to the nonwhite infant mortality rate, the white infant mortality rate on average declined between 1960 and 1970 (*b*=−5.07; *SE*=1.26).

Table 3 shows stepwise models estimating change in infant mortality for nonwhites and whites between 1960 and 1980. Model 1a in Table 4 shows that counties with Klan chapters had an average growth of 3.76 more nonwhite infant deaths per 1,000 live births between 1960 and 1980 (*SE*=1.86). Klan-adjacent counties also showed an average growth in nonwhite infant mortality of 4.46 between 1960 and 1980 (*SE*=1.90). The county-year variable shows that nonwhite infant mortality declined between 1960 and 1980 by 30.87 (*SE*=1.51). Model 2a introduces county-level resources. Resources dampen the impact of Klan presence on nonwhite infant mortality slightly (*b*=3.49; *SE*=1.88). However, adjacent presence was associated with an average increase in nonwhite infant mortality by 4.66 (*SE*=1.94). Model 2a also shows that increases in the total number of votes cast was associated with a decline in the nonwhite infant mortality by 3.37 (*SE*=1.88). Additionally, nonwhite infant mortality on average decreased between 1960 and 1980 (*b*=−26.95; *SE*=2.26). Model 3a shows that Klan presence was associated with 3.86 more nonwhite infant deaths per 1,000 live births between 1960 and 1980 (*SE*=1.90). Similarly, adjacent-Klan presence increased nonwhite infant mortality by 4.66 nonwhite infant deaths between 1960 and 1980 (*SE*=1.95). Counties with a growth in median age showed average decreases in nonwhite infant mortality rates (*b*=−.57; *SE*=.29). The average nonwhite infant mortality rate also declined considerably between 1960 and 1980 (*b*=−25.54; *SE*=7.36).

Table 2. Change in Infant Mortality Rates for Nonwhites and Whites across Counties in Ten Former Confederate States where the Civil Rights Era Ku Klux Klan Made a Concerted Effort to Mobilize, 1960–1970.

	1960 to 1970					
	Nonwhites			Whites		
Variables	Model 1a	Model 2a	Model 3a	Model 1b	Model 2b	Model 3b
Ku Klux Klan Mobilization						
Klan presence, 1964–1966 (1=yes)	3.28†	3.13†	3.87*	0.62	0.56	0.58
	(1.85)	(1.87)	(1.89)	(1.08)	(1.09)	(1.10)
Klan presence in an adjacent county, 1964–1966 (1=yes)	3.19†	3.43†	4.09*	2.10†	2.32*	2.31*
	(1.90)	(1.92)	(1.94)	(1.12)	(1.12)	(1.13)
Political and Socioeconomic Resources						
Total votes cast in most recent election (log)	—	2.09	1.53	—	−0.67	−0.29
		(2.25)	(2.45)		(1.31)	(1.44)
Percent population with a college degree	—	−0.01	0.01	—	−0.11	−0.13
		(0.21)	(0.21)		(0.12)	(0.13)
Percent home ownership	—	−0.23	−0.22	—	−0.12	−0.11
		(0.16)	(0.18)		(0.10)	(0.11)
Percent unemployed	—	0.21	0.17	—	−0.36†	−0.37†
		(0.37)	(0.37)		(0.22)	(0.22)
Covariates						
Total population (log)	—	—	−5.30	—	—	−1.21
			(4.89)			(2.88)
Percent population, female, 15–44	—	—	−0.92	—	—	−0.70
			(0.66)			(0.47)
Percent population black	—	—	−0.27	—	—	−0.05
			(0.27)			(0.18)
Median age	—	—	−1.16**	—	—	−0.24
			(0.41)			(0.26)
County-year from latter decade (1=yes)	−16.70***	−15.80***	−13.98***	−6.27***	−5.42***	−5.07***
	(1.52)	(2.09)	(2.19)	(0.89)	(1.22)	(1.26)
Observations	1,508	1,508	1,508	1,508	1,508	1,508

Note: Fixed-effects estimates. Standard errors in parentheses. County-year from latter decade controls for the temporal change in infant mortality rates that is unrelated to variables in the model.

†$p < .10$. *$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed tests).

Table 3. Change in Infant Mortality Rates for Nonwhites and Whites across Counties in Ten Former Confederate States where the Civil Rights Era Ku Klux Klan Made a Concerted Effort to Mobilize, 1960–1980.

	1960 to 1980					
	Nonwhites			Whites		
Variables	Model 1a	Model 2a	Model 3a	Model 1b	Model 2b	Model 3b
Ku Klux Klan Mobilization						
Klan presence, 1964–1966 (1=yes)	3.76*	3.49†	3.86*	1.29	0.99	0.90
	(1.85)	(1.88)	(1.90)	(0.98)	(0.99)	(1.00)
Klan presence in an adjacent county, 1964–1966 (1=yes)	4.46*	4.66*	4.90*	1.71†	1.53	1.55
	(1.90)	(1.94)	(1.95)	(1.00)	(1.02)	(1.02)
Political and Socioeconomic Resources						
Total votes cast in most recent election (log)	—	−3.37†	−2.77	—	−0.08	0.31
		(1.97)	(2.26)		(1.04)	(1.19)
Percent population with a college degree	—	−0.19	−0.17	—	−0.16†	−0.16†
		(0.17)	(0.17)		(0.09)	(0.09)
Percent home ownership	—	−0.08	−0.03	—	0.00	−0.00
		(0.09)	(0.11)		(0.05)	(0.06)
Percent unemployed	—	−0.08	−0.10	—	−0.43*	−0.49**
		(0.32)	(0.33)		(0.17)	(0.18)
Covariates						
Total population (log)	—	—	−0.99	—	—	−1.11
			(3.05)			(1.62)
Percent population, female, 15–44	—	—	0.01	—	—	0.39
			(0.48)			(0.28)
Percent population black	—	—	0.02	—	—	0.12
			(0.15)			(0.09)
Median age	—	—	−0.57*	—	—	0.27
			(0.29)			(0.18)
County-year from latter decade (1=yes)	−30.87***	−26.95***	−25.54***	−14.40***	−13.19***	−14.36***
	(1.51)	(2.26)	(7.36)	(0.89)	(1.19)	(1.43)
Observations	1,528	1,528	1,528	1,528	1,528	1,528

Note: Fixed-effects estimates. Standard errors in parentheses. County-year from latter decade controls for the temporal change in infant mortality rates that is unrelated to variables in the model.

†$p < .10$. *$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed tests).

Models 1b, 2b, and 3b in Table 4 estimates change in white infant mortality between 1960 and 1980. The association between adjacent-Klan presence and white infant mortality rates was positive between 1960 and 1980 (Model 1b; *b*=1.71; *SE*=1.00). The county-year measure across Models 1b through 3b shows that white infant mortality declined across time (Model 1b [*b*=−14.40; *SE*=.89]; Model 2b [*b*=−13.19; *SE*=1.19]; Model 3b [*b*=−14.36; *SE*=1.43]). Models 2b and 3b show that unit increases in the percent of the population with a college degree was associated with a decline in the white infant mortality rate by .16 (*SE*=.09). White infant mortality rates generally declined in counties that experienced an increase in unemployment between 1960 and 1980 (Model 2b [*b*=−.43; *SE*=.17]; Model 3b [*b*=−.49; *SE*=.18]).

Table 4 shows change in nonwhite and white infant mortality between 1960 and 1990. In Models 1a through 3a, Klan presence is not significantly associated with nonwhite infant mortality though nonwhite infant mortality tends to decline between these two time points (Model 1b [*b*=−33.65; *SE*=1.37]; Model 2b [*b*=−31.22; *SE*=2.18]; Model 3b [*b*=−31.29; *SE*=2.90]). Model 2a shows that adjacent-presence is associated with an increase in nonwhite infant mortality by 2.95 (*SE*=1.75). Model 3a shows that the significant association between adjacent-Klan presence and nonwhite infant mortality rates disappears after introducing controls. One factor that might explain the elimination of the Klan impact is the growth in voting. Increases in the total votes cast in the most recent election was associated with a substantial reduction in nonwhite infant mortality (*b*=−4.55; *SE*=1.94). Additionally, counties that experienced an increase in the nonwhite female population of childbearing age generally showed worse nonwhite infant mortality rates in 1990 compared to 1960 (*b*=.85; *SE*=.30). Lastly, nonwhite infant mortality rates on average declined when a county's median age increased between 1960 and 1990 (*b*=−.57; *SE*=.22)

Table 4. Change in Infant Mortality Rates for Nonwhites and Whites across Counties in Ten Former Confederate States where the Civil Rights Era Ku Klux Klan Made a Concerted Effort to Mobilize, 1960–1990.

	1960 to 1990					
	Nonwhites			Whites		
Variables	Model 1a	Model 2a	Model 3a	Model 1b	Model 2b	Model 3b
Ku Klux Klan Mobilization						
Klan presence, 1964–1966 (1=yes)	2.13	2.33	2.05	0.37	0.11	0.16
	(1.67)	(1.70)	(1.72)	(0.95)	(0.96)	(0.97)
Klan presence in an adjacent county, 1964–1966 (1=yes)	2.69	2.95†	2.35	1.65†	1.56	1.66†
	(1.90)	(1.75)	(1.76)	(0.97)	(0.98)	(0.99)
Political and Socioeconomic Resources						
Total votes cast in most recent election (log)	—	−2.73†	−4.55*	—	−1.73*	−1.27
		(1.44)	(1.94)		(0.81)	(1.10)
Percent population with a college degree	—	0.03	0.02	—	−0.13*	−0.14*
		(0.10)	(0.10)		(0.06)	(0.06)
Percent home ownership	—	0.02	0.10	—	0.04	0.02
		(0.07)	(0.09)		(0.04)	(0.05)
Percent unemployed	—	−0.18	−0.21	—	−0.29*	−0.33*
		(0.24)	(0.26)		(0.14)	(0.15)
Covariates						
Total population (log)	—	—	1.57	—	—	−1.32
			(2.34)			(1.33)
Percent population, female, 15–44	—	—	0.85**	—	—	0.30
			(0.30)			(0.23)
Percent population black	—	—	−0.06	—	—	0.01
			(0.10)			(0.06)
Median age	—	—	−0.57*	—	—	0.01
			(0.22)			(0.15)
County-year from latter decade (1=yes)	−33.65***	−31.22***	−31.29***	−14.40***	−13.78***	−14.17***
	(1.37)	(2.18)	(2.90)	(0.89)	(1.23)	(1.61)
Observations	1,456	1,456	1,456	1,456	1,456	1,456

Note: Fixed-effects estimates. Standard errors in parentheses. County-year from latter decade controls for the temporal change in infant mortality rates that is unrelated to variables in the model.

†$p < .10$. *$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed tests).

Table 5. Change in Infant Mortality Rates for Nonwhites and Whites across Counties in Ten Former Confederate States where the Civil Rights Era Ku Klux Klan Made a Concerted Effort to Mobilize, 1960–2000.

	1960 to 2000					
	Nonwhites			Whites		
Variables	Model 1a	Model 2a	Model 3a	Model 1b	Model 2b	Model 3b
Ku Klux Klan Mobilization						
Klan presence, 1964–1966 (1=yes)	1.82	1.80	1.90	−0.64	−0.59	−0.65
	(1.79)	(1.70)	(1.82)	(0.92)	(0.93)	(0.94)
Klan presence in an adjacent county, 1964–1966 (1=yes)	3.09†	3.71*	3.36†	1.68†	1.78†	1.75†
	(1.84)	(1.86)	(1.86)	(0.94)	(0.96)	(0.96)
Political and Socioeconomic Resources						
Total votes cast in most recent election (log)	—	−2.52†	−2.21	—	−0.61	−0.78
		(1.52)	(1.67)		(0.78)	(0.87)
Percent population with a college degree	—	0.07	0.03	—	0.00	0.00
		(0.12)	(0.13)		(0.06)	(0.06)
Percent home ownership	—	−0.13	−0.06	—	−0.01	−0.04
		(0.07)	(0.09)		(0.04)	(0.05)
Percent unemployed	—	−0.06	−0.18	—	−0.05	−0.02
		(0.23)	(0.24)		(0.12)	(0.12)
Covariates						
Total population (log)	—	—	−1.18	—	—	−0.04
			(0.85)			(0.43)
Percent population, female, 15–44	—	—	0.50*	—	—	−0.04
			(0.25)			(0.21)
Percent population black	—	—	−0.11	—	—	−0.03
			(0.08)			(0.05)
Median age	—	—	−0.56**	—	—	0.07
			(0.21)			(0.13)
County-year from latter decade (1=yes)	−37.37***	−33.01***	−30.48***	−18.03***	−13.78***	−17.36***
	(1.46)	(2.18)	(3.25)	(0.75)	(1.23)	(1.69)
Observations	1,532	1,532	1,532	1,532	1,532	1,532

Note: Fixed-effects estimates. Standard errors in parentheses. County-year from latter decade controls for the temporal change in infant mortality rates that is unrelated to variables in the model.

†$p < .10$. *$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed tests).

Table 4 also shows change in white infant mortality between 1960 and 1990. For whites, the relationship between adjacent-Klan presence and infant mortality patterns returned between 1960 and 1990. Counties with adjacent-Klan presence had an average increase of 1.66 in their white infant mortality rates (*SE*=.99). In addition, an increase in the percentage of the population with a college degree was associated with a decline in white infant mortality between 1960 and 1990 (Model 2b [*b*=−.13; *SE*=.06]; Model 3b [*b*=−.14; *SE*=.06]). Model 3b also shows that growth in the unemployment rate was associated with a .33 reduction in the white infant mortality rate (*SE*=.15). White infant mortality on average declined between 1960 and 1990 (Model 1b [*b*=−14.40; *SE*=.89]; Model 2b [*b*=−13.78; *SE*=1.23]; Model 3b [*b*=−14.17; *SE*=1.61]).

Models 1a through 3b in Table 5 estimate change in nonwhite and white infant mortality between 1960 and 2000. Models 1a, 2a, and 3a shows that adjacent-Klan presence has a positive relationship with nonwhite infant mortality between 1960 and 2000 (Model 1a [*b*=3.09; *SE*=1.84]; Model 2a [*b*=3.71; *SE*=1.86]; Model 3a [*b*=3.36; *SE*=1.86]). Model 3a indicates that counties with growth in the percent of the population, female, aged 15-44 was associated with an increase in the nonwhite infant mortality rate (*b*=.50; *SE*=.25). Consistent across models, nonwhite infant mortality declines across time (Model 1a [*b*=−37.37; *SE*=1.46]; Model 2a [*b*=−33.01; *SE*=2.18]; Model 3a [*b*=−30.48; *SE*=3.25]). Furthermore, Models 1b, 2b, and 3b display results for white infant mortality rates. Adjacent-Klan present counties showed an increase of approximately 2 white infant deaths per 1,000 live births between 1960 and 2000 (Model 1b [*b*=1.68; *SE*=.94]; Model 2b [*b*=1.78; *SE*=.96]; Model 3b [*b*=1.75; *SE*=.96]). White infant mortality rates declines by approximately 17 infant deaths per 1,000 live births between 1960 and 2000 (*b*=−17.36; *SE*=1.69).

DISCUSSION

Guided by insights provided by the stress process and cumulative inequality frameworks, the present study examined county-level longitudinal data from ten southern states to determine the degree to which civil rights era Klan mobilization was associated with white and nonwhite infant mortality rates across time. The first hypothesis proposed that Klan presence would be associated with greater increases in infant mortality for nonwhites than whites. Findings supported this hypothesis. Between 1960 and 1970, Klan presence was associated with significant increases in nonwhite infant mortality. Most notably, the effect size is considerable with an average increase of 4 more nonwhite infant deaths per 1,000 live births for Klan-present counties. Furthermore, Klan presence did not exhibit a similar significant impact on white infant mortality in any of the models. Consistent with foregoing research, while the civil rights era Klan did not succeed in maintaining Jim Crow, it did shape immediate and long-term racial inequities (see Cunningham 2012; McVeigh and Cunningham 2012; McVeigh et al. 2014). In this case, the Klan played a central role in exacerbating racial disparities in infant mortality rates across southern counties.

In addition to testing the relationship in hypothesis 1, I carefully examined how long in a forty-year period the relationship exists. Counties with a Klan had an average growth of 4 more infant deaths per 1,000 live births from 1960 to 1980. This finding indicates a long-term health consequence associated with Klan mobilization. One possible explanation for the effect lasting across time is that neighborhood context is consequential across generations. Sharkey (2008) has shown that intergenerational transmission of social context is particularly strong for black Americans. Among children born in the poorest U.S. neighborhoods, 70 percent of black Americans were still living in poor neighborhoods as adults compared to 40 percent of white

adults. Consistent with this finding, Crowder, South, and Chavez (2006) argue that blacks have less extraction and use of their economic, educational, and social resources from their neighborhood.

Adjacent Klan presence also related to increases in nonwhite infant mortality for 1970, 1980 and 2000-decade comparisons. The change from 1960 to 1980 was 5. In other words, having a Klan chapter in a neighboring county seems to be harmful for nonwhites across multiple decades. Likewise, white infant mortality increased in every decade comparison for adjacent Klan presence. Hence, having a neighboring county with Klan mobilization affects health patterns in nearby counties for both whites and nonwhites.

To make sense of these findings recall what the stress process model would expect. The Klan represents an unpredictable and uncontrollable stressor in one's environment (Pearlin 1989). The Klan, as an environmental stressor, or as Campbell (1983) referred, an ambient stressor, shapes health differentially based on the availability of resources that could dampen its effect. The primary target of the civil rights era Klan's efforts was black Americans, and the Klan deleteriously influenced black American neighborhoods through terrorism (e.g., bombings, cross burnings, public marches) (McVeigh and Estep 2019; Owens et al. 2015). Each Klan chapter across the South had its own "wrecking crew"—groups of Klansmen held in high esteem that were responsible for violent missions like murders, bombings, mutilations, whippings, and abductions (McVeigh and Estep 2019). Recall too, that the Klan became so violent and disruptive that the FBI eventually intervened. The threat of and the actual experiencing of violence by the Klan is understood as a stressful experience that results in elevated stress, poorer natal experiences, and higher infant mortality rates particularly for the group most targeted—black Americans. This explanation is consistent with research that demonstrates that

communities—and particularly their cues related to social and physical disorder—affect health through fear and stress-related responses (Ford and Rechel 2012; Ross and Jang 2000; Ross and Mirowsky 2009). Exposure to violent behavior is associated with individuals' health (Boynton-Jarrett et al. 2012; Ford and Browning 2014; Sternthal et al. 2010).

Although the present study has not examined infant mortality rates by ethnicity, there is tangentially applicable research that suggests, for instance, that infant mortality for Muslim and Arab Americans grew significantly following September 11 due to increasingly hostile treatment and discrimination directed toward this group. Although white supremacy is certainly ubiquitous across the United States with or without the Klan, it could be that Klan presence indicates an area much more hostile toward nonwhites leading to worse health outcomes. Furthermore, research from Ross and Mirowsky (2009:59) offers insight into the adjacent presence findings. The authors showed that while personal victimization (e.g., being robbed or harassed) increases with perceptions of neighborhood disorder, victimization is not the major link to poor health outcomes; instead, threat implied by neighborhood disorder results in greater distress even when not realized in personal victimization. Hence, the constant threat posed by an adjacent-residing Klan may increase distress.

Further clarification of the findings presented here comes from Krieger's (2001, 2012) ecosocial theory of racism and health and Geronimus' (1992, 2006, 2013) weathering hypothesis. Krieger's ecosocial theory of racism and health aids in theorizing health disadvantages experienced by marginalized populations. Krieger (2012) notes that populations embody the types and degrees of inequality they experience. In other words, discrimination structures exposure to both health promoting and health disadvantaging risks and resources. Thus, Klan mobilization alters health patterns by structuring exposure to risk and resources.

Additionally, Geronimus' weathering hypothesis (1992, 2006, 2013) provides theoretical insight to explain how racism-related experiences—such as residing near an active white supremacist organization—can impact racial/ethnic health disparities. The weathering hypothesis proposes at the cumulative effects of sustained disadvantaged and repeated exposure to racial bias wears on the physiological systems of racial/ethnic minorities resulting in adverse health and earlier onset of chronic disease. Geronimus (2013) notes that poor maternal health is the first socially patterned vulnerability that infants born to black mothers will experience. Weathering posits that stressors experienced during pregnancy represent the starting point for children's' health (Geronimus 2013); disparate starting points places children on different health trajectories. Living near a Klan chapter may lead to poorer health because of repeated exposure to violent racial bias.

Extant research investigating the consequences of Klan mobilization also offers insight to the patterns observed here. Research has shown that Klan mobilization was associated with two significant legacies: increases in violent crime and higher than expected rates of political polarization (Cunningham 2012; McVeigh and Cunningham 2012; McVeigh et al. 2014). Thus, violence lingering long after the Klan declines could lead to long-term health consequences as well. Research shows that exposure to violence is associated with worse health, and particularly, with worse birth outcomes (Collins and David 1997; Messer, Kaufman, Dole, Savitz, Laraia 2006). Secondly, Klan mobilization across the same period I analyze has been shown increase rates of Republicanism (McVeigh et al. 2014). It could be that the generally Republican dominated South operates with smaller social safety nets and spend less on healthcare. Poorer health could consequently linger across multiple decades (Metzl 2019).

For white infant mortality, the pattern is generally stable across time; Klan presence does not significantly alter white infant mortality. For whites, it could be that Klan presence is relatively unimportant because other whites are not the target of the Klan's efforts, and that the existence of chapters provides a sense of well-being, safety, and security. Additionally, the normalization of Klan mobilization in some communities may have made it less impactful. The House Committee records (1966) used to quantify Klan presence show that many Klan chapters were fraternal organization, social clubs, or fishing groups that were a part of functioning communities. In fact, many local officials, according to the work of David Cunningham (2012:231), thought of Klan mobilization as nothing since "cross burnings were not hurting anyone." Hence, they did not have a significant effect on whites' infant mortality patterns.

Adjacent-Klan presence is detrimental for both nonwhite and white infant mortality rates. Counties with a Klan chapter across their neighboring boundary had an average increase of 5 more nonwhite infant deaths and 2 more white infant deaths per 1,000 live births. There are at least two explanations for higher infant mortality among whites in adjacent counties. First, Klan mobilization may have increased distress among noncommittal whites and worsened health given the intimidation and violence perpetrated by the organization. Second, the entrenchment of white supremacy in adjacent counties leads to greater opposition among whites to health enhancing social policy given that the perception among typical whites is that groups deemed undeserving will also benefit. The likelihood that residents in a county with adjacent Klan presence were exposed to the Klan would be higher than counties without a bordering Klan even though a county did not host its own Klan chapter (Cunningham 2012; McVeigh et al. 2014; Owens et al. 2015). The Klan operated in the cover of darkness and this is evident in their known as the invisible empire. Counties that did not themselves have a Klan chapter but that were

connected to one that did may have experienced a prolonged heightened sense of vigilance leading to poorer natal experiences, and ultimately, worse health outcomes. Additionally, the entrenchment of white supremacy in adjacent counties may lead whites to support conservative social policy which directly harms lower and middle-income whites (Metzl 2019). Consistent with the *Dying of Whiteness* thesis, whites tend to oppose health enhancing policy altogether if it means groups perceived as undeserving will likewise benefit from a given policy (Metzl 2019). The work of Quadagno (1994; 2010; 2012) is also informative here. Social policy intended to benefit health is racialized and consequently opposed by typical white Americans.

Limitations and Extensions

Although this study has offered several unique contributions, it is not without limitations. First, although analyses use data collected before and after Klan mobilization, the analyses do not infer causality. Given that areas with histories of racialized violence dating back to reconstruction tended to be places where the Klan mobilized during the civil rights era (Owens et al. 2015), it could be that areas with worse health tended to be where the Klan organized. While the analyses used here include covariates that control for selection into the sample, the data do not have a full battery of racial violence. However, it should be noted that infant mortality measured in 1960 is not significantly associated with Klan mobilization. Thus, worse infant mortality rates are at least partly a factor of Klan mobilization rather than the Klan tending to operate in places with worse infant mortality.

Second, data are generally not available for geospatial measures of availability of advancements in medical technology through the latter 20th century or medical facilities in general. Given that healthcare is an important part of infant mortality patterns, including these measures may complicate the story presented. The Klan's efforts to maintain Jim Crow segregation and its concomitant inequitable distribution of resources meant that blacks and other

racial-ethnic minorities were generally subject to worse healthcare providers or precluded them from uses healthcare services at all. Including measures of medical facilities may indeed complicate the story, but it would likely not eliminate the Klan's influence on infant mortality. If anything, it may provide an additional indirect path for the Klan's impact.

CONCLUSION

This study found that civil rights era Ku Klux Klan mobilization is associated with increases in nonwhite infant mortality rates, a commonly used indicator of a population's health (Matoba and Collins 2017; Wise and Pursley 1992). Klan mobilization offers an alternative explanation for the higher prevalence of infant mortality among black Americans, among residents of the U.S. South, and among those with low socioeconomic standing (see Novak, Geronimus, and Martinez-Cardoso 2017; Bor et al. 2018). While much empirical work has documented disparities in birth outcomes, less scholarship has explained mechanisms that produce such disparities (see Giurgescu et al. 2011; Gortmaker and Wise 1997). The findings presented here suggest that community context is important for the confluence of race, socioeconomic status, and region on birth outcomes. Finally, this study adds to a growing research tradition identifying outcomes associated with social movements (Bosi and Giugni 2004; Giugni 1998, 2004, 2007, 2008; King and Pearce 2010; Kutz-Flamenbaum 2016). This paper showed that social movements can impact the health of surrounding communities. In other words, adverse health can be an unintended outcome of social movements.

Improving understanding of the social determinants of birth outcomes will aid in improving health disparities as well as increase the knowledge base needed to redirect practical interventions. Some groups experience higher rates of poor outcomes than others (Giurgescu et

al. 2011; Gortmaker and Wise 1997; Matoba and Collins 2017), and the disparities in health outcomes can contribute to enduring impacts on broader systems of inequality. Black infants have on average twice the risk of death as white infants, and these disproportionate losses adversely influence family members' mental, physical, and economic well-being (Geronimus 1996; MacDorman and Kirmeyer 2009; Torche 2011). The intergenerational transfer of poor birth outcomes is also documented in the literature and could put families at a cumulative disadvantage for a range of outcomes such as health problems and lower SES (Conley and Bennett 2000, 2001; Kuzawa and Sweet 2009; Madigan et al. 2017; Saigal et al. 2016; Van Lieshout et al. 2015). In other words, addressing current birth disparities will be beneficial now and will alleviate cumulative and detrimental effects in the future.

In sum, civil rights era Klan mobilization influenced communities' health decades after its decline, and these findings have implications for the current sociopolitical climate. According to the Southern Poverty Law Center (2018), there were over 1,000 hate groups active in the U.S. in 2018. The findings presented here suggest that white domestic terrorism is a public health issue with potentially large consequences particularly for racial health disparities. Ultimately, the real and symbolic violence enacted by hate group organizations carries short and long-term health consequences. Actively policing domestic terror organizations should be a priority for federal and local officials.

CHAPTER III

PAPER TWO: PUBLIC CONFEDERATE MONUMENTS AND RACIAL VARIATION IN MENTAL HEALTH

ABSTRACT

Black Americans typically have better or similar mental health profiles as white Americans despite disproportionate exposure to health-harming stressors. Paper Two uses elements of the stress process model to extend research on the black-white mental health paradox by examining the relationship between the presence of public Confederate monuments in states and the mental health of black and white residents. Data are merged from a novel census of Confederate monuments collected by the Southern Poverty Law Center and the 2015 Behavioral Risk Factor Surveillance System (*n*=281,587). This study incorporates five measures of mental health—mentally unhealthy days in the past month, frequent mental distress, clinical depression, chronic heavy alcohol consumption, and binge drinking behavior. First, consistent with the black-white mental health paradox, generalized linear models show that black Americans report fewer days of poor mental health and lower probabilities of frequent psychological distress, clinical depression, heavy drinking, and binge drinking compared to white Americans. Second, predictions estimated from multivariable models show that the mental health advantage in heavy drinking experienced by black Americans over white Americans is eliminated in states with a greater number of public Confederate monuments. Results highlight the importance of using multiple measures of mental health, critically investigating the stress universe, and discerning the health harming effects of white supremacy.

INTRODUCTION

Black Americans generally report better or similar mental health profiles as white Americans despite disproportionate exposure to health-harming stressors (Erving, Thomas, and Frazier 2019; Erving and Thomas 2018; Hearne and Christie-Mizell 2018; Hughes and Demo 1989; Hughes and Thomas 1998; Keyes 2007; Louie and Wheaton 2019; Vega and Rumbaut 1991). While research has extensively documented the black-white mental health paradox, much of the literature examines mental health differences using single measures (Riolo et al. 2005; Rodriquez et al. 2017; Williams et al. 2007). Additionally, the research literature has historically focused on the role of social stressors unique to privileged groups (Williams 2018) while primarily controlling for risk factors that predict racial variation in mental health (e.g., poverty, unemployment, and racial discrimination). Less often considered in explaining racial differences in mental health is the role of ecological context that individuals navigate on a daily basis. The present study examines the association between one element of the ecological context—the presence of public Confederate monuments—and the black-white mental health paradox.

In 2019, over 1,700 Confederate monuments occupied public spaces in twenty-three U.S. states and the District of Columbia, a decline from thirty-one states prior to the 2015 Charleston shooting (Southern Poverty Law Center [SPLC] 2019). The Charleston shooting in June 2015 that left nine black church members dead brought national attention to the Confederate flag flying at the South Carolina capitol and rapidly increased public awareness of Confederate monuments across the nation. Confederate monuments—statues, flags, holidays, or the commemorative naming of parks, streets, or schools in recognition of the short-lived Confederacy—symbolize reverence for Confederate generals, officials, and the Confederacy's "lost cause" (Blight 2001; Coski 2005; Equal Justice Initiative [EJI] 2018; SPLC 2019).

Research has documented how race and white supremacy tie to Confederate symbols (see Ehrlinger et al. 2011; SPLC 2019; Strother et al. 2017; Talbert 2017; Talbert and Patterson 2020). However, less scholarship has examined whether Confederate monuments are consequential for communities that encounter them regularly. Research in this domain is needed considering the steep public investment in preserving Confederate monuments—$40 million between 2008 and 2018 (Palmer and Wessler 2018)—as well as the life or death consequences sometimes tied to such symbols (e.g., Charleston and Charlottesville).

This study offers three contributions to the research literature by merging research from two lines of inquiry—the sociology of mental health and sociology of culture. First, this study offers a more holistic and updated depiction of the black-white mental health paradox by examining five indicators of mental health. In doing so, this paper extends beyond potential misclassification concerns and allows mental health problems to manifest via internalization, externalization, and subjective appraisal (see Brown 2003, 2008; Horwitz 2002; Turner 2013; Wheaton 2001). Second, this study expands the stress universe to examine the mental health consequences of residence in spaces occupied by public Confederate monuments (Wheaton 1994). Studies have documented stark differences in support for Confederate symbols by race-ethnicity (Talbert 2017; Talbert and Patterson 2020) as well as the harmful health effects of residing in areas dominated by racial resentment (Chae et al. 2015; Lee et al. 2015; Leitner et al. 2016; Metzl 2019). Yet, inadequate research attention has linked these literatures by documenting the mental health consequences of racialized stressors such as Confederate monuments (see Williams 2018). Monuments will likely impact mental health differently by race given that such markers represent a homage to the Confederacy, its intent to defend slavery, and the persistent narrative reconstruction surrounding the Civil War (Blight 2001; Coski 2005).

Confederate monuments reflect a cultural extension of white supremacy—the instillation of symbols and imagery that oppress, marginalize, and debase black Americans (Williams, Lawrence, and Davis 2019). A third contribution from this study is its careful consideration of within group variation in mental health among black and white Americans. Research often focuses solely on mental health patterns between black and whites without also considering differences among these groups. In the next section, I detail the theoretical framework used for this study—elements of the stress process model—and its utility to explaining how Confederate monuments might impact mental health by race.

THEORY AND BACKGROUND

Confederate Monuments, the Stress Process, and Ecological Context

Elements of the stress process model guide the present study. The stress process serves as a foundation for research on mental health disparities (Aneshensel 2009; Pearlin et al. 1981; Turner 2013). According to the stress process framework, health disparities arise from one's social context, individual history, and current circumstances. The stress process incorporates three elements: stressors, resources, and outcomes (Dagadu and Christie-Mizell 2014; Pearlin 1989; Thoits 2010). Stressors include events, circumstances, or conditions that can inhibit one's ability to cope with adversity and that vary by severity, chronicity, and timing in the life course (Almeida et al. 2005; Christie-Mizell et al. 2017; Pearlin 1989; Pearlin et al. 1981; Williams, Neighbors, and Jackson 2003; Wheaton 1994). The stress process highlights influence of stressors—the presence of public Confederate monuments—as impactful of mental health. Confederate monuments are markers of white supremacy that can heighten vigilance and increase the sense of danger given the credible potential threat presented by them specifically for

black Americans—the historical and continued target of monument dedication and defense (Blight 2001; EJI 2018; SPLC 2019).

Confederate monuments are a part of the ecological context that residents navigate regularly. While much research links the neighborhood context to mental health outcomes, fewer studies link the broader ecological and community context to mental health problems, which includes where people live, work, play, worship, commute, and study. The ecological context consists of chronic ambient stressors that can impact mental health outcomes (Campbell 1983; Pearlin and Skaff 1996; Pearlin 1999). Monuments represent a potential ambient stressor that can shape mental health patterns. There is reason to expect monuments will impact mental health. Recent studies have also documented that residing in communities with high levels of racial prejudice is associated with an elevated risk of mortality, especially for racial minorities who reside in those communities (Chae et al. 2015; Lee et al. 2015; Leitner et al. 2016). Yet, inadequate research attention has documented the short-term and long-term mental health consequences of residence in hostile environments (Williams 2018).

The association between exposure to Confederate monuments and mental health will likely vary by race because white supremacy is connected to views of Confederate symbols as well as the dedication of Confederate monuments historically (Cooper and Knotts 2006; Pew 2011, 2015; SPLC 2019; see Talbert 2017 for a review). On June 17, 2015, a white gunman opened fire in the Mother Emanuel AME Church in Charleston, South Carolina, leaving nine black churchgoers dead. In the shooting's aftermath, activists and lawmakers called for the removal of South Carolina's Confederate flag, and it was removed a month later. The shooting also brought national attention to the placement of Confederate monuments across the U.S., their legal protection across the South, and their prominence in public spaces across the nation (SPLC

2019). I expect that race will moderate the relationship between monuments and mental health problems. Additionally, consistent with prior research, I incorporate educational attainment and income into this study as socioeconomic resources that can be used to navigate stressors like Confederate monuments. Individuals with greater educational attainment and income levels tend to have more economic and social resources with which to cope successfully (Turner, Wheaton, and Lloyd 1995).

Finally, outcomes are the third component of the stress process model. Outcomes are the function of stressors and the ability for resources to interrupt their harm. Outcomes in this study include internalized mental health problems (i.e., clinical depression and frequent distress), externalized problems (i.e., chronic heavy alcohol consumption and binge drinking), and subjective appraisal (i.e., reported days with poor mental health). Utilizing multiple indicators of mental health is important for two reasons: (1) to overcome potential misclassification problems associated with poor health, and (2) to allow distress to manifest differently across social groups (Brown 2003, 2008; Horwitz 2002; Myers et al. 2015; Turner 2013; Wheaton 2001). Clinical depression is a common mood condition characterized by prolonged symptoms of interrupted sleep or appetite, intractable sadness, and low self-esteem that is diagnosed by a medical professional (World Health Organization [WHO] 2017). In severe cases, depression is associated with increased risk of suicidal ideation, social isolation, and morbidity (WHO 2017). In addition, experiencing frequent mental distress—two weeks or more of poor mental health in the past month—indicates a poor health-related quality of life and is associated with physical inactivity and increased likelihood of chronic physical health conditions (Brown et al. 2003; Strine et al. 2005). Research on alcohol use highlights the importance of using frequency and quantity measures to attain a more complete picture of consumption patterns (Cable and Sacker 2008;

Christie-Mizell and Peralta 2009; Rehm 1998). Excessive drinking includes heavy usage and binge drinking (CDC 2019). Excessive drinking increases the risk of alcohol dependence, certain cancers, and learning and memory problems (WHO 2018; Esser et al. 2014). The next section explains the black-white mental health paradox and explains Confederate monuments as an understudied though important factor.

Race, Stressors, and Mental Health

Research documents that black Americans tend to have better or similar mental health profiles as white Americans despite greater exposure to health harming stressors. Specifically, black Americans generally report lower levels of depression, depressive symptomology, psychiatric illness, and substance use disorders (Barnes and Bates 2017; Christie-Mizell et al. 2019; Hearne and Christie-Mizell 2018; Kessler et al. 1994; Mouzon 2017; Riolo et al. 2005; Turner, Wheaton, and Lloyd 1995; Williams et al. 2007). However, an important caveat is that once diagnosed with a mental health condition, black Americans experience symptoms that are more severe, chronic, and debilitating than conditions for white Americans. Explanations for patterns of mental health differences between blacks and whites have referenced higher levels of psychosocial resources among black Americans (Christie-Mizell and Erickson 2007; Mouzon 2014), greater religious involvement (Mouzon 2017), differences in health behaviors (Jackson, Knight, and Rafferty 2010), differences in clinical diagnoses (Akinhanmi et al. 2018), and lack of culturally relevant mental health queries (Brown 2003, 2008). Furthermore, research has often examined the mental health influence of salient stressors for privileged groups (Williams 2018) to the potential neglect of stressors relevant to marginalized social groups. Research on race-related stressors may inform the black-white mental health paradox more fully.

Williams (2018) notes that racial discrimination is the most commonly studied race-

related stressor. Although testing the association between racial discrimination and mental health is outside the scope of the present study, I rely on insights provided from such research to explain how exposure to Confederate monuments might affect mental health differently by race. Racial discrimination is an example of a stressor that harms mental health (Bennett et al. 2004; Thoits 2010; Christie-Mizell et al. 2017; Colen et al. 2018; Gee 2002; Gee et al. 2007). Given that chronic stressors tend to be stronger predictors of adverse mental health than acute life events (Cohen, Kessler, Gordon 1995), repeated exposure to discrimination is often considered a stronger predictor of worse mental health outcomes than single events. In other words, everyday discrimination is more consistently associated with higher rates of morbidity than acute instances of unfair treatment (Paradies 2006; Williams and Mohammed 2013). Exposure to racial bias tends to increase the number of poor mental health days (Anderson 2013), the likelihood of clinical depression (Brown et al. 2000; Kessler, Mickelson, and Williams 1999), and alcohol consumption among black Americans (Brown and Tooley 1989; Borrell et al. 2010; Hunte and Barry 2012). Furthermore, a recent meta-analysis showed that experiences of racial bias tend to increase alcohol consumption, drinking-related problems, and risk of disorders (Gilbert and Zemore 2016).

Racial inequalities are also deeply embedded within the larger U.S. culture and can impact mental health (Williams and Mohammed 2013). Research has assessed the role of negative stereotypes, hostile treatment, internalized racism, and healthcare bias as cultural extensions of U.S. racism with health implications. Priest and colleagues (2018) showed that racial minorities are negatively stereotyped, and a recent review from Marcelin et al. (2019) contends that negative stereotypes and resultant unconscious bias affects patient-clinician interactions and alters the quality of healthcare. Additionally, events can trigger greater periods

of hostility toward social groups that worsen psychological adjustment. For example, research found that increases in hostility against Arab Americans after the September 11, 2001, terrorist attacks was associated with elevated levels of psychological distress among the targeted population (Padela and Heisler 2010). Finally, populations of color can also internalize racism—accept or endorse negative views about one's group, which represents another way that cultural racism can harm mental health. Kwate and Meyer (2011) argue that endorsing the superiority of whiteness and the devaluation of nonwhite groups can worsen mental health through decreases in self-esteem and positive health behaviors. In the following section, I embed the mental health impact of Confederate monuments within literature on collective memory.

Monuments, Commemoration, and Mental Health

Iconography represents a way that society commemorates people and events (Schwartz 1982). Durkheim (1965) argued that commemoration serves to protect the memory of historical events and to unite social groups around their shared glories. Confederate iconography takes the form of statues, seals, the naming of schools, parks, and streets, as well as public holidays. Confederate monuments extend Wagner-Pacifici and Schwartz's (1991) contention that some symbols and memorials can reflect a group's struggle to identify itself and its past. Historian David Blight (2001:96) writes, "The historical memory of any transforming or controversial event emerges from cultural and political competition, from the choice to confront the past and to debate and manipulate its meaning." Monument dedication began prior to the end of the Civil War; the first monuments were typically modest in structure and expressed personal mourning (Blight 2001). The monuments dedicated in subsequent decades, however, differed in tone, theme, and quantity, which is important in explaining why monuments might impact mental health.

The dedication of Confederate monuments peaked primarily in two periods: during the early 1900s and during the civil rights era (Coski 2005; EJI 2018; Mask 2020; SPLC 2019). Most importantly, the first peak of monument dedication coincided with the installation of Jim Crow laws, and the second peak occurred when black Americans most prominently challenged Jim Crow (Mask 2020). During both peaks, monuments became a major vehicle to reconstructing the narrative around secession and the antebellum South. White southerners installed monuments across the South as part of a concerted effort to redeem their defeat and build support for the reestablishment of white supremacy. Consistent with research on the Vietnam Veterans Memorial (Wagner-Pacifici and Schwartz 1991), the reconstructed narrative shifted attention away from military defeat, and instead celebrated the South's victory over Reconstruction. To this end, monuments commemorate Confederate generals, officials, and most specifically, the "lost cause."

The lost cause is composed of three important elements: (1) "a public memory shaped by organizations, institutions, and rituals; (2) a dimension of southern and American civil religion, rooted in churches and sacred rhetoric as well as secular institutions and thought; (3) and as a literary phenomenon, shaped by journalists and fiction writers" (Blight 2001:102). Taken together, the lost cause is a constructed memory rooted deeply into and most prominently signified by public Confederate monuments. The original commandeers of the lost cause were aging Confederate veterans like former Confederacy President Jefferson Davis; Davis and others were responsible for the creation of veterans organizations, the building of monuments, and the romanticizing of Robert E. Lee (Connelly and Bellows 1995). The lost cause took on national significance as writers and journalists began publishing about Civil War veterans' reunions between the 1880s and 1890s, which celebrated the valor and shared respect of Union and

Confederate soldiers. Consequently, slavery, secession, and racial equality faded from the Civil War narrative and were replaced with memories of a conflict between equally courageous sides composed of white men that shared a national identity (Blight 2001; Connelly and Bellows 1995). The reshaping of collective memory also meant that Confederate monuments received endorsements from outside the South. The North's appeasement of white Southerners included actively funding the creation of a cultural landscape designed to perpetuate white supremacy and the subjugation of black Americans (Blight 2001).

The second peak of monument dedication occurred during the backlash to the civil rights movement. According to a report by the Equal Justice Initiative (2018), at least 1,000 monuments were installed throughout the South by 1950 with more than 300 on courthouse grounds. In fact, every state capitol building in the South had at least one monument to the Confederacy (EJI 2018). In the 1960s, in reaction to the passage of the Civil Rights Act and Voting Rights Act, Texas installed 27 Confederate monuments dedicated to Confederate soldiers who had fought against "the federal enemy." In 1964, Florida joined Georgia and South Carolina in flying the Confederate flag on its courthouse grounds (Blight 2001; Coski 2005). The Confederate battle flag also became a staple at segregationist protests and rallies during the civil rights era. Segregationists displayed Confederate flags when black students attempted to integrate schools and order at segregated lunch counters, and white residents hung Confederate flags along the route of the voting rights march from Selma to Montgomery (EJI 2018).

In subsequent years, Confederate iconography continued to gain traction outside the South. The year after Brown versus Board of Education, Robert E. Lee Elementary School was founded in East Wenatchee, Washington (EJI 2018). Monuments were also installed in Maine, Oregon, and New York among over a dozen other states outside the South. During President

Obama's first term in 2009, a South Dakota police department created an official badge featuring the Confederate flag (EJI 2018). According to historian James Loewen (2019), prior to 2015 more monuments to founder of the Ku Klux Klan, Nathan Bedford Forrest, occupied Tennessee than any other figure including President Andrew Jackson. Monuments are rooted deeply within a reconstructed narrative about slavery, secession, and the lost cause. This racialized narrative is without geographical boundaries and ultimately reflects a subjugation, marginalization, and devaluation of black Americans.

In June 2015, a white supremacist murdered nine black parishioners at the Mother Emmanuel church in Charleston, South Carolina, a site central to the black freedom struggle and located on Calhoun street—named after John C. Calhoun, a Confederate romanticist that argued that slavery was a positive good (Mask 2020). The event, as well as later surfacing pictures of the gunman holding a Confederate flag, brought national attention to the Confederate flag flying at the South Carolina capitol and rapidly increased public awareness of the ubiquity of Confederate monuments across the U.S. landscape. The Charleston shooting is an event—a significant and transformational occurrence (Sewell 1996)—that altered the public's awareness of Confederate monuments, and in some cases, led to the removal of monuments. To put the event into perspective, a study commissioned by the Pew Research Center (2016) demonstrated the exponential increase in conversations about race, racism, and the proper placement of Confederate monuments following Charleston. Over a 14-month span between 2015 and 2016, the most active day on social media discussing race was the day after the church shooting. On that day, there were approximately 4.3 million tweets posted about race, more than double the 2.1 million tweets the day the shooting occurred. The eighth most active day was two days following the Charleston Church shooting (Pew 2016). In sum, the Charleston shooting increased

awareness of public monuments that litter the U.S. landscape.

SUMMARY AND HYPOTHESES

This study relies on tenets of the stress process model to examine the impact of Confederate monument presence on the black-white mental health paradox. The stress process highlights influence of an ambient stressor—the presence of public Confederate monuments in one's ecological context—as impactful of mental health differently by race. Confederate monuments are symbolic homages to white supremacy that can heighten vigilance and increase the sense of danger given the credible potential threat presented by them specifically for black Americans, the historical and continued target of monument dedication and defense (Blight 2001; EJI 2018; SPLC 2019). States provide a theoretically relevant space with which to measure exposure to monuments for two reasons. First, some Confederate monuments can only be identified at the state-level—for instance, opportunities to get a Confederate flag license plate and state holidays celebrating Confederate leaders (e.g., Robert E. Lee day). Second, foregoing research shows that state-level measures strongly map onto racial health inequalities (Chae et al. 2018; Gee and Ford 2011; Lukachko et al. 2014; Wallace et al. 2017). The present study seeks to answer one research question. What is the relationship between the presence of public Confederate monuments and racial variation in mental health? This study tests two hypotheses based on the theoretical framework and expectations offered by the research literature.

Hypothesis 1a–e: Compared to white Americans, black Americans will report fewer (a) mentally unhealthy days and lower likelihoods (b) frequent distress (c) clinical depression, (d) chronic heavy alcohol consumption, and (e) binge drinking behavior.

Hypothesis 2a–e: The presence of Confederate monuments will moderate the relationship

between race and mental health such that at higher monument totals, black Americans will report (a) more mentally unhealthy days and higher probabilities of (b) frequent distress (c) clinical depression, (d) chronic heavy alcohol consumption, and (e) binge drinking behavior compared to whites.

DATA AND METHODS

Data for this study are merged from the Southern Poverty Law Center's ([SPLC] 2019) census of Confederate monuments and the 2015 Behavioral Risk Factor Surveillance System ([BRFSS]; CDC 2015). Following the Charleston shooting, SPLC launched an effort to catalog and map Confederate monuments in public spaces across the nation (SPLC 2019). In researching publicly supported spaces dedicated to the Confederacy or its heroes, SPLC researchers relied on federal, state, and private sources. Each entry was verified by at least one other source. When possible, preference was given to governmental sources over private ones. An important note is that these monuments occupy public property; thus, the true count of Confederate monuments is vastly underestimated in these data. In total, 2,600 markers, battlefields, museums, cemeteries and other places or symbols that are largely historical in nature were excluded as were monuments resting on privately owned property. The distinction is important because monuments on public grounds indicate an implicit support from federal and state governments for Confederate symbolism and its connotations. Given the significance of the 2015 Charleston shooting on awareness of monuments, monument counts are consistent with 2015. Monuments removed prior to 2015 or dedicated after 2015 are excluded from counts.

Survey information comes from the 2015 Behavioral Risk Factor Surveillance System [BRFSS]. The 2015 BRFSS was collected between January 2015 and March 2016. The BRFSS

is a nationally representative, telephone-based, random digit dial survey of non-institutionalized adults in the 50 U.S. states, District of Columbia, Puerto Rico, and Guam. The current study excludes respondents from Puerto Rico and Guam. The BRFSS is intended to represent state-specific data on preventive health practices and risk behaviors that are linked to chronic diseases, injuries, and preventable infectious diseases that affect the adult population (CDC 2015). The BRFSS is the world's largest, on-going telephone health survey system, tracking health conditions and risk behaviors among adults in all 50 states. In the BRFSS, sampling weights adjust for noncoverage and nonresponse and forces the total number of cases to equal population estimates for each geographic region, which for the BRFSS sums to the state population. More information on the BRFSS is available from the Centers for Disease Control website (https://www.cdc.gov/brfss/about/index.htm). To protect the confidentiality of participants, specific variables such as sub state geographic identifiers, detailed race or ethnicity, and age older than 80 years of age in a given year are removed from the BRFSS. The BRFSS is ideal for the present study since it is a large, nationally representative sample of U.S. residents and includes multiple measures of mental health. The listwise sample size for the present study is 281,568 noninstitutionalized U.S. adults.

Measures

This study uses five dependent variables. *Days with poor mental health* is a measure of how many days in the past month respondents felt mentally down, which includes stress, depression, and problems with emotions. Answers are coded as a count ranging from zero to 30. This item has been shown to have a high degree of internal validity, construct validity, criterion-related validity, and test-retest reliability, and is widely used to monitor trends in population mental morbidity (Slabaugh et al. 2017; Bor et al. 2018). The second dependent variable is

frequent mental distress. Respondents experienced *frequent mental distress* if they reported fourteen or more days with poor mental health in the past month (yes=1). This measure is commonly used as an assessment of respondent's health-related quality of life and is correlated with a number of adverse behavioral and health-related outcomes (Brown et al. 2003; Strine et al. 2005). *Clinical depression* is coded as yes=1 if respondents answered affirmatively to a medical professional diagnosing them with a depressive disorder including depression, major depression, dysthymia, or minor depression. In addition, I include two measures of excessive drinking. Both originate from the Centers for Disease Control (CDC 2019). *Heavy alcohol consumption* is classified as adult men having more than fourteen drinks per week, and adult women having more than seven drinks per week (1=yes). *Binge drinking* is defined as men having five or more drinks on one occasion, and women having four or more drinks on one occasion (1=yes).

Confederate monument presence is measured by a count of the number of public Confederate monuments in respondents' state of residence. Monument counts are consistent with the year 2015 when respondents were surveyed. This means that monuments dedicated after 2015 are not included in the counts and monuments removed after 2015 are included in the count. I anticipate that having a monument in one's state in 2015 was news to most residents, for instance, in non-former Confederate states. Therefore, I include monuments that were present in the state in 2015 even if they were subsequently removed. In other words, the monument's presence will have an impact on people's mental health. Additionally, r*ace* is self-reported (black=1). Whites are the reference group in regression models.

Multivariate models include individual and socioeconomic characteristics that may relate to mental health including age, education, employment, parenthood status, marital status, gender,

region, self-reported physical health, and survey timing. *Age* is measured in years since birth though age is capped at 80 years old to maintain the anonymity of respondents. *Education* (1–6, 6=BA degree or more) and *household income* (1–8, 8=$75,000 or more) are ordinal measures. *Employment*, *health insurance coverage*, and *parenthood* are dichotomous measures where yes=1. *Marital status* is coded with four dichotomous measures where married/cohabiting is the reference group. Poor mental health may reflect physical health status. I include a self-reported assessment of *days with poor physical health* to control for this possibility. The measure is logged in regression models to account for the nonnormal distribution. Since former Confederate states have a greater number of monuments and mental health tends to be poorer in such states, I include a measure that controls for region. *Residence in a former Confederate state* is coded yes=1. Given that awareness of Confederate monuments grew rapidly following the Charleston shooting, I incorporate a measure assessing whether respondents were surveyed prior to (reference) or *surveyed after Charleston* (yes=1).

Analytic Strategy

The analytic strategy begins with estimating weighted descriptive statistics. I describe the mental health profiles for the entire sample and then by presenting tests for differences between blacks and whites. I then estimate survey-adjusted multivariable regressions of mental health outcomes. I estimate five models. The first model uses a negative binomial model for mentally unhealthy days since it is an over dispersed count variable. The latter four models are estimated using logistic regressions given the binary construction of these variables. Results are presented as incident rate ratios or odds ratios consistent with the relevant model. I then illustrate the black-white mental health paradox using average marginal effects. Average marginal effects represent predicted values or probabilities while holding other predictors in the model at their actual value

for each observation. The next analyses incorporate the role of Confederate monuments in mental health patterns by race. Observations are no longer independent when including a state level variable—Confederate monuments—into models. To correct for nonindependence, I estimate sample-weighted models with clustered standard errors at the state level.

The stress process model suggests that stressors, strains, and disadvantages may compound the stress of navigating the presence of Confederate monuments differently by race. In lieu of estimating separate models by race, I examine fully interacted regression models, which are substantively identical to split models and allow all variables including Confederate monument presence to impact mental health differently for blacks and whites (Mustillo, Lizardo, and McVeigh 2018; Primo et al. 2007). Given that the significance of interacted regression coefficients in nonlinear models are not meaningful assessments of moderation, I examine predictions and marginal effects to determine whether monuments differentially impact the black-white mental health paradox (Long and Mustillo 2018). All regression analyses incorporate sampling weights.

RESULTS

Descriptive Statistics

Descriptive statistics are presented in Table 1 and are corrected for the BRFSS sampling design. On average, respondents reported 3.68 (*SD*=7.81) days with poor mental health. Approximately eleven percent experienced frequent distress, and twenty percent had a diagnosis of clinical depression. In terms of excessive drinking, seven percent consumed alcohol heavily while seventeen percent binge drank. On average, 56 monuments occupy respondents' states of residence (*SD*=83.91; range 0–262). In addition, black Americans comprise 15 percent of the

study population. Turning to other characteristics, the survey-adjusted sample is 51 percent female, and the average respondent is 49 years old with some college or technical school (mean=4.85 [*SD*=.98]; range 1–6) and $35,000 to $50,000 in household earnings. Fifty-five percent of the sample was employed, and 92 percent reported health insurance. A third of respondents were parents, and most were married or cohabiting (58 percent). The average number of days with poor physical health was 3.86 (*SD*=8.26; range 0–30). It is notable that a third of the sample resides in a former Confederate state, and a little over half was surveyed after the Charleston shooting.

Differences between Blacks and Whites

Table 1 also shows differences between blacks and whites. All tests are reported at the $p<.05$ level. Different from what the black-white mental health paradox would expect, black Americans reported significantly more mentally unhealthy days on average than whites (mean for blacks=3.95 [*SD*=6.27]; mean for whites=3.64 [SD=8.03]) and were more likely to experience frequent distress (12 percent versus 11 percent). In contrast, at the descriptive level, whites were more likely to report clinical depression (15 percent versus 20 percent), heavy alcohol consumption (5 percent versus 7 percent), and binge drinking (13 percent versus 20 percent). Given that half of black respondents reside in former Confederate states, it is unsurprising that black Americans tend to reside in states with a greater number of Confederate monuments than white Americans (mean for blacks=86.55 [*SD*=71.91]; mean for whites=50.92 [SD=83.88]). Black respondents were more likely to be female than white respondents (55 percent versus 51 percent). On average, blacks were younger, had lower levels of education, reported lower household income, and were less likely to have health insurance compared to whites. In terms of marriage and parenthood, whites were less likely to be parents, divorced,

separated, or never married. Blacks were less likely to be widowed or married/cohabiting.

Table 1. Descriptive Statistics for Study Variables for Black and White Americans in the Behavioral Risk Factor Surveillance System, 2015.

	Full Sample (*n*=281,568)			Blacks (*n*=24,719)		Whites (*n*=256,849)	
Variables	*Mean/ Proportion*	*SD*	*Range*	*Mean/ Proportion*	*SD*	*Mean/ Proportion*	*SD*
Dependent Variables							
Mentally unhealthy days	3.68	(7.81)	0–30	3.95*	(6.27)	3.64	(8.03)
Frequent mental distress (yes=1)	0.11	—	—	0.12*	—	0.11	—
Clinical depression (yes=1)	0.19	—	—	0.15*	—	0.20	—
Heavy alcohol consumption (yes=1)	0.07	—	—	0.05*	—	0.07	—
Binge drinking (yes=1)	0.17	—	—	0.13*	—	0.18	—
Confederate Monuments							
Total monuments	56.13	(83.91)	0–262	86.55*	(71.91)	50.92	(83.88)
Covariates							
Black (yes=1)	0.15	—	—	—	—	—	—
Female (yes=1)	0.51	—	—	0.55*	—	0.50	—
Age (in years)	48.79	(17.31)	18–80	45.33*	(12.67)	49.39	(17.98)
Educational attainment	4.85	(0.98)	1–6	4.63*	(0.77)	4.88	(1.01)
Income level	6.05	(2.10)	1–8	4.97*	(1.78)	6.24	(2.07)
Employed (yes=1)	0.55	—	—	0.58	—	0.59	—
Health insurance (yes=1)	0.92	—	—	0.86*	—	0.93	—
Parent (yes=1)	0.34	—	—	0.42*	—	0.33	—
Divorced (yes=1)	0.12	—	—	0.14*	—	0.12	—
Widowed (yes=1)	0.07	—	—	0.06*	—	0.07	—
Separated (yes=1)	0.02	—	—	0.05*	—	0.02	—
Never married (yes=1)	0.21	—	—	0.38*	—	0.18	—
Married/cohabiting (yes=1)	0.58	—	—	0.37*	—	0.62	—
Days with poor physical health	3.86	(8.26)	0–30	3.92	(6.39)	3.85	(8.54)
Former Confederate state residence	0.32	—	—	0.50*	—	0.29	—
Surveyed after Charleston shooting	0.54	—	—	0.55	—	0.54	—

Note: Means, standard deviations (*SD*), and ranges presented for continuous variables. Proportions presented for categorical variables. Statistics are adjusted for the sampling design.
*$p < .05$.

Black-White Mental Health Paradox after Accounting for Other Factors

I now turn to results from multiple regression models to examine the consistency of the black-white mental health paradox across five measures of mental health. For the sake of parsimony, I focus here on mental health variation by race. Model 1 presented in Table 2 shows negative binomial models estimating the number of poor mental health days by race while accounting for a host of individual and socioeconomic measures. Model 1 shows that blacks report fewer mentally unhealthy days on average than whites (*IRR*=.88, *SE*=.03, $p<.001$). This association supports hypothesis 1a. Model 2 estimates frequent mental distress using a survey-

adjusted logistic regression. Model 2 supports hypothesis 1b; black Americans are less likely than white Americans to report frequent mental distress by a factor of .81 (*OR*=.81, *SE*=.03, *p*<.001). Supporting expectations, Model 3 in Table 2 shows that blacks have lower odds of clinical depression by a factor of .50 (*OR*=.51, *SE*=.02, *p*<.001). Models 4 and 5 estimate odds of heavy alcohol consumption and binge drinking using logistic regressions, respectively. Results show that black Americans are less likely to consume alcohol heavily (*OR*=.63, *SE*=.04, *p*<.001) and binge drink (*OR*=.66, *SE*=.03, *p*<.001) compared to whites. Results in Table 2 support hypothesis 1a–e that the black-white mental health paradox is consistent across all five indicators examined here.

To illustrate black-white patterns of mental health, Figure 1 shows average marginal effects estimated from models in Table 2. Average marginal effects represent predicted values (Model 1) or probabilities (Models 2–5) holding other predictors in the model at their actual value for each observation. Error bars represent 95 percent confidence intervals around predictions.

Table 2. Mental Health Outcomes Regressed on Race and Covariates in the Behavioral Risk Factor Surveillance System, 2015.

	Dependent Variables[a]									
	Mentally Unhealthy Days		Frequent Mental Distress		Clinical Depression		Heavy Alcohol Consumption		Binge Drinking	
	Model 1		Model 2		Model 3		Model 4		Model 5	
Variables	*IRR*	*SE*	*OR*	*SE*	*OR*	*SE*	*OR*	*SE*	*OR*	*SE*
Black (yes=1)	.88***	(.03)	.81***	(.03)	.50***	(.02)	.63***	(.04)	.66***	(.03)
Female (yes=1)	1.41***	(.03)	1.38***	(.04)	1.83***	(.04)	1.01	(.03)	.55***	(.01)
Age (in years)	.98***	(.00)	.98***	(.00)	.99***	(.00)	.99***	(.00)	.96***	(.00)
Educational attainment	.94***	(.01)	.89***	(.01)	1.03*	(.01)	.96*	(.02)	1.02	(.01)
Income level	.92***	(.00)	.89***	(.01)	.89***	(.01)	1.09***	(.01)	1.08***	(.01)
Employed (yes=1)	.88***	(.02)	.77***	(.02)	.74***	(.02)	1.25***	(.05)	1.46***	(.04)
Health insurance (yes=1)	.87***	(.03)	.80***	(.04)	.96	(.04)	.67***	(.04)	.87**	(.04)
Parent (yes=1)	.98	(.02)	.98	(.03)	.97	(.02)	.65***	(.03)	.71***	(.02)
Divorced (yes=1)	1.31***	(.04)	1.31***	(.05)	1.52***	(.04)	1.50***	(.07)	1.43***	(.05)
Widowed (yes=1)	1.14***	(.04)	.99	(.05)	.88***	(.03)	1.10	(.07)	1.05	(.06)
Separated (yes=1)	1.87***	(.10)	2.01***	(.15)	2.00***	(.12)	1.59***	(.17)	1.37***	(.10)
Never married (yes=1)	1.07*	(.03)	.98	(.04)	1.01	(.03)	1.29***	(.06)	1.22***	(.04)
Days with poor physical health (log)	1.61***	(.01)	1.92***	(.02)	1.59***	(.01)	1.00	(.02)	.99	(.01)
Former Confederate state residence	.99	(.02)	1.05	(.03)	.97	(.02)	.97	(.04)	.83***	(.02)
Surveyed after Charleston shooting	1.06**	(.02)	1.06*	(.03)	1.03	(.02)	1.08**	(.03)	1.08***	(.02)

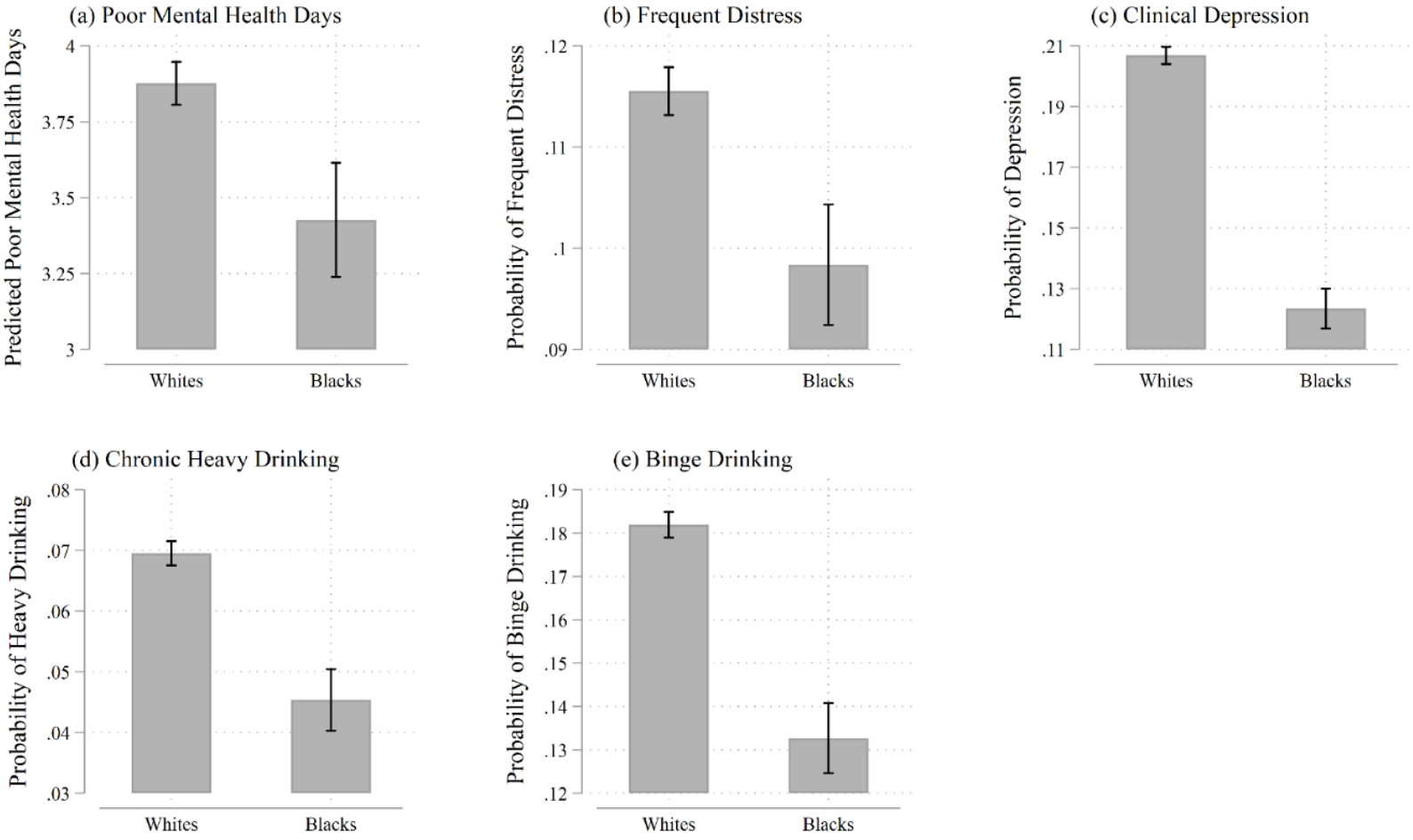
Note: *n*=281,568. Incident rate ratios (IRR) and odds ratios (*OR*) presented with standard errors (*SE*) in parentheses. Models are corrected for the complex survey design.

[a] Mentally unhealthy days is a count requiring a negative binomial model while the latter four binary measures are examined using logistic regressions.

*$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

Figure 1a shows that black Americans experience approximately 3.43 poor mental health days compared to 3.88 for whites (difference=.45, $p<.001$). Similarly, Figure 1b estimates the predicted probability of experiencing frequent mental distress by race. Whites have a 11.6 percent probability of frequent distress compared to a 9.8 percent probability blacks (difference=.017, $p<.001$). Figure 1c shows that the probability of clinical depression for blacks (12.3 percent) is significantly lower than the probability for whites (20.7 percent; difference=.08, $p<.001$). Likewise, patterns are similar for chronic heavy drinking (Figure 1d) and binge drinking (Figure 1e). Whites have a 7 percent probability of heavying drinking and an 18.2 percent probability of binge drinking compared to 4.5 and 13.3 percent probabilities for blacks, respectively (difference=.024, $p<.001$; difference=.049, $p<.001$). In sum, marginal relationships also demonstrate support for the black-white mental health paradox.

Figure 1: Predictions of Mental Health by Race



Note: Average marginal effects presented from models estimated in Table 2.

Confederate Monuments and the Black-White Mental Health Paradox

Table 3 shows mental health outcomes regressed onto public Confederate monuments, race, and covariates in fully interacted models with race. The advantage of fully interacted models is that they allow for the impact of covariates to influence outcomes differently for blacks and whites. Additionally, models include standard errors clustered at the state level. The coefficients presented in Table 3 become more difficult to interpret given the presence of multiple interactions. In lieu of interpreted coefficients, I turn to Figure 2a that shows average marginal effects derived from Model 1 (Table 3). The figure estimates the number of poor mental health days that individuals experience based on the number of Confederate monuments in their state or residence and self-reported race. The x-axis illustrates five points of estimation—the mean number of Confederate monuments, plus/minus one standard deviation, and plus/minus two standard deviations. Figure 2a shows that at the lowest level of monuments, blacks maintain an advantage in poor mental health days ($p<.001$) but that advantage disappears at the highest level of monuments. Figure 2a suggests that as the number of monuments increases, the number of mentally unhealthy days increases for blacks (first difference $p=.066$) but not whites (first difference $p=.75$). The second differences test offers suggestive evidence for the relationship between monuments and poor mental health days depending on race (second difference $p=.089$).

Table 3. Mental Health Outcomes Regressed on Public Confederate Monuments, Race, and Covariates in the Behavioral Risk Factor Surveillance System, 2015.

	Dependent Variables[a]									
	Mentally Unhealthy Days		Frequent Mental Distress		Clinical Depression		Heavy Alcohol Consumption		Binge Drinking	
	Model 1		Model 2		Model 3		Model 4		Model 5	
Variables	*IRR*	*SE*	*OR*	*SE*	*OR*	*SE*	*OR*	*SE*	*OR*	*SE*
Total monuments (log)	1.00	(.01)	1.01	(.02)	1.00	(.02)	.97	(.03)	.95	(.03)
Black (yes=1)	.53**	(.15)	.41*	(.19)	.44**	(.14)	2.45*	1.09)	.93	(.28)
Female (yes=1)	1.45***	(.02)	1.41***	(.03)	1.90***	(.05)	1.03	(.04)	.55***	(.01)
Age (in years)	.98***	(.00)	.97***	(.00)	.99***	(.00)	.99***	(.00)	.96***	(.00)
Educational attainment	.94***	(.01)	.88***	(.01	1.03*	(.02)	.97	(.02)	1.04**	(.02)
Income level	.92***	(.00)	.88***	(.00)	.90***	(.00)	1.11***	(.01)	1.10***	(.01)
Employed (yes=1)	.88***	(.02)	.76***	(.02)	.75***	(.02)	1.23***	(.03)	1.46***	(.04)
Health insurance (yes=1)	.88***	(.03)	.82***	(.03)	.96	(.03)	.71***	(.05)	.86**	(.04)
Parent (yes=1)	1.00	(.03)	1.00	(.04)	.97	(.03)	.61***	(.03)	.68***	(.02)
Divorced (yes=1)	1.33***	(.03)	1.35***	(.05)	1.55***	(.03)	1.60***	(.07)	1.52***	(.05)
Widowed (yes=1)	1.15***	(.05)	1.00	(.04)	.90**	(.04)	1.14*	(.08)	1.09	(.08)
Separated (yes=1)	2.12***	(.09)	2.43***	(.15)	2.42***	(.17)	1.86***	(.16)	1.47***	(.11)
Never married (yes=1)	1.06*	(.03)	.96	(.04)	1.00	(.03)	1.23***	(.05)	1.18***	(.05)
Days with poor physical health (log)	1.60***	(.01)	1.90***	(.02)	1.57***	(.02)	.98	(.01)	.98*	(.01)
Former Confederate residence (yes=1)	.97	(.06)	1.01	(.05)	.99	(.10)	1.08	(.19)	1.00	(.12)
Surveyed after Charleston shooting	1.07***	(.02)	1.07	(.02)	1.03	(.02)	1.11***	(.04)	1.11***	(.03)
Interactions										
Black (yes=1) X										
Total monuments (log)	1.06	(.04)	1.04	(.04)	.98	(.04)	1.13*	(.06)	1.01	(.04)
Female (yes=1)	.85**	(.05)	.87	(.08)	.74***	(.06)	.80	(.10)	.98	(.08)
Age (in years)	1.01**	(.00)	1.01	(.00)	1.01**	(.00)	.99	(.01)	1.02***	(.00)
Educational attainment	1.04	(.03)	1.10*	(.04)	1.02	(.04)	.88	(.06)	.88**	(.05)
Income level	1.02	(.01)	1.04	(.02)	.99	(.01)	.91**	(.03)	.92***	(.02)
Employed (yes=1)	1.06	(.08)	1.08	(.12)	.85*	(.07)	1.09	(.11)	.95	(.08)
Health insurance (yes=1)	.93	(.07)	.93	(.10)	1.04	(.12)	.79	(.13)	1.00	(.10)
Parent (yes=1)	.91	(.08)	.92	(.13)	.97	(.06)	1.36*	(.18)	1.30**	(.11)
Divorced (yes=1)	.90	(.11)	.79*	(.07)	.84	(.11)	.71	(.17)	.66**	(.06)
Widowed (yes=1)	.93	(.11)	.85	(.12)	.82	(.14)	.86	(.27)	.81	(.23)
Separated (yes=1)	.61***	(.10)	.49***	(.10)	.45***	(.07)	.52*	(.18)	.69	(.15)
Never married (yes=1)	1.05	(.10)	1.06	(.15)	1.06	(.10)	1.14	(.23)	1.10	(.17)
Days with poor physical health (log)	1.03	(.03)	1.05	(.04)	1.08**	(.02)	1.23***	(.09)	1.09*	(.04)
Former Confederate state residence	.80	(.12)	.83	(.13)	1.06	(.17)	.63	(.18)	.97	(.18)
Surveyed after Charleston shooting	.99	(.06)	.93	(.06)	.99	(.07)	.76*	(.12)	.82*	(.08)

Note: *n*=281,568. Incident rate ratios (IRR) and odds ratios (*OR*) presented with clustered standard errors (*SE*) at the state level in parentheses.

[a] Mentally unhealthy days is a count requiring a negative binomial model while the latter four binary measures are examined using logistic regressions.

*$p \leq .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

Figure 2b depicts a similar though not statistically significant pattern for blacks' and whites' probabilities of frequent distress. Black and white Americans have similar probabilities of distress regardless of the number of monuments in one's state (second difference p=.362). The patterns depicting clinical depression in Figure 2c differ from 2a and 2b. Blacks generally maintain lower probabilities of depression than whites across the range of Confederate monuments (second difference p=.631). Figure 2d shows the predicted probability of chronic

heavy drinking for blacks and whites by Confederate monument presence. First, black residents of states with the fewest Confederate monuments have lower probabilities of heavy drinking than black residents in states with the most Confederate monuments (p=.059). As monument totals increase so too does the probability of heavy drinking among black Americans. The slope for blacks is significantly different from the slope for whites (second difference p<.001). Finally, Figure 2e depicts results for binge drinking. Blacks have a lower probability of binge drinking than whites toward the center of the distribution, but the advantage is eliminated toward the tails. The second difference test indicates that the slopes are not statistically different (p=.606). In sum, the black-white mental health paradox is generally consistent for all outcomes across the range of Confederate monuments with exception to heavy alcohol consumption.

Figure 2a: Predicted Number of Poor Mental Health Days by Race and Confederate Monument Presence

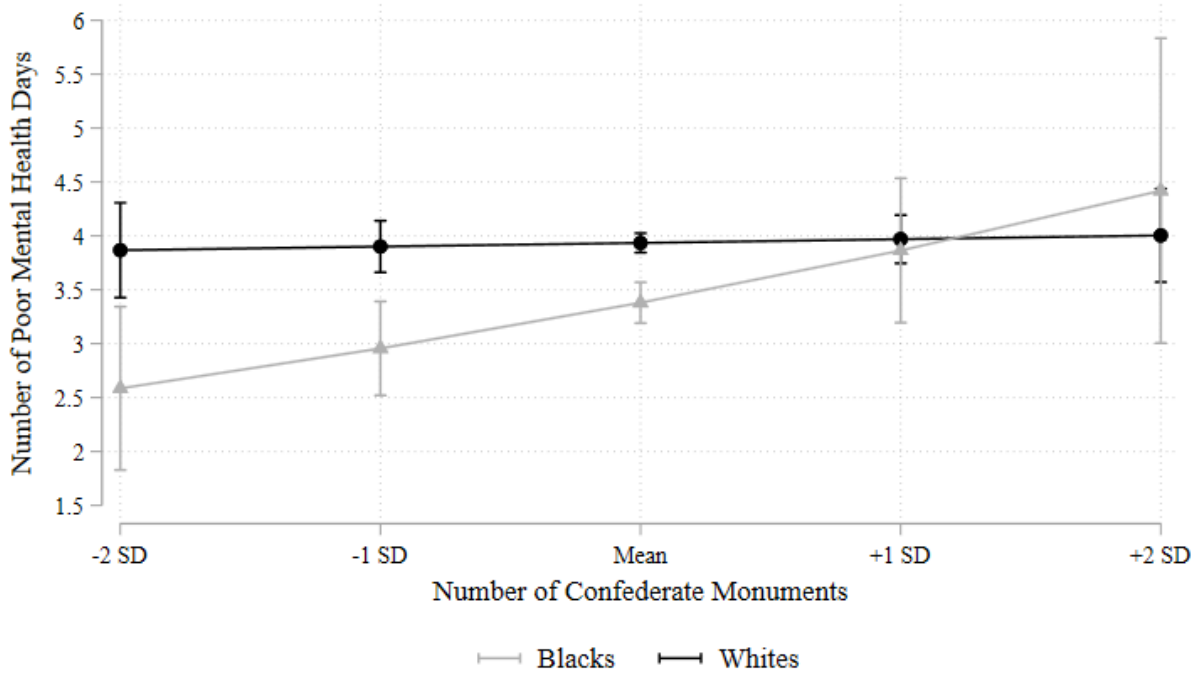


Figure 2b: Predicted Probability of Experiencing Frequent Distress by Race and Confederate Monument Presence

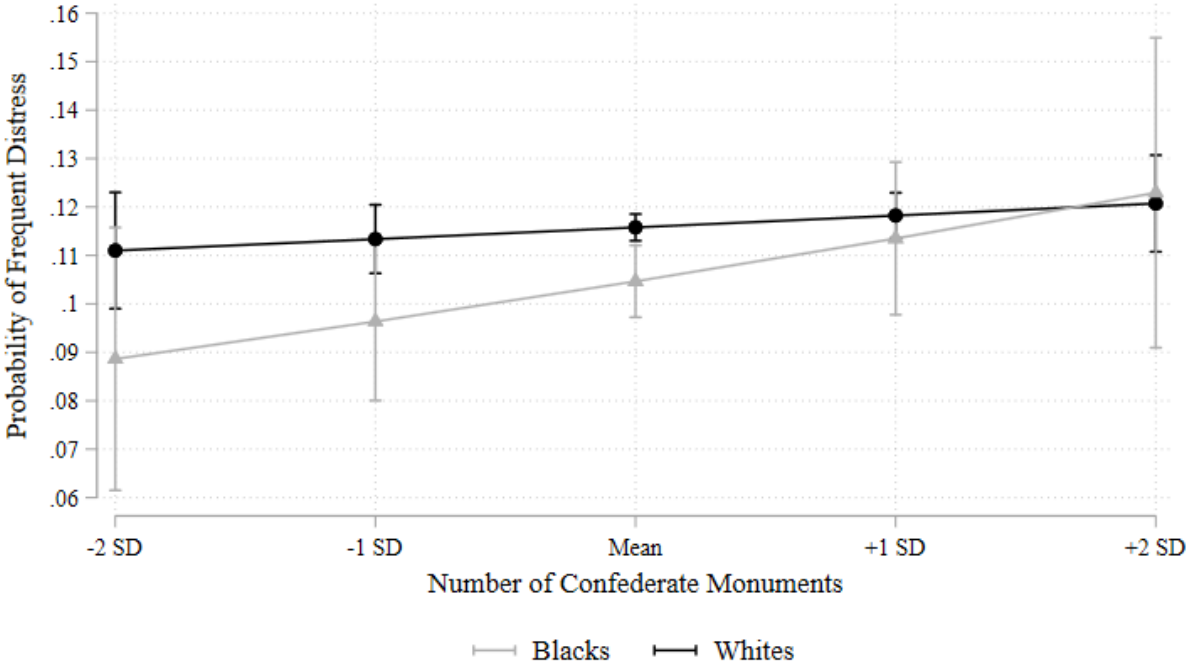


Figure 2c: Predicted Probability of Clinical Depression by Race and Confederate Monument Presence

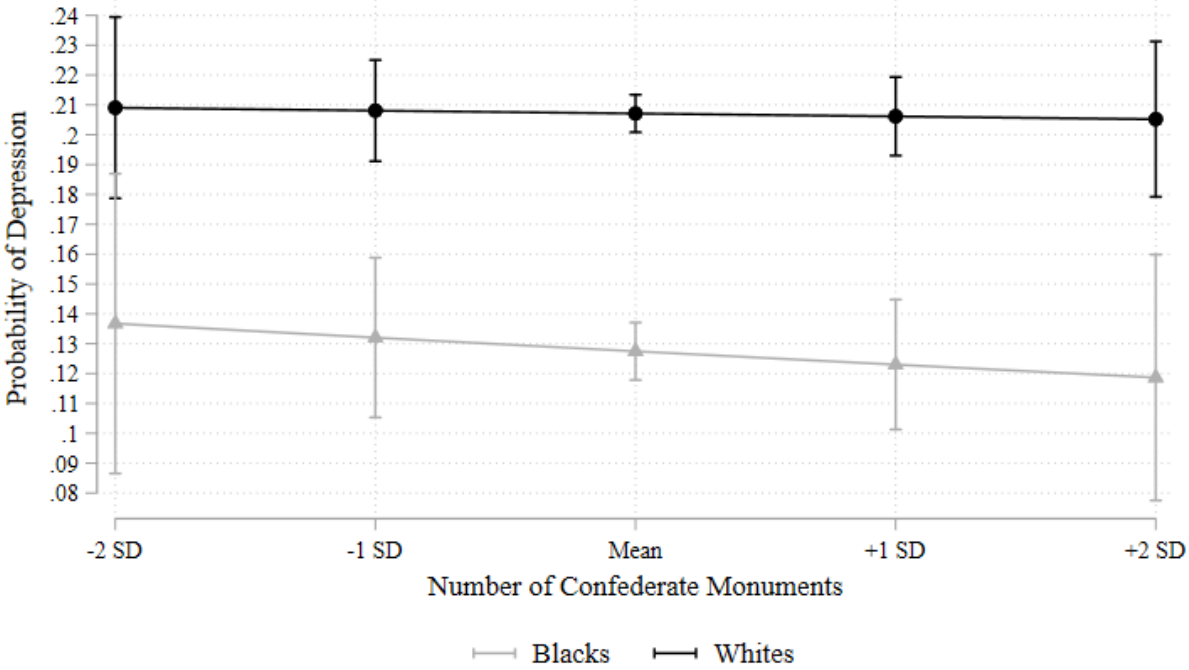


Figure 2d: Predicted Probability of Chronic Heavy Drinking by Race and Confederate Monument Presence

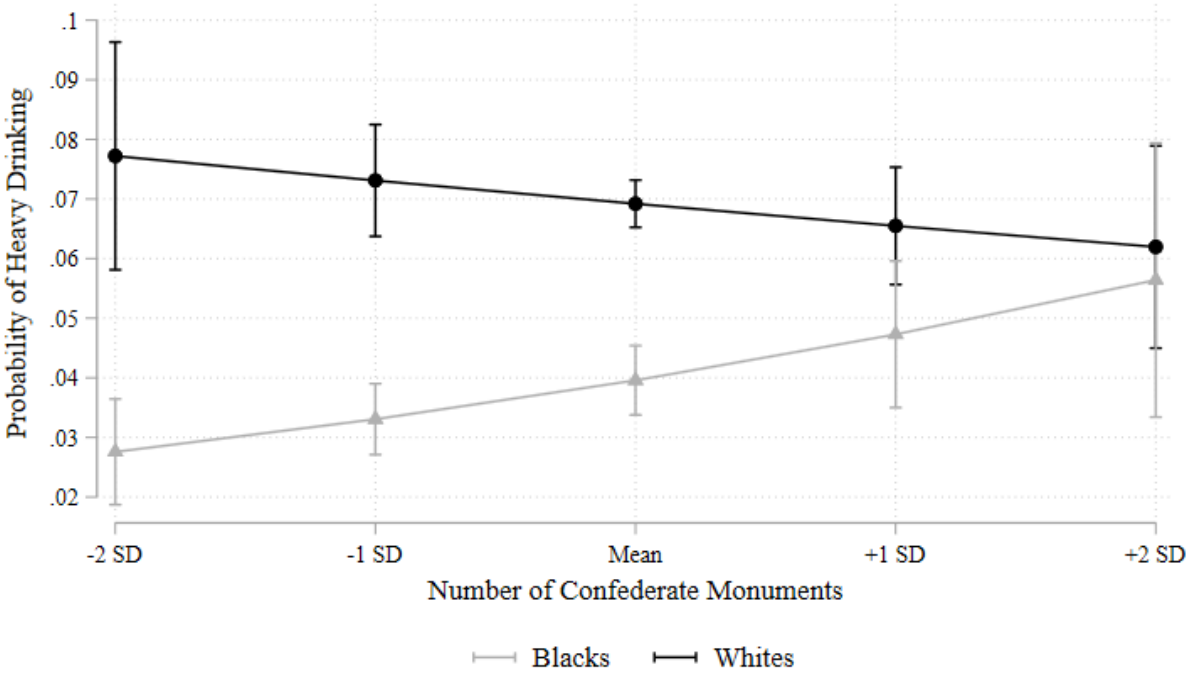
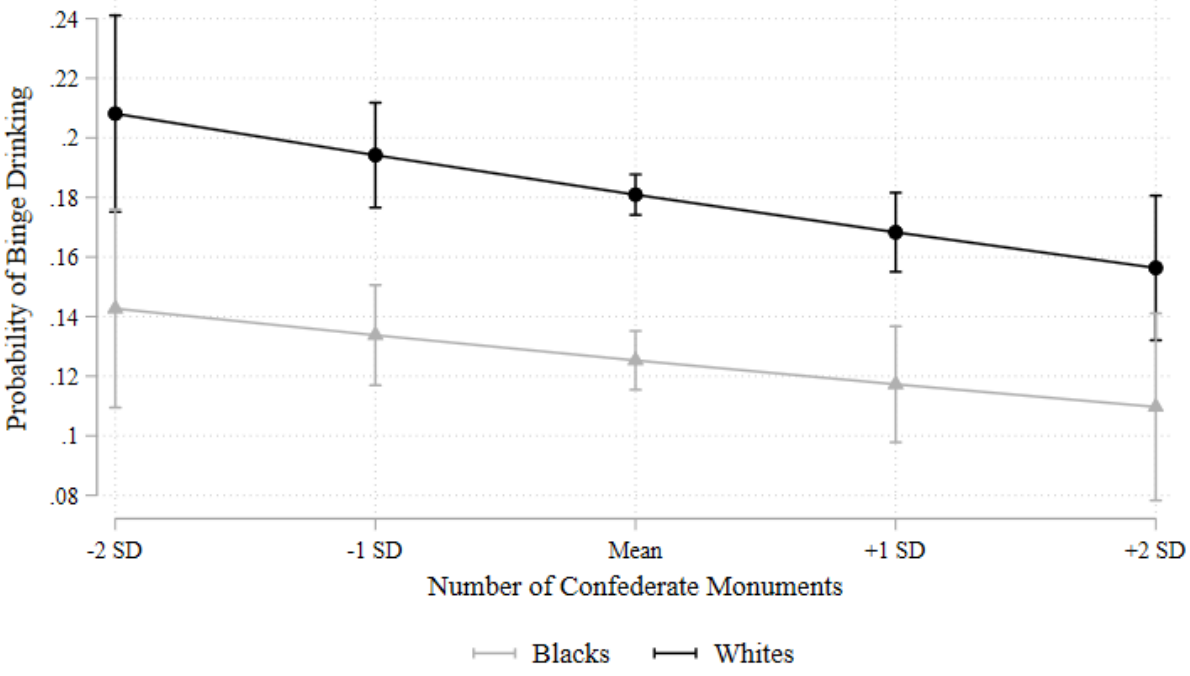


Figure 2e: Predicted Probability of Binge Drinking by Race and Confederate Monument Presence



DICUSSION

Paper Two used elements of the stress process model to examine the black-white mental health paradox using multiple indicators and after considering the presence of Confederate monuments. Derived from the theoretical framing and background research, this study tested two hypotheses. The first hypothesis projected that compared to whites, black Americans would report fewer (a) mentally unhealthy days and lower likelihoods (b) frequent distress (c) clinical depression, (d) chronic heavy alcohol consumption, and (e) binge drinking behavior. Analyses presented in Table 2 offer full support for hypothesis 1a–e. Consistent with the black-white mental health paradox, black Americans tend to have better or similar mental health profiles as white Americans across the range of outcomes examined here (Barnes and Bates 2017; Christie-Mizell et al. 2019; Hearne and Christie-Mizell 2018; Kessler et al. 1994; Mouzon 2017; Riolo et al. 2005; Turner et al. 1995; Williams et al. 2007). Black Americans tend to have higher levels of psychosocial resources such as mastery, self-esteem, and social support, and access to these resources is protective of mental health (Cross, Taylor, and Chatters 2018; Louie and Wheaton 2019; Mouzon 2014). Consequently, in the present study, black Americans have better psychological adjustment than white Americans despite on average having lower incomes, educational levels, and access to health insurance (Table 1).

The second hypothesis expected that the presence of Confederate monuments would moderate the relationship between race and mental health such that at higher monument totals, black Americans would report (a) more mentally unhealthy days and higher probabilities of (b) frequent distress (c) clinical depression, (d) chronic heavy alcohol consumption, and (e) binge drinking behavior compared to whites. Findings offered support for Hypothesis 2d such that as monument totals increase, the probability of heavy drinking tends to increase among black

Americans but decrease among white Americans (Figure 2d). This finding is consistent with research that shows self-reported racism increases risk of heavy drinking (Chavez et al. 2015; Martin, Tuch, and Roman 2003; Mulia and Zemore 2012). Research also shows that internalized racism is associated with greater alcohol consumption (Williams and Mohammed 2009). The proposed pathway is through increases in psychological distress (Gibbons et al. 2014). Given that the present study does not find that the impact of Confederate monuments on self-reported mental health or frequent distress differs significantly by race, it is unlikely that distress alone, as measured here, is driving increases in heavy drinking for black Americans.

Research shows that environmental stressors can harm health by heightening feelings of powerlessness and increasing perceived neighborhood disorder (Downey and Van Willigen 2005). Confederate monuments are a part of the ecological context that residents navigate regularly. Instead of signaling a lack of social control (i.e., neighborhood disorder), Confederate monuments may signify durable racialized social control that impacts mental health problems through similar means—increasing powerlessness and perception of areas as threatening, noxious, and fear inducing. In turn, stress can increase the risk of heavy drinking for black Americans. Williams, Lawrence, and Davis (2019:110) note that cultural racism "refers to the instillation of the ideology of inferiority in the values, language, imager, symbols, and unstated assumptions of the larger society." The internalization of negative views of black Americans occurs for blacks and whites and could as a result worsen alcohol use for blacks.

Monuments are markers of white supremacy that may serve whites' psychological interests, and in turn, benefit mental health. Monuments were installed to commemorate Confederate generals, officials, and most specifically, the "lost cause"—an ahistorical memory that downplays the role of slavery and secession from the Civil War narrative and replaces it

with memories of a conflict between white men that fought valiantly and shared a national identity (Blight 2001; Connelly and Bellows 1995). Du Bois referred to the psychological privileges of whiteness as wages. At a 1927 dedication ceremony for a federally-funded statue of Jefferson Davis in Mississippi, Senator John Sharp Williams of Mississippi proclaimed that the Confederacy did not fight to preserve slavery, but to preserve "[t]he cause of White Racial Supremacy, which…is not a 'Lost Cause.' It is a Cause Triumphant. It was never as safe as now since the Missouri Compromise…The white man's family, life, his code of social ethics, his racial integrity—in a word his civilization—the destruction of which in the slave states was dreaded . . . are safe" (EJI 2018). Results showed that monuments did not decrease whites' likelihood of clinical depression or frequent distress. However, whites in states with a greater number of Confederate monuments may be less likely to engage in heavy drinking likely due to the psychological wages of whiteness. Additionally, in supplementary analyses presented in Appendices A through J, I examined interactions with monuments, race, gender, and educational attainment. Results showed that while the black-white mental health paradox is generally consistent across gender and education, less educated whites tend to experience a significant mental health disadvantage compared to more educated whites. In other words, the mental health of lower socioeconomic status whites tends to be worse in areas with more Confederate monuments.

Extensions and Future Research

Whites in states with more Confederate monuments may be more politically conservatives and be less likely to support policy that benefits mental health. Roediger (2007) writes that "racial folklore" fuels racial ideologies in ways that open white working class communities to economic exploitation. For example, research shows that residing in a state or

county dominated by a politics of racial resentment is a mortal preexisting condition in part because racial resentment fuels opposition to health-enhancing policy (Metzl 2019). Indeed, Williams and colleagues (2019) argue that cultural racism can affect health through driving social policy that creates and maintains differential access to resources. Hence, while beneficial to mental health in the immediate, the long-term costs of opposing health-enhancing policy will likely be poorer physical health and shorter life spans. Future research could benefit by extending the present study to examine whether Confederate monuments signal opposition to policy that would universally benefit health patterns. Future research should also investigate whether political ideology and racial attitudes condition the impact of Confederate monuments on mental health. Unfortunately, such measures are unavailable in the Behavioral Risk Factor Surveillance System. Additionally, data limitations prevent a deeper analysis into whether the removal or addition of monuments in areas impacted mental health. While data from the Southern Poverty Law Center are informative about the placement of most monuments, dates of dedication and removal are not available all monuments in the data.

Consistent with the black-white mental health paradox, this study finds that black Americans are experience better psychological adjustment compared with white Americans. Contrarily, the advantage blacks experience in heavy alcohol consumption disappears in states with a greater number of Confederate monuments. In each case, this study measures the simple presence or absence of mental health problems. However, black Americans are more likely to experience mental health problems that are more chronic, severe, and impairing in addition to being less likely to seek treatment, compared to white Americans (Breslau et al. 2005; Hwang and Myers 2013; Williams 2018; Williams et al. 2007). Studies could benefit by examining whether Confederate monuments are associated with differences in the severity of mental health

conditions by race.

CONCLUSION

Writing in 1871, Frederick Douglass noted "the spirit of secession is stronger today than ever. It is now a deeply rooted, devoutly cherished sentiment, inseparably identified with the Lost Cause, which the half measures of the Government towards the traitors have helped to cultivate and strengthen. Is it not about time that this bombastic laudation of the rebel chief [Robert E. Lee] should cease"? (Blight 2001:105). In the aftermath of the 2015 Charleston shooting, public awareness dramatically increased about the ubiquity of Confederate monuments installed across the United States from the time of Douglass' writing until the present. The dedication of Confederate monuments peaked primarily in two periods relevant to racial inequalities: during the installation of Jim Crow laws and when black Americans most prominently challenged them (Mask 2020). The present study represents one of the first to examine whether monuments are consequential for social outcomes, and specifically, the mental health for black and white Americans. This study shows the importance of relying on multiple indicators of mental health and of considering critically the role of the ecological context. Ultimately, symbols of the Confederacy on public grounds are consequential for racial differences in mental health.

CHAPTER IV

PAPER THREE: LETHAL POLICE ENCOUNTERS AND RACIAL VARIATION IN CARDIOVASCULAR HEALTH

ABSTRACT

This study uses life course and stress process theories to examine the impact of police officers' use of lethal force against unarmed black men and women and its association with the cardiovascular health and risk factors for black and white Americans. Data come from a novel crowdsourced collection of deadly police encounters in the United States—the Mapping Police Violence database—and from the 2017 Behavioral Risk Factor Surveillance System, a nationally representative sample of noninstitutionalized black and white adults in the U.S. (blacks=26,278; whites=220,226). I examine six measures of cardiovascular health and risk factors: self-reports of heart attack, stroke, hypertension, diabetes, high cholesterol, and obesity. Results from generalized multilevel models showed that police killings of unarmed black men and women were associated with significantly greater increases in the likelihood of hypertension and stroke among exposed black Americans compared to white Americans. In fact, increases in exposures are associated with decreases in the odds of hypertension for white Americans. I argue that police killings of unarmed black men and women are particularly salient for black Americans in part because of their historical significance. The distressing experience of exposure to unarmed police killings of black Americans tends to evoke grief and anger, and increases fear of one's own victimization at the hands of police. The findings demonstrate that the quantity and inequity

of police killings, and the exposures therein generated, have large implications for racial disparities in cardiovascular health.

INTRODUCTION

The deaths of Breonna Taylor, Eric Garner, George Floyd, Sandra Bland, and a multitude of others brought national attention to police officers' use of force against black Americans. Approximately 1,200 people die annually due to police officers' actions in the United States translating into an average of three deaths per day (Banks et al. 2016; Buehler 2017; Sinyangwe, McKesson, and Packnett 2016). Research shows that black Americans are more likely to be killed by police than whites particularly when unarmed (Buehler 2017; Sinyangwe et al. 2016). Police are one the most visible parts of the criminal justice system on a day-to-day basis, and their actions as law enforcing extensions of the State warrant greater attention than the actions of civilians. Scholarship has only begun investigating the potential spillover effects of lethal police encounters (see Bor et al. 2018). The present study examines the association between the police officers' use of lethal force and racial variation in cardiovascular health.

A lethal police encounter is a case where a person dies because of being beaten, shot, or otherwise fatally harmed by law enforcement (Sinyangwe et al. 2016). The vicarious experience of police killings may be an important factor in cardiovascular health patterns across the United States. Beyond the immediate effect of the experience for victims, families, and communities, deaths attributed to police might also impact the health of individuals not directly linked to the event. Exposure to an unjust and traumatic stressor may activate a stress response that harms cardiovascular health by evoking grief, anger, and increased vigilance (Bor et al. 2018). Moreover, such trauma is connected to long-term changes in physiology (e.g., blood pressure,

cortisol levels, and inflammation) and health behaviors (e.g., smoking, eating, and exercise) (Bor et al. 2018; Glover et al. 2020). Cardiovascular disease is the leading cause of death in the United States, and identifying stressors implicated in cardiovascular health can inform potential interventions that reduce inequities (Xu et al. 2016). Research shows that black Americans have a higher lifetime risk of cardiovascular outcomes such as hypertension, heart attacks, heart disease, and higher body mass index than white Americans (Brondolo et al. 2011; Chae et al. 2011, 2012; Dolezsar et al. 2014; Lukachko, Hatsenbuehler, and Keyes 2014; Szanton et al. 2012; Williams 2012, 2018; Williams and Sternthal 2010). Death rates from cardiovascular disease are also higher for blacks than other racial-ethnic groups. Even when not fatal, conditions can result in disability and diminished quality of life (National Center for Health Statistics 2016). Psychosocial stressors factor into cardiovascular health disparities (Dagadu and Christie-Mizell 2014). Stress places adaptive demands on individuals, which can worsen cardiovascular health by damaging arteries and worsening other risk factors for heart disease (Christie-Mizell et al. 2017; Dagadu and Christie-Mizell 2014; Pearlin 1989; Pearlin et al. 1981; Thoits 2010). Given that research identifies social stressors as potential precursors of cardiovascular problems, exposure to police killings may play a fundamental role in these patterns.

The present study offers three innovations to the research literature. First, this study addresses racial inequalities in multiple cardiovascular health outcomes. Persistent differences in cardiovascular health between blacks and whites may be related to an understudied though hyper distressing factor—lethal police encounters. Second, this study carefully considers the impact of lethal encounters on blacks and whites. Blacks and whites typically have stark differences in experiences with police (Bowleg et al. 2020; Voigt et al. 2017), and extrajudicial and legalized killings of black Americans are historically significant (Alexander 2012; Tolnay and Beck 1995).

Consequently, the salience and health significance of these events will generally differ by race. Third, this study offers an additional contribution to the literature by identifying police-involved violence as having spillover consequences for individuals' health. While research has documented the health impacts of expansions in the criminal justice system (Kirk and Wakefield 2018; Lee et al. 2014; Patterson 2010, 2013; Sewell, Jefferson, and Lee 2016), less scholarship has focused on fatal police violence (Bor et al. 2018).

THEORY AND BACKGROUND

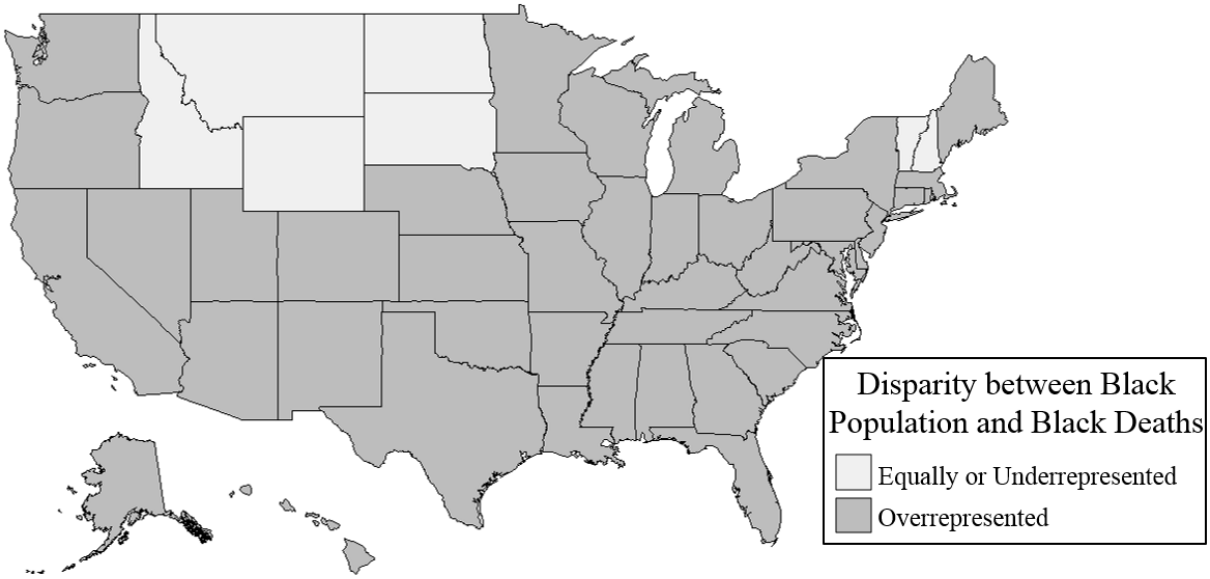
Policing and Lethal Force

This study is situated within literature that identifies spillover consequences of expansions in the criminal justice system beginning in the late 1960s. Much of the research in this area focuses on the role that incarceration plays in shaping health patterns across the U.S. (Lee et al. 2014; Patterson 2010, 2013; Wildeman and Wang 2017). In line with expansions of the criminal justice system was a shift in policing strategies. Policing practices shifted to more proactive methods that increased police-community interaction and the criminalization of black and Latinx populations (Alexander 2012; Rios 2011). One strategy deriving from broken windows was "stop and frisk" also known as the practice of temporarily detaining, questioning, and searching people for illegal paraphernalia (Jones-Brown, Gill, and Trone 2010). Deriving from a 1968 decision in *Terry v. Ohio*, stop and frisk provided law enforcement with greater latitude in policing (Epp, Maynard-Moody, and Haider-Markel 2014). Additionally, strategies such as stop and frisk disproportionately targeted black Americans (Epp et al. 2014) and represent one of many racial inequalities in law enforcement. Compared with whites, blacks experience more police stops (Epp et al. 2014), searches (Jones-Brown, Gill, and Trone 2010),

use of force (Smith 2004), and are more likely to be spoken to with disrespect (Voigt et al. 2017).

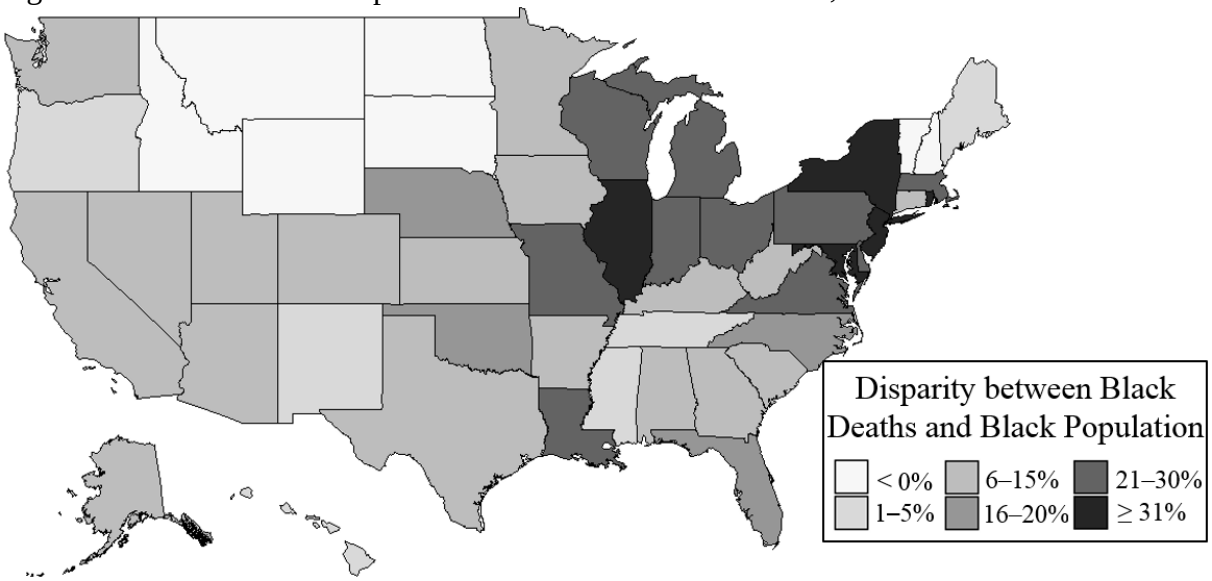
Compared to other racial and ethnic groups, black Americans are also disproportionately likely to be killed by police officers (Buehler 2017; Sinyangwe et al. 2016). Figure 1 illustrates state-level comparisons of the percentage of deaths attributed to police when the victim is black compared to the percentage of each U.S. state's population that is black. A positive difference indicates the overrepresentation of black Americans among lethal police encounters in a given state. The darker shading of the majority of states indicates that black Americans remain overrepresented among deaths attributable to police in 43 of 50 U.S. states and the District of Columbia. With the exception of a few northern mountain and northeastern states where there is a very small black population, there is a consistent pattern of racial inequality in lethal force across the United States. Figure 2 disaggregates this racial inequality in lethal force. The darkest shaded states are those where the percentage of victims due to police force that are black is at least 31 percent higher than the percentage of the population that is black. The greatest disparities are in Illinois, New York, New Jersey, Rhode Island, and Maryland, though as Figure 1 shows, black Americans remain overrepresented among deaths due to lethal force in almost every state.

Figure 1. Presence of Racial Disparities in Lethal Police Encounters, 2013–2018.



Note. Authors' calculation using data from Mapping Police Violence.

Figure 2. Level of Racial Disparities in Lethal Police Encounters, 2013–2018.



Note. Authors' calculation using data from Mapping Police Violence.

Black Americans are also disproportionately exposed to violent police contact, which includes nonfatal injuries as well as deaths due to police use of force (Buehler 2017; Edwards, Esposito, and Lee 2018; Lee and Robinson 2019). Consequently, black Americans face a double burden of greater likelihood of being killed by police and greater likelihood of having their family member die due to police actions. Such exposures are harmful to victims, families, and

communities. Awareness of deaths attributed to police has also increased in recent years. A report completed by the Pew Research Center (2016) examined how race is discussed on Twitter using a content analysis. Between 2015 and 2016, the majority of conversations about race on Twitter occurred in the days following an act of police brutality toward black Americans or an act of domestic terrorism against black Americans. Of the ten highest volume days of Tweets involving race, four of the ten days involved days following police-involved violence: (2 out of 10) the day following Freddie Gray's death in Baltimore (4/28/2015; 3.4 million Tweets); (3-5 out of 10) Details around Sandra Bland's case were released. Protests organized by Black Lives Matter in response to the death of Bland, and the day after details were released. The study shows that people are aware of lethal police encounters. In the next section, I outline the theoretical framework for the present study, which incorporates elements of the stress process and life course perspectives to explain how lethal police encounters impact cardiovascular health.

The Stress Process and Life Course Perspectives

This study relies on elements of the stress process and life course perspectives. The stress process model proposes that social life is structured and affects the distribution of stressors and resources that people encounter (Aneshensel, Rutter, and Lachenbruch. 1991). According to the stress process framework, health disparities arise from one's social context, individual history, and current circumstances. In its most basic form, the stress process incorporates three elements: stressors, resources, and outcomes (Christie-Mizell et al. 2017; Dagadu and Christie-Mizell 2014; Pearlin 1989; Turner 2013). Stressors include events, circumstances, or conditions that can inhibit one's ability to cope with adversity and that vary by timing in the life course, severity, and chronicity (Almeida et al. 2005; Christie-Mizell et al. 2017; Pearlin et al. 1981; Pearlin 1989;

Wheaton 1994; Williams, Neighbors, and Jackson 2003). I use the stress process model to highlight the deleterious influence of a stressor—exposure to police killings—on cardiovascular health (Mozaffarian et al. 2015).

Lethal police encounters as a stressor. Lethal police encounters are an extreme form of police contact, and there is reason to expect that exposure to police killings will be associated with cardiovascular health. Research has shown that greater police surveillance in an area is associated with health consequences including higher odds of diabetes, obesity, and worse self-rated health (McFarland, Geller, and McFarland 2019; Sewell 2017; Sewell, Jefferson, and Lee 2016; McFarland, Taylor, McFarland, Friedman 2018; Lee and Robinson 2019). The health impact of policing is particularly strong when a police stop is viewed as unjust (McFarland, Geller, and McFarland 2019; McFarland, Taylor, McFarland, Friedman 2018).

Resources are the second element of the stress process. I expect that the socioeconomic measures will moderate the influence of lethal police encounters on cardiovascular health, and anticipate that health behaviors to mediate the impact of lethal encounters. The factors I include are interrelated. Greater education is generally associated with higher rates of employment, better working conditions, and buffers against economic hardship. Employment is tied to ability paying bills, acquiring basic necessities, and have access to medical care. Employment is associated with cardiovascular health (Heikkila et al. 2020). Healthcare coverage is associated with preventative health screening, the ability to pay for doctor visits, and afford prescriptions. Getting regular exercise and not smoking are associated with better cardiovascular outcomes. Ultimately, greater access to resources will likely alter the toll of stressors on health. Outcomes are the third component of the stress process model, and outcomes under examination here are cardiovascular health outcomes, which I fully detail in the next section.

Linked fates. This study also draws from life course theory, which focuses on the timing, variation, and chronicity of stress exposures (Almeida et al. 2005; Pearlin et al. 1981; Pearlin 1989; Williams et al. 2003; Wheaton 1994). I rely on the concepts of linked lives and linked fates—or the interdependence of members of formal and informal social networks and to members of their social status groups (Elder, Johnson, and Crosnoe 2003). I expect that the vicarious experience of lethal police encounters is associated with poorer cardiovascular health. Stressors can affect health through both actual exposure and the threat of exposure by heightening vigilance. Heightened vigilance refers to living in a state of psychological arousal in order to monitor, respond to, and attempt to protect oneself from threats linked to potential dangers (Williams, Lavizzo-Mourey, and Warren 1994). Consequently, direct and vicarious experience of police violence is linked to adverse health through the stress process: unarmed police killings increase levels of cortisol, blood pressure, and norepinephrine, which will generally increase the likelihood of poor cardiovascular health.

Simply witnessing an arrest deleteriously impacts health. For example, children with incarcerated parents who witness the police arresting their parents affects the child's mental health across the life course (Parke and Clarke-Stewart 2003). Geller and colleagues (2014) showed that the frequency of police stops, intrusiveness of the encounter, and perception of injustice and disrespect in the encounter were positively associated with symptoms of posttraumatic stress disorder (PTSD) and anxiety. Additionally, a recent quasi-experimental study found that police killings of unarmed black Americans worsened mental health among blacks in the general population but had no effect on whites (Bor et al. 2018). The effect was not evident for police shootings of armed black men. The authors estimated that police killings of

unarmed black Americans result in 55 million poor mental health days annually among black Americans (Bor et al. 2018).

Stress proliferation. Additionally, the concept of stress proliferation offers insight into how exposure to a lethal event potentially leads to difficulties in one life domain also can spread to other domains, as when increased caregiving duties interfere with work performance or cause job loss (Pavalko and Woodbury 2000; Pearlin, Aneshensel, and LeBlanc 1997). Given that studies have identified adverse mental health as an outcome of exposure (Bor et al. 2018), a lethal encounter can lead to an additional stressor in the form of relationship or financial strain if poor mental health prohibits people from fulfilling typical role obligations such as marriage or employment (Bor et al. 2018). Likewise, the primary exposure to lethal police encounters will most likely lead to an additional stressor if the law enforcement officer is taken to trial and acquitted. Given that the law makes it difficult to hold law enforcement accountable when use of force is in question, many more times than not officers are acquitted (Boylstein 2018). Experiencing the acquittal of an officer accused of killing an unarmed civilian is a secondary stressor that can worsen cardiovascular health by persistently elevating cortisol, norepinephrine, and blood pressure—all factors indicative of poor cardiovascular health.

Psychosocial Factors and Cardiovascular Health

Epidemiologists often examine how a stress exposure contributes to the development of illness after some period (Gee et al. 2019). Using a life course approach to studying how the timing of an event—exposure to police killings—impacts health requires examining how such exposure may affect multiple health outcomes differently (House, Lantz, and Herd 2005; McDonough and Walters 2001; Thoits 2010; Robert, Cagney, and Weden 2010). The outcome for the present study is cardiovascular health. According to the American Heart Association,

cardiovascular health represents the well-being of the heart and circulatory systems (Mozaffarian et al. 2015). I incorporate four factors that represent health conditions associated with poor cardiovascular health (i.e., hypertension, diabetes, high cholesterol, and obesity), and two factors that are complications of adverse cardiovascular health (i.e., heart attack and stroke). These six factors are intricately connected. A litany of studies have documented racial disparities in hypertension—a condition when the force of blood pushing against the walls of blood vessels is consistently too high (National Center for Health Statistics 2016). High blood pressure is harmful because it increases the workload of the heart and blood vessels. Hypertension is known as a silent killer because it often presents with no symptoms (National Center for Health Statistics 2016).

Diabetes occurs when the body does not make enough or does not utilize insulin well (CDC 2018). Glucose then stays in the blood, and having too much glucose in the blood can cause health problems. Diabetes is the seventh leading cause of death in the United States (CDC 2018). The third outcome for this study is high cholesterol. High cholesterol is a condition that causes higher than normal levels of bad fats in the blood called lipids. High levels of cholesterol can form plaques in blood vessels leading to increased risk of heart disease (Carroll et al 2017). The final condition associated with poor cardiovascular health is obesity. Obesity represents having excess body weight and typically worsens other risk factors such as physical inactivity (CDC 2010).

Although all six of the measures included in this study are serious health conditions and complications, heart attacks and strokes and represent the highest immediate risk of mortality. The blockage of blood flowing to the heart causes heart attacks, and even when not fatal, heart attacks damage part of the heart muscle that pumps blood (Fryar, Chen, and Li 2012). Similarly,

strokes are blood clots or ruptures in blood vessels that prevent blood from reaching the brain. Stroke represents the number five cause of death. Heart disease is the leading cause of death in the U.S. with one out of every four people dying from it, and it is also a major cause of disability (Fryar, Chen, and Li 2012).

Cardiovascular health is stratified in the U.S. by socioeconomic status, gender, and race. Studies indicate that individuals with low SES are much more likely to suffer from high blood pressure, high cholesterol, heart attack, and stroke than their high SES peers (Fryar, Chen, and Li 2012). Research also shows that cardiovascular health among black Americans tends to be poor. Black Americans have the highest rate of high blood pressure and diabetes of all population groups (Hicken et al. 2014). According to current data, black Americans are also more likely to die following a stroke and heart attack than are whites (National Center for Health Statistics 2016). The typical theoretical reasoning for these patterns is that black Americans experience higher levels of daily stress including reduced access to health care, and more instances of racial discrimination, and greater financial strain. In turn, these stressors worsen cardiovascular health directly by straining the heart and circulatory systems through increases in cortisol and blood pressure as well as indirectly by impacting coping methods such as exercise and eating behaviors. Extant research has uncovered a relationship between stress deriving from racism (e.g., racial discrimination) and cardiovascular health patterns (Williams 2018). Though beyond the scope of the present study, research on the role of racial discrimination offers insight into how exposure to lethal police encounters impacts cardiovascular health. Experiencing racial discrimination is related to higher blood pressure (Brondolo et al. 2011; Dolezsar et al. 2014), coronary artery calcification (Lewis et al. 2006), cardiovascular disease (Chae et al. 2011, 2012; Lewis et al. 2014), and oxidative stress (Szanton et al. 2012). Race-related vigilance is one

possible mechanism linking race-related stress to worse cardiovascular health (Hicken et al. 2014) and waist circumference and BMI among black women (Hicken, Lee, and Hing 2018).

SUMMARY AND HYPOTHESES

This study relies on elements of the stress process and life course perspectives to examine the relationship between exposure to lethal police encounters and racial variation in cardiovascular health. I expect that the cardiovascular associations with the stressor will be greater for blacks than whites given that blacks are overrepresented among police deaths and that the perception of these events as unjust will likely vary by race. Based on background research and elements of the stress process and life course frameworks, I test the following hypothesis.

> *Hypothesis 1*: Police killings of unarmed black victims will be associated with greater increases in the likelihood of (a) hypertension, (b) diabetes, (c) high cholesterol, (d) obesity, (e) heart attack, and (f) stroke for blacks compared to whites.

In addition to the hypothesis listed, I carefully consider within group variation; in other words, how exposure impacts variation among blacks and whites. I anticipate that exposure to lethal police encounters—particularly those that are perceived as unjust—represents a stressor that evokes grief, anger, and increases vigilance. In turn, this stress response impacts factors and behaviors that worsen cardiovascular health which includes elevating cortisol, blood pressure, cholesterol, smoking, physical inactivity, and overeating. Hence, exposures will be associated with cardiovascular well-being.

DATA AND METHODS

This study uses four sources of data. Most of the variables in this study come from the 2017 Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a nationally representative, telephone-based, random digit dial survey of non-institutionalized adults aged 18 years and older. The BRFSS is the world's largest, on-going telephone health survey system, tracking health conditions and risk behaviors among adults in all 50 states. It is also one of the major data sources used by the American Heart Association to monitor cardiovascular health across the United States. In the BRFSS, sampling weights adjust for noncoverage and nonresponse and forces the total number of cases to equal population estimates for each geographic region, which for the BRFSS sums to the state population. More information on the BRFSS is available from the Centers for Disease Control website (https://www.cdc.gov/brfss/about/index.htm). To protect the confidentiality of participants, specific variables such as sub state geographic identifiers, detailed race or ethnicity, and age older than 80 years of age in a given year are removed from the BRFSS. The BRFSS is ideal for the present study since it is a large, nationally representative sample of U.S. residents and includes multiple measures of cardiovascular health. The listwise sample size for the present study is 261,277 noninstitutionalized U.S. adults.

Lethal police encounter information comes from Mapping Police Violence data. Official counts of deadly police encounters differ by record source. Federal records indicate half of the number of police killings as crowdsourced records (Buehler 2017; Sinyangwe et al. 2016). To circumvent data coverage issues associated with federal records, I use mapping police violence data, which is considered the most comprehensive dataset on police-involved deaths (Sinyangwe et al. 2016) and has been used in several recent publications (Bor et al. 2018; Siegel et al. 2019;

Mesic et al. 2018). MPV defines a police killing as a case where a person dies as a result of being chased, beaten, arrested, restrained, shot, pepper sprayed, tasered, or otherwise harmed by police officers whether on or off-duty, intentional or accidental.

The MPV project meticulously draws information from the three largest, most comprehensive and impartial crowdsourced databases on police killings: FatalEncounters.org, the U.S. Police Shootings Database, and KilledbyPolice.net. The MPV also checks completeness and quality of records via social and traditional media, obituaries, criminal records databases, and police reports to identify information about victims in the database. The database includes information on age, race, and sex of the victim; whether the victim was armed; and location of the event. There were a total of 208 possible exposures to killings of unarmed black Americans respondents in the 2017 BRFSS could have been exposed (January 2017 to March 2018). The manner that MPV classifies police killings as armed/unarmed is ideal for the present study. Eyewitness accounts, and hence, community perceptions of armed status is likely more important for discerning the consequences of these events (Bor et al. 2018). Finally, four state-level variables come from the 2017 American Community Survey and the U.S. Department of Justice collected in 2017.

This study focuses on exposure as measured by the number of police killings in the state of residence for BRFSS respondents. State provides a theoretically relevant area of space with which to measure exposure for three reasons. First, research shows evidence for state-level measures of inequality as predictive of police killings (Smith 2004; Mesic et al. 2018). Second, recent studies examining exposure to lethal police encounters use state level information (Bor et al. 2018). Third, prior work suggests that populations are most aware of police activity in their own state of residence and Google search data supports this theorizing (Bor et al. 2018; Lee and

Robinson 2019). In this study, exposure to lethal police encounters means that a typical person has knowledge of lethal encounters through social networks, traditional news media, or online media, which includes Twitter, Facebook, and Google.

Dependent Variables

The six dependent variables for the present study include diagnoses by a medical professional of hypertension, diabetes, high cholesterol, heart attack, and stroke as well as having a BMI above or equal to 30, which is considered obesity. BRFSS respondents were asked whether they had been diagnosed with a particular condition. Respondents answering in the affirmative are coded as having a diagnosis (yes=1) with undiagnosed the reference group for all analyses.

Independent Variables

Exposure to Police Killings. The key independent variable is a count of lethal police encounters with unarmed blacks that occurred in the past 365 days in one's state of residence. This is the only measure that comes from the Mapping Police Violence data. It is calculated using two variables from the BRFSS: the date of one's survey and their state of residence. This means that two individuals from the same state can be exposed to a different number of police killings if they were surveyed a week a part. As an example, a person surveyed a week before Michael Brown's death would not have been exposed the event. The exposure measure is consistent with existing research, and combines a number of possible mechanisms through which individuals learn about police killings (see Bor et al. 2018).

Covariates and Control Variables. Consistent with the stress process model, I expect resources will alter the impact of the stressor on health. Resources included in this study are educational attainment, employment, healthcare coverage, exercise, and smoking behavior. I also

include controls to the extent that they relate to exposure to lethal police encounters and cardiovascular health. These include age, gender, employment status, parenthood status, marital status, health insurance coverage, whether respondents have smoked 100 cigarettes in their lifetime, whether they have exercised in the past month, region, interview month, and education. I also include information about respondents' self-reported mental health since foregoing work shows a link between killings and days with poor mental health. The BRFSS asks, "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good"? Answers are coded as a count variable ranging from zero to 30. This variable is logged due to its over dispersion.

I incorporate four state-level variables that are commonly used in studies examining cardiovascular health at the population level as well as research that predicts where police use of force will occur (Carmichael and Kent 2013). These variables include the percentage of the population that is black, and the GINI index of income inequality. These measures come from the 2017 American Community Survey. I also include the number of law enforcement officers per 100,000 residents and violent crime rates. Both of these variables are logged to correct for over dispersion. I incorporate these data from the U.S. Department of Justice. The Gini Index is a measure of the share of total income earned by each decile of the population. The index ranges from 0 to 1. A value of 0 indicates that each decile within the population receives an equal share of the total income earned, or no income inequality. A value of 1 indicates perfect inequality or all of the income earned by the top income bracket.

Analytic Strategy

I begin by presenting survey-adjusted descriptive analyses and tests for differences between blacks and whites. Multivariate models adjust for the clustered nature of the BRFSS by nesting individuals into states. Failure to account for clustered data leads to misleading inference (Cameron and Miller 2015). Even the smallest of intra-cluster correlation can bias inferences with relatively large cluster sizes (Cameron and Miller 2015). Intraclass correlation coefficients were .247 for hypertension, .382 for heart attack, .518 for stroke, .160 for diabetes, .083 for high cholesterol, .420 for heart disease, and .105 for obesity. I model the odds of poor cardiovascular health outcomes using random intercept logistic regressions. Individuals are nested within states. The multilevel modeling that I perform is consistent with studies that use the BRFSS. The regression models do not utilize stratification variables and sampling weights, as multilevel models themselves control for sampling probabilities, and a design-based approach is less prone to estimation error with multilevel modeling (Gelman 2007; Snijders and Bosker 2012).

RESULTS

Descriptive Analyses

Table 1 shows survey-adjusted descriptive statistics for key study variables in the 2017 Behavioral Risk Factor Surveillance System. Consistent with the research literature, black Americans are more likely than white Americans to report diagnoses of hypertension (43.76 percent versus 35.59 percent; $p<.001$), diabetes (15.43 percent versus 10.68 percent; $p<.001$), obesity (40.21 percent versus 30.19 percent; $p<.001$), and stroke (4.75 percent versus 3.42 percent; $p<.001$). White Americans are more likely to report a diagnosis of high cholesterol (34.40 percent versus 30.17 percent; $p<.001$), and heart attack (4.89 percent versus 4.20 percent; $p<.001$). In terms of exposure to lethal police encounters, black Americans are exposed to an

average of 2.23 police killings of unarmed black victims, which is significantly higher than for whites (mean=1.85). Additionally, compared with blacks, whites experience significantly fewer exposures to unarmed police killings of whites (mean=2.57). The next sections details results in a multiple regression context.

Table 1. Survey-Adjusted Descriptive Statistics for Study Variables. Behavioral Risk Factor Surveillance System, 2017.

	Blacks (n=26,278)			Whites (n=220,226)		
Variables	*Mean/ Percent*	*SD*	*Range*	*Mean/ Percent*	*SD*	*Range*
Dependent Variables (yes=1)						
Hypertension	43.76%*	—	—	35.59%	—	—
Diabetes	15.43%*	—	—	10.68%	—	—
High Cholesterol	30.17%*	—	—	34.40%	—	—
Obesity	40.21%*	—	—	30.19%	—	—
Heart Attack	4.20%*	—	—	4.89%	—	—
Stroke	4.75%*	—	—	3.42%	—	—
Counts of Exposure to Lethal Encounters						
Black, unarmed, past year	2.23*	(1.53)	0–8	1.85	(2.02)	0–8

*Significant differences between blacks and whites $p < .001$.

Unarmed, Black Police Killings and Cardiovascular Health

Table 2 shows results from generalized multilevel models estimating cardiovascular health outcomes by exposure to police killings in the past year for black and white Americans. Odds ratios are presented above average marginal effects. Model 1a shows that a unit increase in the number of unarmed black police killings black Americans are exposed is associated with a significant increase in the odds of hypertension (*OR*=1.027; $p<.001$). Each exposure increases the probability of hypertension for blacks by .5 percent. In contrast, an additional exposure among whites is associated with a decrease in the odds of hypertension by a factor of .991 (*OR*=.991; $p<.01$). The second difference between the average marginal effects is significantly different for blacks and whites. In other words, the impact is greater for blacks' odds of hypertension than for whites' odds (second difference=.676; $p<.05$). Figure 3 graphs the average marginal effects across the range of exposures from 0 to 8. The slope for blacks is in yellow, and

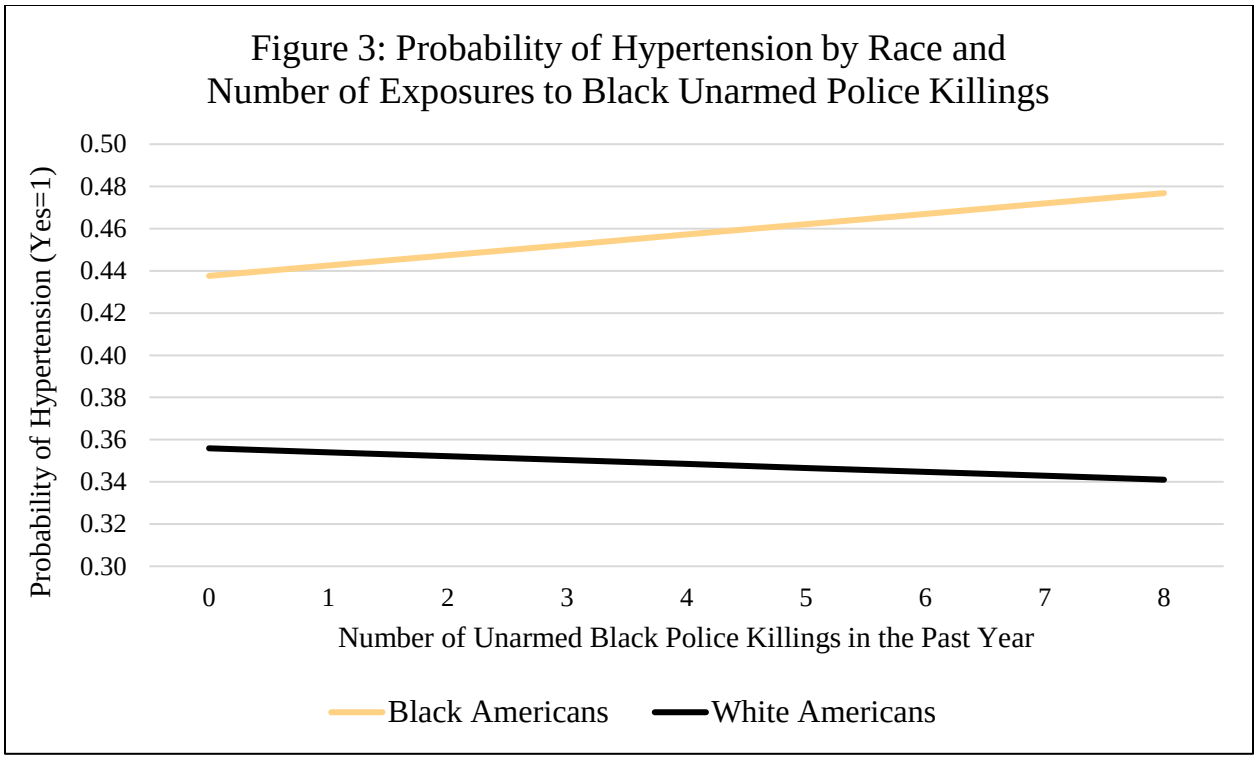
the slope for whites is in black. At zero exposures, black Americans have a higher probability of hypertension than whites, but the difference grows as exposures increase. At the highest exposure, blacks have 48 percent probability of hypertension compared to whites' 34 percent probability.

Model 4a finds that unarmed black police killings are not significantly associated with obesity among blacks. However, a unit increase in the number of exposure to unarmed police killings of black Americans is associated with a slight increase in the probability of obesity among white Americans (*OR*=1.009; $p<.01$). The second difference test was not significant indicating that although killings are associated with variation in obesity among whites, the slope for whites and blacks are not statistically different. In other words, the slopes for the two groups do not differ significantly. Figure 4 graphs the average marginal effects across the range of exposures from 0 to 8. At 0 exposures, blacks have a 40 percent of obesity compared to a 30 percent probability for whites. The probability increases slightly as the number of exposures increases for whites. At 8 exposures, the probability of obesity is 42 percent for blacks compared to 32 percent for whites. Appendix K estimates these identical models by exposures to police killings of unarmed whites.

Table 2. Generalized Multilevel Models Estimating Cardiovascular Health Outcomes by Counts of Exposure to Lethal Police Encounters in the Past Year.

	Hypertension		Diabetes		High Cholesterol		Obesity	
	Blacks	Whites	Blacks	Whites	Blacks	Whites	Blacks	Whites
Black, unarmed, past year	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b
Odds ratios	1.027***	0.991**	1.009	0.992	1.000	0.996	1.007	1.009**
Average marginal effects	0.490%	−0.186%	0.131%	−0.081%	0.009%	−0.091%	0.158%	0.179%
Second differences	0.676*		0.212		0.100		−0.021	

Note: Blacks=26,278. Whites=220,226. Odds ratios presented above average marginal effects. Second differences in marginal effects along the bottom. Models include age, education, gender, employment status, parenthood status, marital status, days with poor mental health, length of time since last doctor's visit, health insurance, cigarette smoking, exercise, state-level percent black, state-level income inequality, state-level number of police officers per 100,000 residents, and state-level violent crime rate.
*$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).



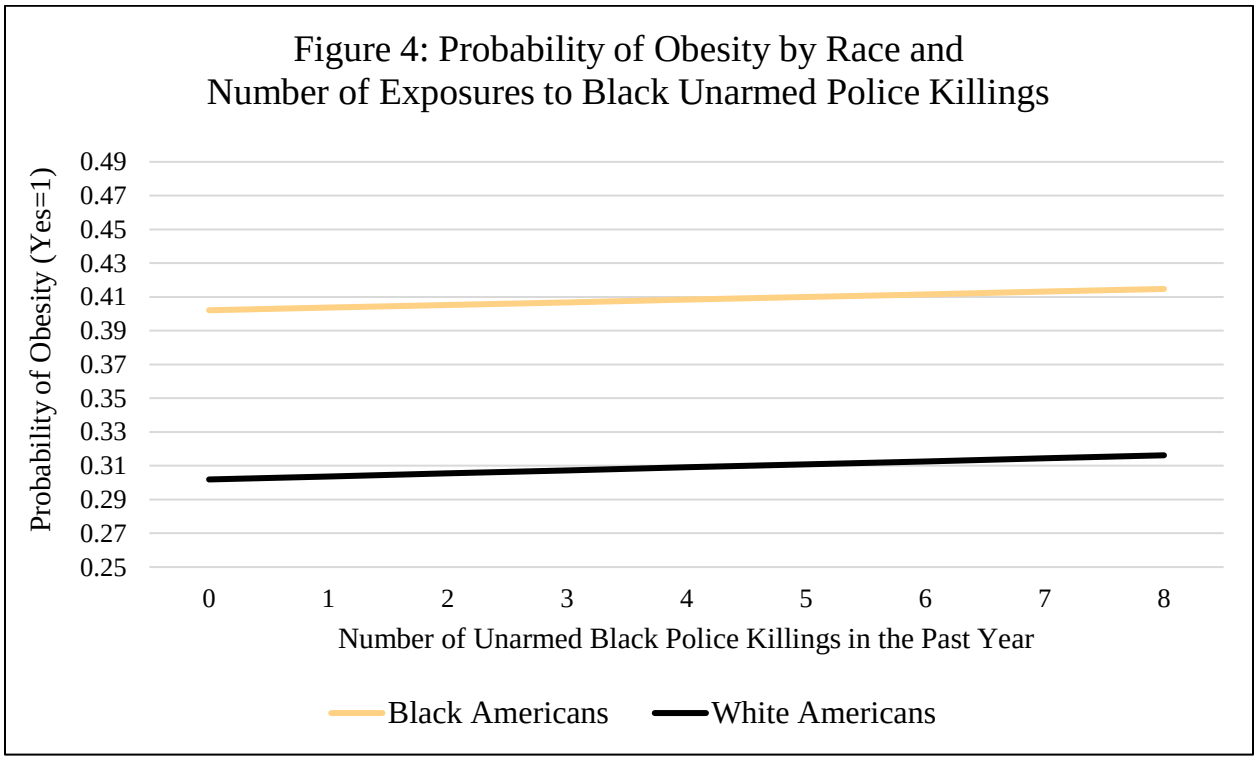


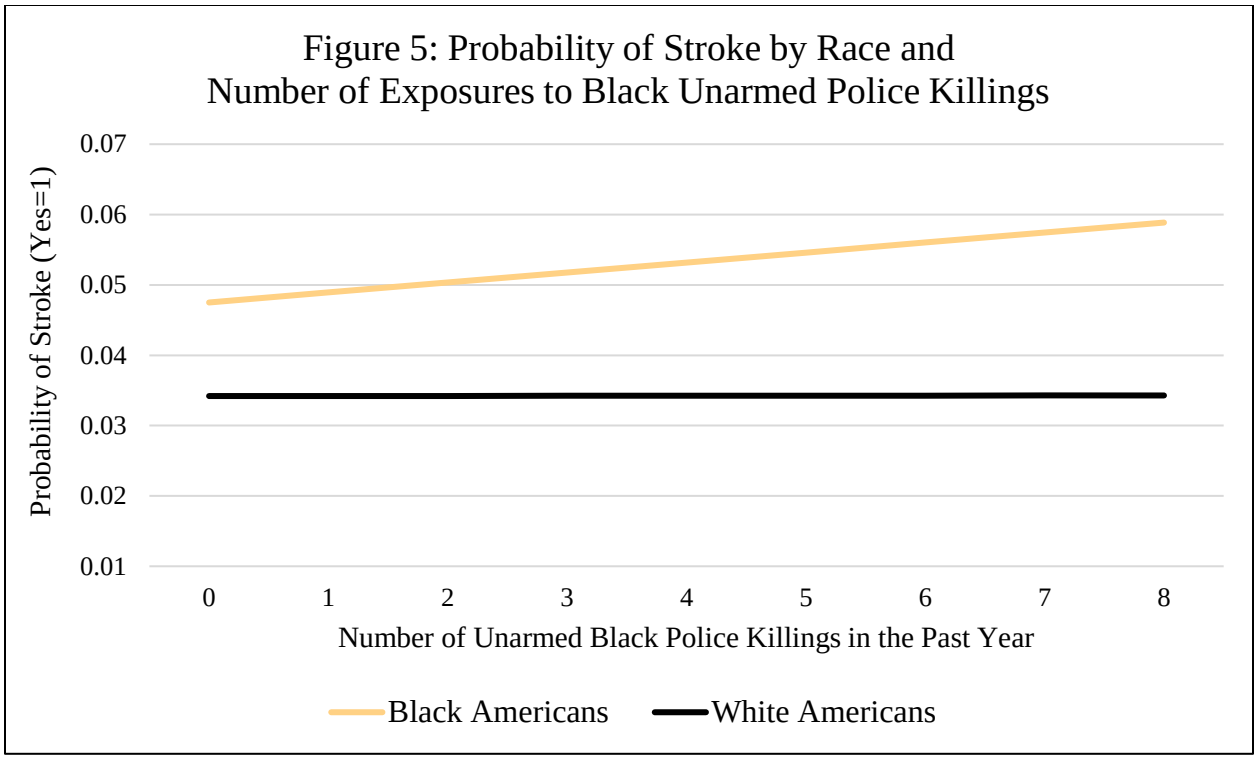
Table 3 shows results from multi-level logistic regressions estimating stroke and heart attacks. Model 6a shows that exposure to black unarmed police killings also increases the odds

of stroke for black Americans. Each exposure increases the probability of stroke by about .15 percent. Figure 5 shows the probability of stroke by race and by number of exposures to unarmed black police killings. At 0 exposures, the probability of stroke is 4.5 percent for blacks and 3.5 percent for whites. However, as exposures increase, the probability of stroke increases for blacks but not for whites. At 8 exposures, the probability of stroke is 6 percent for blacks and 3.5 percent for whites. Appendix L estimates these identical models by exposures to police killings of unarmed whites. In sum, unarmed police killings of black Americans increases the odds of hypertension and stroke for black Americans, decreases the odds of hypertension for whites, and has no statistically significant association with whites' odds of stroke. These results offer support for hypothesis 1a and 1f.

Table 3. Generalized Multilevel Models Estimating Cardiovascular Health Outcomes by Counts of Exposure to Lethal Police Encounters in the Past Year.

	Heart Attack		Stroke	
	Blacks	Whites	Blacks	Whites
Black, unarmed, past year	Model 5a	Model 5b	Model 6a	Model 6b
Odds ratios	1.002	1.006	1.027**	1.000
Average Marginal Effects	0.010%	0.032%	0.142%	0.001%
Second differences	−0.022		0.141*	

Note: Blacks=26,278. Whites=220,226. Odds ratios presented above average marginal effects. Second differences in marginal effects along the bottom. Models include age, education, gender, employment status, parenthood status, marital status, days with poor mental health, length of time since last doctor's visit, health insurance, cigarette smoking, exercise, state-level percent black, state-level income inequality, state-level number of police officers per 100,000 residents, and state-level violent crime rate.
*$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).



DISCUSSION

This study examined the association between exposure to lethal police encounters and racial variation in cardiovascular health. Based on background literature and tenets of the stress process and life course frameworks, I expected that police killings of unarmed black victims would be associated with greater increases in the likelihood of (a) hypertension, (b) diabetes, (c) high cholesterol, (d) obesity, (e) heart attack, and (f) stroke for blacks compared to whites. Results printed in Table 2 show support for hypothesis 1a and 1f. To summarize these findings, exposure to unarmed encounters tends to exacerbate cardiovascular outcomes in terms of hypertension and stroke among blacks compared to whites.

To make sense of these findings, it is important to recognize that the perception of these events differs by race. Extrajudicial as well as judicial killings of black Americans is historically significant; black Americans were the primary target of mob justice during post reconstruction

and Jim Crow eras. Hence, these events are likely more salient for blacks than they are for whites. The view of these events as unjust, which evokes grief, anger, and increases vigilance and fear of one's own victimization by law enforcement. Police killings of unarmed black men and women are particularly salient in part because of the event's historical significance. The perceived threat of violent police victimization is empirically greater among black Americans than white Americans due to the legacy of extra and interjudicial killings of black Americans. The study's findings are consistent with research that shows that exposure to unjust police stops (e.g., stop and frisk) are associated with worse health (Geller et al. 2014).

The concept of linked fates also informs the mechanisms linking police violence to health. individuals' health, livelihood, and life trajectories are intricately tied to those in their immediate and distal social network. Because of these close ties, the impact of tragic events will tend to radiate across social ties. In other words, what happens to one person also happens to members of their network. Finally, exposure to lethal police encounters represents a stressor that places adaptive demands on individuals. This stressor leads to additional stressors as well. Research shows that exposures to these events increases the number of days people experience poor mental health; this in turn can strain relationships and financial situations. Additionally, the primary stressor can lead to an additional stressor if the law enforcement officer is taken to trial. Given that the law makes it quite difficult to hold officers accountable, most of the time, they are acquitted. Pairing two phenomena—the overrepresentation of black American deaths due to police (Buehler 2017; Edwards, Esposito, and Lee 2018; Mesic et al. 2018) and the under penalization of police officers accused of using unwarranted force (Boylstein 2018; Zimring 2018)—may worsen levels of self-esteem, mastery, and perceived agency among black men and women resulting in fewer psychosocial resources with which to handle police violence.

Hence, not only has the primary exposure harmed health, it proliferates into additional stressors that can also harm health.

I argue that the distressing experience of exposure to unarmed police killings of black Americans evokes grief and anger, and increases fear of one's own victimization at the hands of police. In turn, this stress response impacts factors and behaviors that worsen cardiovascular health which includes elevating stress hormones such as cortisol and norepinephrine, and more persistently increasing blood pressure. Recent qualitative research supports the argument for the prevalence of police violence among black Americans, the awareness of police activity, and the harmful impact of directly as well as vicariously experiencing police violence. A recent study by Lee and Robinson (2019) examined life history narratives of black Americans and asked about their experience with police violence. The authors found that exposure to police violence was commonly reported among black Americans including personal as well as vicarious experience. The experience with lethal and nonlethal police violence shows that people are aware of police activity in their communities, and secondarily, that individuals experience increased fear of future victimization. One of the respondents identified the police as his greatest daily fear while another identified the necessity of being vigilant about police officers patrolling one's community. Another study showed that black men exposed to nationally publicized police killings reported a greater fear of police and expressed greater concern for their safety in the presence of police (Staggers-Hakim 2016). Consequently, lethal police encounters are associated with poorer cardiovascular health among black Americans.

The present study is informative of persistent racial disparities in cardiovascular health. Black Americans have a higher incidence, prevalence, and duration of hypertension than do whites (Gillespie and Hurvitz 2013). Hypertension is a risk factor for major health issues such as

stroke, heart disease, and kidney disease (Gillespie and Hurvitz 2013). Exposure to violent behavior is associated with adult hypertension (Boynton-Jarrett et al. 2012; Sternthal et al. 2010; Ford and Browning 2014). Community context has been linked to racial and ethnic disparities in hypertension (Morenoff et al. 2007), obesity (Robert and Reither 2004), and self-assessed health (Cagney, Browning, and Wen 2005). It is common to find that a given stressor is associated with multiple cardiovascular health outcomes differently. For instance, a recent study showed that higher goal striving stress—the stress from striving for goals—is a risk factor for developing CHD, but is protective of experiencing a stroke (Glover et al. 2020).

Limitations and Extensions

This study has offered several contributions to the research literature though it is not without limitations. First, the present study uses a large, nationally representative data set, but the cross sectional nature of the data prohibits conclusive causal inferences. The cross-sectional analyses that I present offer a telling image; black respondents in this survey were exposed to two unarmed deaths of black men and women in the past year on average and these exposures have cardiovascular health impacts. The cross-sectional data I use also excludes institutionalized populations including men and women who are incarcerated that likely have poorer cardiovascular health. Second, I focus on blacks and whites because blacks are disproportionately impacted by lethal police violence and a greater number of whites are killed by police than other groups. Given that Latinx populations are also disproportionately likely to be killed by police, future research could benefit by expanding the focus beyond blacks and whites. Third, I incorporate encountering lethal police force as a form of criminal justice contact. Yet, research also shows that other forms of criminal justice contact disproportionately impact black Americans and their health (Lee et al. 2014; Patterson 2010, 2013; Wildeman and Wang

2017). In other words, future research should examine the simultaneous impact of multiple forms of criminal justice contact (e.g., stops, arrests, incarceration) and their health implications given that the reality is that individuals have to navigate all of these forms of contact at the same time.

Even for young, healthy folks, exposure may increase the risk for poor cardiovascular health outcomes. This study is limited in its self-reports of disease, and cannot ascertain whether signs and symptoms of heart disease are present within folks. There is reason to believe exposure to lethal police killings may increase or expedite the development of disease. Pierce and colleagues (2020) used longitudinal data and found that childhood adversity and trauma increased poorer cardiovascular disease (CVD) outcomes in adulthood. Appendix M shows that the impact of police killings on blacks' odds of stroke is partially a function of cardiovascular health conditions inclusive of hypertension, diabetes, high cholesterol, and obesity. Once accounting for a count of these conditions, the significant association between exposures and risk of stroke is eliminated for black Americans. Police killings may expedite the onset of poor cardiovascular health.

CONCLUSION

Findings from this study offer several contributions to the research literature and have implications for our current sociopolitical climate. Over 1,000 people die annually due to police use of deadly force (Sinyangwe et al. 2016). The findings presented show that blacks' and whites' health is differently impacted by lethal police encounters, and this differential impact factors into racial inequalities in cardiovascular health. Recent data from the Department of Health and Human Services shows that Black Americans have a higher prevalence of hypertension and stroke than all other racial ethnic groups. Yet, the prevalence of these

conditions understates their severity. Black Americans are also more likely to die from stroke than are white Americans, and left untreated, hypertension more often leads to damage to the heart, brain, kidneys, and eyes for blacks than whites. Ultimately, this study shows that the actions of police reach beyond their intended effect (e.g., maintaining social control) and impacts disparities in cardiovascular health for blacks and whites.

CHAPTER V

CONCLUSION

This three-paper dissertation examined the role of psychosocial stressors in shaping racial health disparities and combined insights from multiple areas of research. A goal of this dissertation was to examine more critically the stress universe (Wheaton 1994; Williams 2018) and the mechanisms that link stress to physical, mental, and population health. This dissertation provides evidence for the influence of the political-economic context in shaping health and well-being. In other words, context shapes the relationships among white supremacy, stress, and health disparities. These studies identified the health impacts of three extensions of white supremacy. Paper One identified the Ku Klux Klan as an organizational extension of white supremacy. Paper Two conceptualized Confederate monuments as a material cultural extension of white supremacy, and the third paper focused on police killings of unarmed black Americans as a behavioral extension of white supremacy.

This three-study dissertation offers critical inquiry into mental and physical health outcomes as a function of civil rights era Klan mobilization, public Confederate monuments, and deadly police encounters. Black Americans tend to have worse health outcomes than white Americans regardless of how health is measured (Adler and Stewart 2010; Bailey et al. 2017; Gee and Ford 2011; Reskin 2012; Smedley and Myers 2014; Villarosa 2018; Williams 2012; Williams and Jackson 2005; Williams and Mohammed 2013). Infant mortality, hypertension, obesity, diabetes, and mortality risk from heart disease, illustrate health privileges associated with whiteness (Center for Disease Control [CDC] 2013, 2019; Dagadu and Christie-Mizell 2014; Lukachko, Hatzenbuehler, and Keyes 2014; Malat, Mayorga-Gallo, and Williams 2018;

Williams 2012). While mental health patterns are more complex than physical health patterns such that black Americans typically have better mental health than whites, the experience of mental illness tends to be more severe, debilitating, and prolonged for black Americans compared with white Americans (Breslau et al. 2005; Williams 2018).

Each of the three studies tested hypotheses derived from literature and theory to add depth and clarity about mechanisms tying stressors to health outcomes. For two of the studies, I used nationally representative data to test proposed hypotheses, and in one of the studies, the use of longitudinal data facilitated an analysis across several decades. An aim of this dissertation was to examine critically the role of stress in health disparities, to expand the notion of stressor to include facets of the everyday ecological context, and to offer insight into persistent health disparities between black and white Americans. In this concluding chapter, I briefly outline the social problems this dissertation focuses on, highlight key findings from the three studies, and offer the theoretical and practical importance of each study.

KU KLUX KLAN MOBILIZATION AND INFANT MORTALITY

Paper One examined whether white supremacist organizing is a key element in understanding racial disparities in infant mortality. Infant mortality is a key measure of a population's health and tends to reflect broader social inequities (Matoba and Collins 2017; Wise and Pursley 1992). Infant mortality is highest among black Americans, among residents of the U.S. South, and among those with low socioeconomic status (Brosco 1999; Hirai et al. 2014; Marks et al. 1987; Menifield and Dawson 2008; Shin 1975; Chen et al. 2016). This study redressed a gap in the research literature by examining how race, class, and residential context combine to influence infant mortality rates. Specifically, I expected that the Klan would impact

disparities in infant mortality given its presence as an archetypal white supremacist organization created to maintain separate and unequal distribution of social, political, and economic resources.

Paper One was embedded in in three research literatures: medical sociology, the sociology of race and ethnicity, and social movement studies. First, it extended studies that seek to understand the effects of white supremacy on the health of blacks and whites. I conceived of white supremacist organizing as a stressor that differentially influenced infant mortality by race/ethnicity. Second, this paper added to research specifying the social determinants of birth outcomes. Persistently poor infant mortality among blacks and southern residents was related to important contextual features of communities including Klan presence (see Novak, Geronimus, and Martinez-Cardoso 2017; Bor et al. 2018). While research has examined disparities in birth outcomes, less scholarship has identified mechanisms such as white supremacist organizing that factor into such disparities (see Giurgescu et al. 2011; Gortmaker and Wise 1997).

Third, this study added to literature specifying the outcomes of social movements (Bosi and Giugni 2004; Giugni 1998, 2004, 2007, 2008; Whittier 2004; King and Pearce 2010; Kutz-Flamenbaum 2016). Studies have shown that health-related movements can impact health positively (e.g., mobilization for healthcare, reproductive rights, and AIDS research; see Brown et al. 2004); however, few studies have assessed how social movements affect health patterns when it was not a stated goal. In other words, studies have not identified health inequality as an unintended outcome of social movement organizing. By assessing how Klan organizing over a forty-year period impacts infant mortality for whites and blacks, this study identified both the short and long-term health consequences of civil rights era Klan mobilization.

Paper One used a county-level longitudinal data from ten former Confederate states spanning forty years (1960–2000) to assess the influence of the civil rights era Ku Klux Klan

mobilization on nonwhite and white infant mortality rates across time. The fixed-effects design modeled change in infant mortality occurring within southern counties across time and offers support for strong support for the Ku Klux Klan as a primary driver of changes in infant mortality patterns. Paper One showed that civil rights era Ku Klux Klan mobilization was associated with increases in nonwhite infant mortality rates. Klan mobilization offers an alternative explanation for the higher prevalence of infant mortality among black Americans, among residents of the U.S. South, and among those with low socioeconomic standing (see Novak, Geronimus, and Martinez-Cardoso 2017). This paper showed that social movements can impact the health of surrounding communities; in other words, adverse health can be an unintended outcome of social movements.

CONFEDERATE MONUMENTS AND MENTAL HEALTH

Hundreds of Confederate monuments occupy public spaces in twenty-three U.S. states and the District of Columbia as of 2019 (Southern Poverty Law Center [SPLC] 2019). The Charleston shooting in June 2015 brought public awareness to the ubiquity of Confederate monuments across the U.S. landscape. Paper Two asked whether public Confederate monuments—statues, flags, holidays, or the commemorative naming of parks, streets, or schools in recognition of the short-lived Confederacy—have implications for the mental health of black and white residents. In doing so, the study contributed to research on the black-white mental health paradox (Erving, Thomas, and Frazier 2019; Erving and Thomas 2018; Hearne and Christie-Mizell 2018; Hughes and Demo 1989; Hughes and Thomas 1998; Keyes 2007; Louie and Wheaton 2019; Vega and Rumbaut 1991). Scholarship has shown that white supremacy is intricately tied to Confederate symbols (Ehrlinger et al. 2011; SPLC 2016, 2019; Strother et al.

2017; Talbert 2017; Talbert and Patterson 2020), but little research has examined whether monuments are consequential for social inequalities.

Paper Two merged data from a novel census of Confederate monuments collected by the Southern Poverty Law Center and the 2015 Behavioral Risk Factor Surveillance System. Consistent with the black-white mental health paradox, black Americans reported fewer days of poor mental health and lower probabilities of frequent psychological distress, clinical depression, heavy drinking, and binge drinking compared to white Americans. Analyses were replicated after accounting for Confederate monuments. Findings showed that generally, the mental health advantage experienced by blacks over whites is generally consistent even after accounting for monuments. However, one outcome showed divergent patterns. The mental health advantage in heavy drinking experienced by black Americans is eliminated in states with a greater number of public Confederate monuments.

Paper Two merged research from two lines of inquiry—the sociology of mental health and sociology of culture—and offered multiple contributions to the research literature. First, this study offered a holistic and updated depiction of the black-white mental health paradox by examining multiple indicators of mental health. Research has often dealt with misclassification concerns common in the sociology of mental health (see Brown 2003, 2008; Horowitz 2002; Turner 2013; Wheaton 2001). Second, this study expanded the stress universe to examine the ecological context (Wheaton 1994). Public monuments were installed as homages to the Confederacy, its intent to defend slavery, and the persistent narrative reconstruction surrounding the Civil War (Blight 2001; Coski 2005). Confederate monuments reflect a cultural extension of white supremacy—the instillation of symbols and imagery that oppress, marginalize, and debase black Americans (Williams, Lawrence, and Davis 2019). Finally, a third contribution from this

study is its careful consideration of within group variation in mental health among black and white Americans. Research often focuses solely on mental health patterns between black and whites without also considering differences among these groups.

LETHAL POLICE ENCOUNTERS AND CARIOVASCULAR HEALTH

Black Americans are disproportionately likely to be killed while unarmed by police officers, and beyond the immediate effect for the victim, these patterns have large implications for families, friends, and communities associated with the deceased (Banks et al. 2016; Buehler 2017; Sinyangwe, McKesson, and Packnett 2016). Paper Three examined the association police officers' use of lethal force and racial variation in cardiovascular health. Research shows that black Americans have higher lifetime risks of hypertension, heart attacks, heart disease, and higher body mass index than white Americans (Brondolo et al. 2011; Chae et al. 2010, 2012; Dolezsar et al. 2014; Lukachko, Hatsenbuehler, and Keyes 2014; Szanton et al. 2012; Williams 2012, 2018; Williams and Sternthal 2010). Additionally, death rates from cardiovascular disease are also higher for blacks than any other racial-ethnic group (National Center for Health Statistics 2016). The vicarious experience of police killings may be an important factor in racial disparities in cardiovascular health patterns across the United States. Exposure to an unjust and traumatic stressor may activate a stress response that harms cardiovascular health by evoking grief, anger, and increased vigilance, and by shaping long-term changes in physiology (e.g., blood pressure, cortisol levels, and inflammation) and health behaviors (e.g., smoking and exercise) (Bor et al. 2018; Glover et al. 2020).

Paper Three merged data from a crowdsourced collection of deadly police encounters in the United States—the Mapping Police Violence database—with the 2017 Behavioral Risk

Factor Surveillance System. Federal records typically indicate half the number of police killings, and the use of crowdsourced records provide a more comprehensive picture of fatal encounters. Results showed that police killings of unarmed black Americans were associated with increased probabilities of hypertension and stroke for exposed black Americans. For white Americans, with the exception to increased probability of obesity, exposure to unarmed police killings of black Americans did not significantly alter cardiovascular health outcomes. The findings demonstrated that persistent racial disparities in cardiovascular health are related to police killings of unarmed black Americans—a behavioral extension of white supremacy.

Paper Three merged research from medical sociology with punishment and inequality, and also offered three innovations to the research literature. Paper Three addressed racial inequalities in multiple cardiovascular health outcomes. Persistent differences in cardiovascular health between blacks and whites were related to lethal police encounters. This finding is particularly important. Cardiovascular disease is the leading cause of death in the United States, and identifying stressors implicated in cardiovascular health can inform potential interventions that reduce inequities (Xu et al. 2016). Second, Paper Three considered the impact of lethal encounters on blacks and whites. Consistent with blacks and whites having divergent experiences when interacting with police officers, lethal police encounters were more consequential for the cardiovascular health of black Americans (Bowleg et al. 2020; Voigt et al. 2017). Third, a key contribution from this paper is that it shows police-involved violence as having spillover consequences for individuals' health. Research has documented the health impacts of contact with the criminal justice system (Kirk and Wakefield 2018; Lee et al. 2014; Patterson 2010, 2013; Sewell et al. 2016), but has focused less on police violence (Bor et al. 2018).

CONCLUSIONS AND IMPLICATIONS

Health disparities between blacks and whites have existed since indicators were first formally recorded (Bailey et al. 2017; Reskin 2012; Smedley and Myers 2014; Villarosa 2018; Williams 2018; Williams and Mohammed 2013). This dissertation intended to examine more critically people's stress universe (Wheaton 1994; Williams 2018) and the mechanisms that link stressors to cardiovascular, mental, and population health. The findings from these three studies have implications for our current sociopolitical context. In this section, I discuss implications derived from these three papers.

Paper One showed that the civil rights era Klan mobilization influenced communities' health decades after it entered abeyance. In other words, white supremacist organizations have an impact on the health of surrounding communities. For both nonwhite and white infant mortality patterns, the presence of a Klan chapter in an adjacent county was associated with worse health. Consequently, even if a neighborhood does not have a hate group within it, having one close by is also detrimental to health. According to the Southern Poverty Law Center (2018), over 1,000 hate groups were active in the United States in 2018. The implications of Paper One are that white domestic terrorism is a public health issue with potentially large consequences particularly for racial health disparities in infant mortality. The real and symbolic violence enacted by hate group organizations carries short and long-term health consequences. Actively policing domestic terror organizations should be a priority for federal and local officials. Future research should also focus on other inequalities created or exacerbated by white supremacist groups.

Paper Two showed that black Americans typically have better mental health than white Americans as measured by five outcomes. However, the presence of Confederate monuments in one's state of residence leads to divergent patterns in heavy drinking for blacks and whites. The

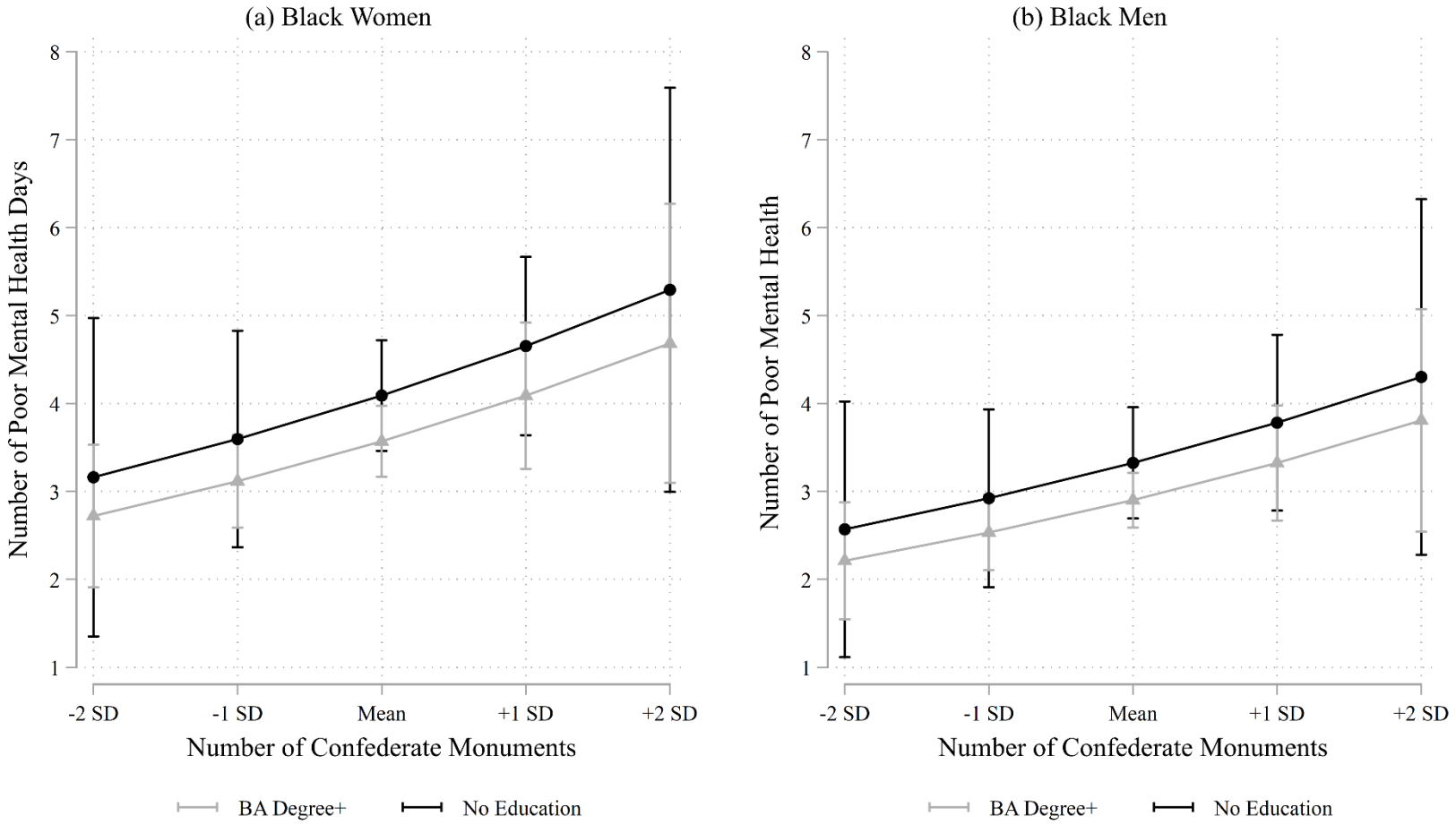
advantage experienced in heavy drinking by blacks declines at greater numbers of monuments. At the highest level of monuments, the mental health advantage disappears. The findings have implications for the current context as well. Monument totals exclude privately installed monuments, and the presence of private monuments along the sides of interstates and attached to privately owned residences must also be consequential for mental health. Additionally, the Confederate flag's symbolism of white supremacy, the preservation of slavery, and of secessionism, takes on added meaning in 2020. The narrative of the lost cause is consequential even for states' responses to the novel COVID-19 pandemic. As states struggled to implement social distancing plans, protesters took to state capitols with Confederate flags opposing shutdown orders. Additionally, factors that place individuals at risk for complications of COVID-19 are also factors I find associated with exposure to lethal police encounters—namely, poor cardiovascular health and risk factors. Ultimately, as Frederick Douglass noted over one hundred and thirty years ago, the spirit of secession is a deeply rooted, devoutly cherished sentiment, inseparably identified with the Lost Cause (Blight 2002:105). Public monuments as markers of white supremacy are consequential for mental health patterns. The removal of monuments would improve racial disparities in mental health patterns particularly in states where the landscape is littered with their presence.

Paper Three showed that exposure to unarmed police killings of black Americans was associated with significantly greater increases in the probability of reporting hypertension and stroke for black Americans compared to white Americans. Over 1,000 people die annually due to police use of deadly force, and black Americans are more likely to be killed by police than white Americans. The findings from Paper Three show that blacks' and whites' health is differently impacted by lethal police encounters, and this differential impact factors into racial inequalities

in cardiovascular health. The impact of these encounters does not end with the diagnoses of these conditions, however. Research shows that black Americans tend to have higher prevalence of hypertension, diabetes, and stroke than all other racial ethnic groups. Yet, these conditions are also more severe for blacks with greater likelihood of death from diabetes and stroke than are white Americans. Additionally, left untreated, hypertension more often leads to organ damage for blacks than whites. The deaths of Breonna Taylor and George Floyd in 2020 led to greater public awareness of police officers' use of lethal force against black Americans and the lack of clearly identified escalation of force protocols. Ultimately, policy should push for the avoidance of use of lethal force, ban chokeholds and shooting into vehicles, and eliminate qualified immunity for law enforcement. Offering clear guidance and encouraging officers to exhaust all available means to deescalate a situation aside from lethal force should greatly reduce police killings and ultimately benefit cardiovascular health inequalities at the population level.

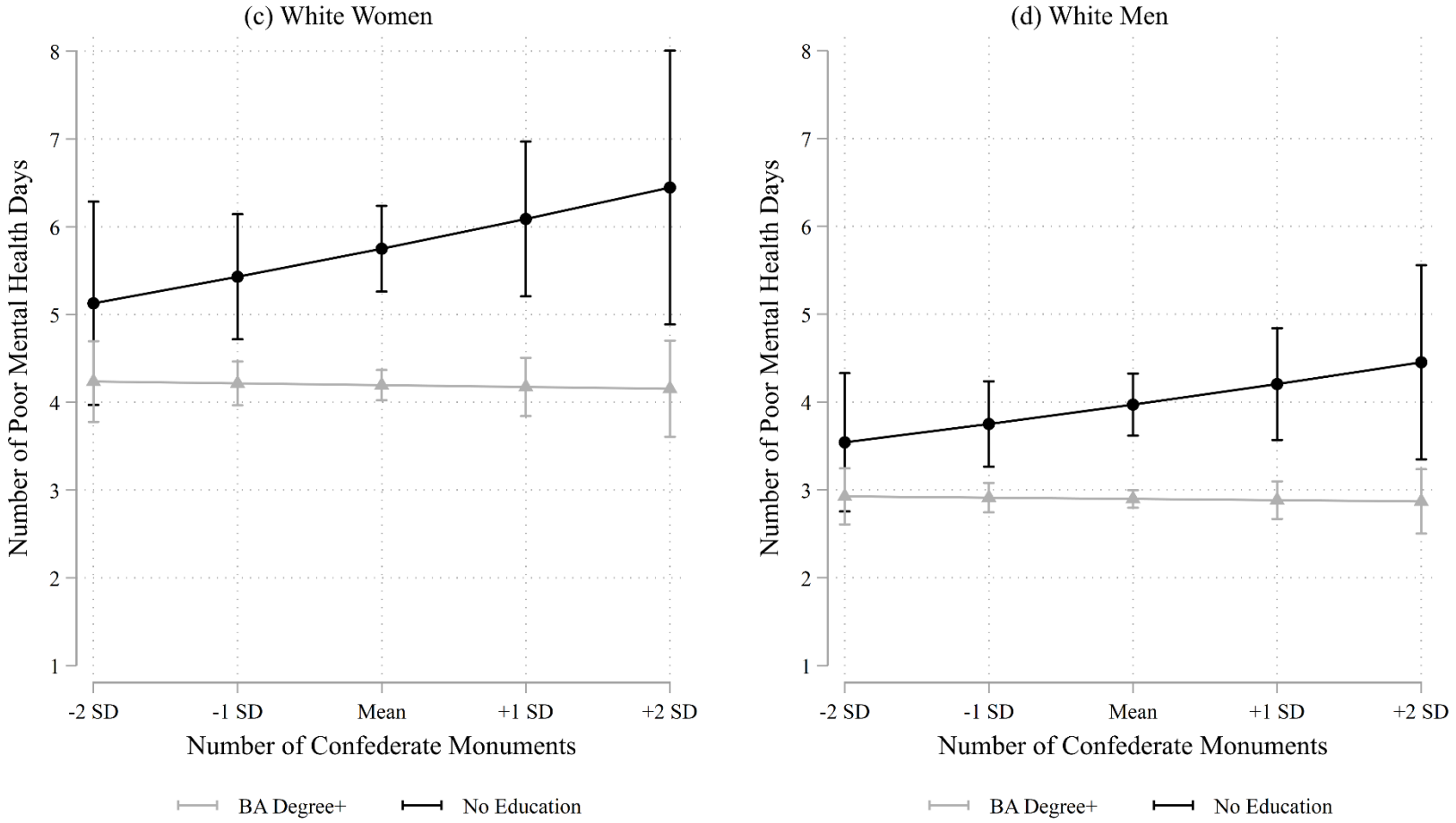
APPENDIX

Appendix A: Predictions of Poor Mental Health Days by Race, Gender, and Education



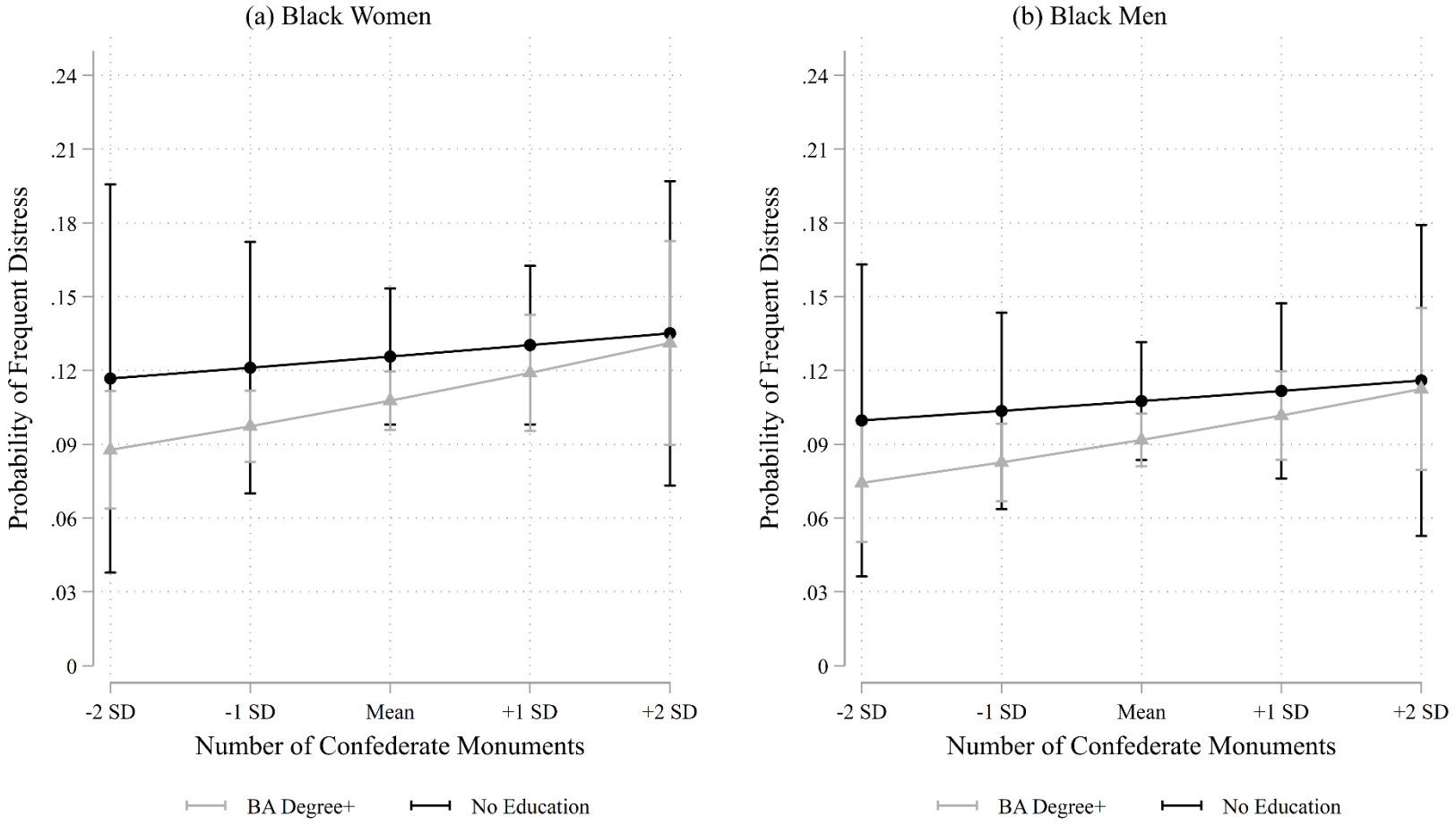
Note: Predictions estimated from full models with interactions.

Appendix B: Predictions of Poor Mental Health Days by Race, Gender, and Education



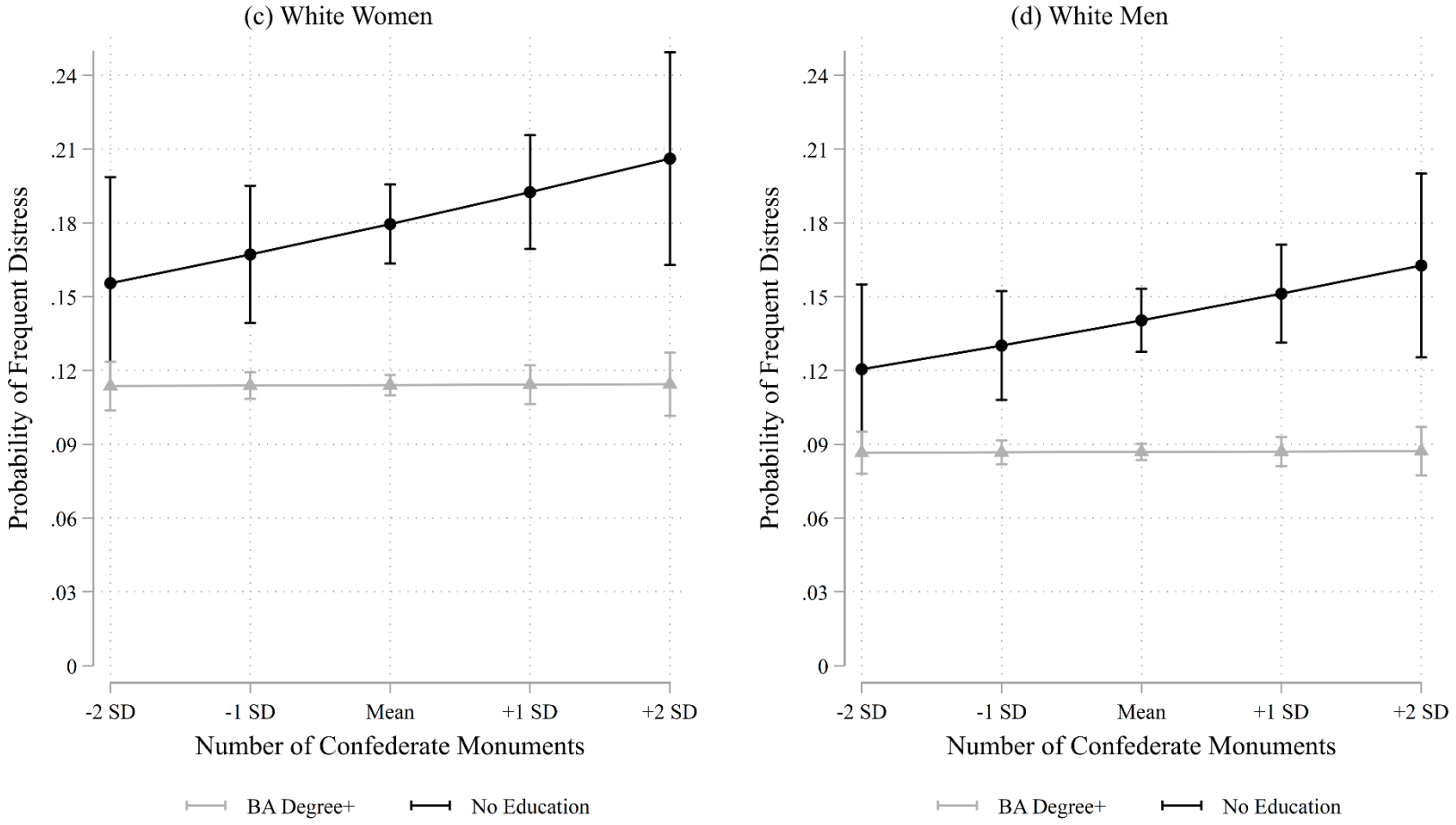
Note: Predictions estimated from full models with interactions.

Appendix C: Predicted Probability of Frequent Distress by Race, Gender, and Education



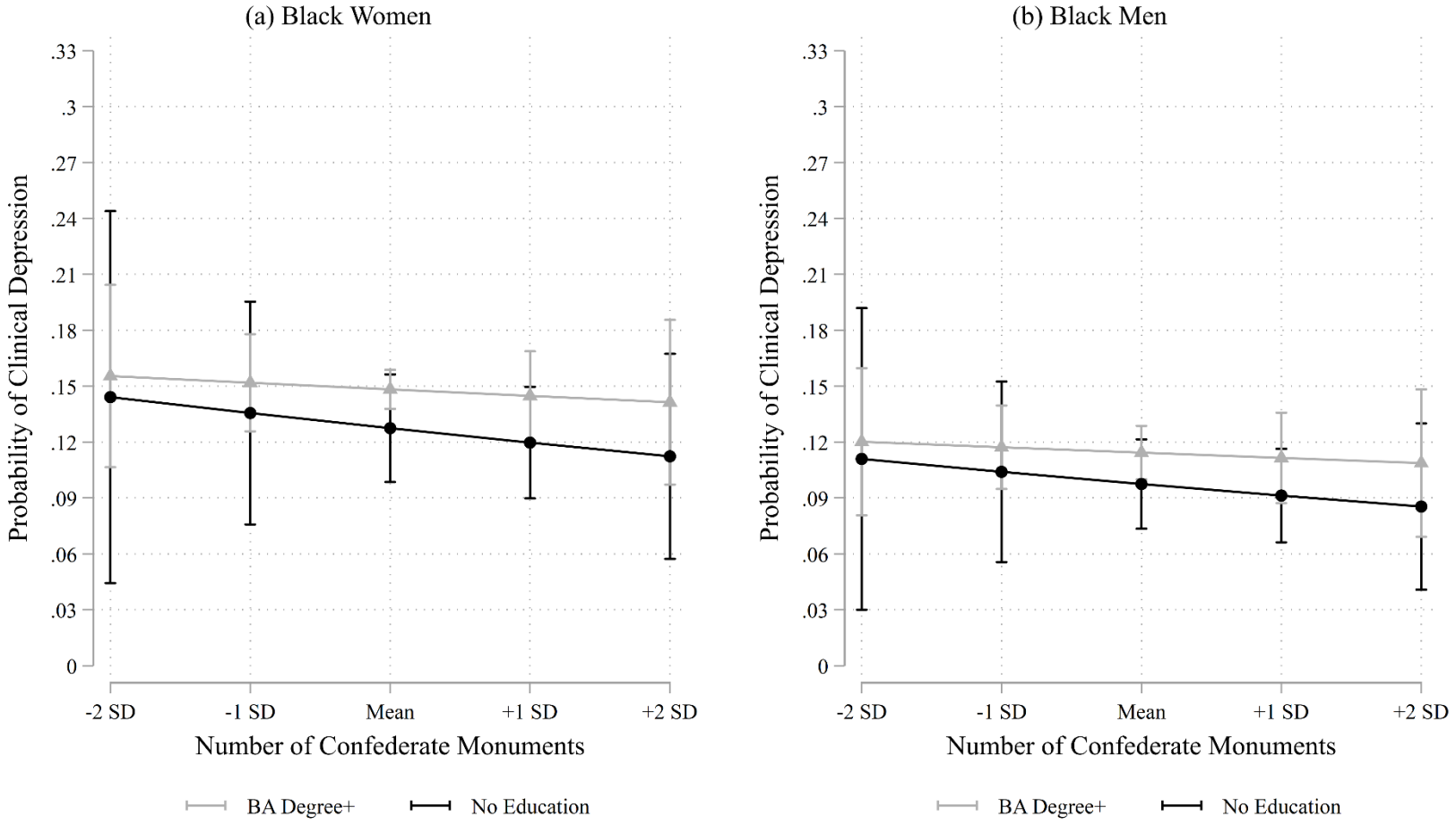
Note: Predictions estimated from full models with interactions.

Appendix D: Predicted Probability of Frequent Distress by Race, Gender, and Education



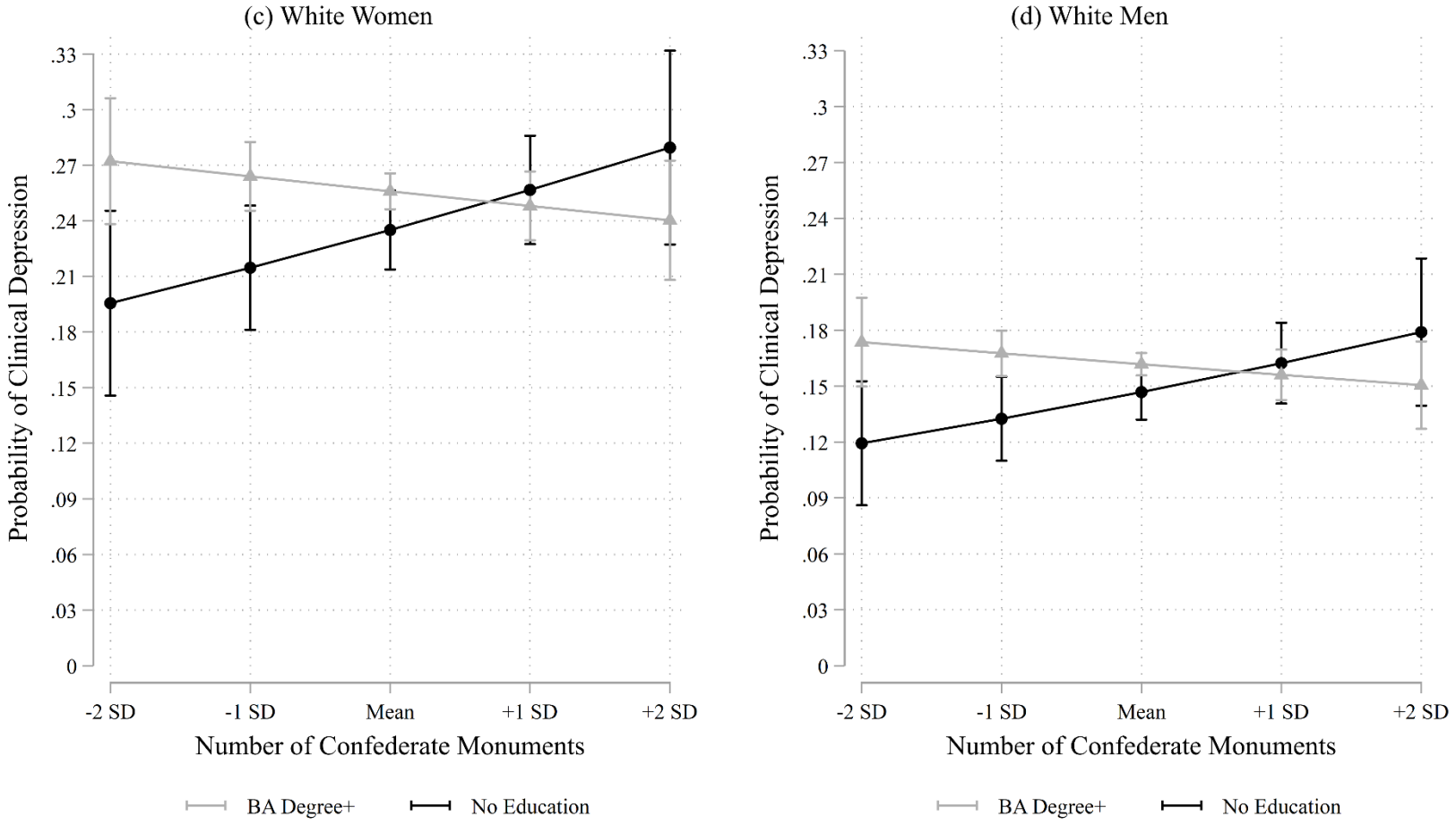
Note: Predictions estimated from full models with interactions.

Appendix E: Predicted Probability of Clinical Depression by Race, Gender, and Education



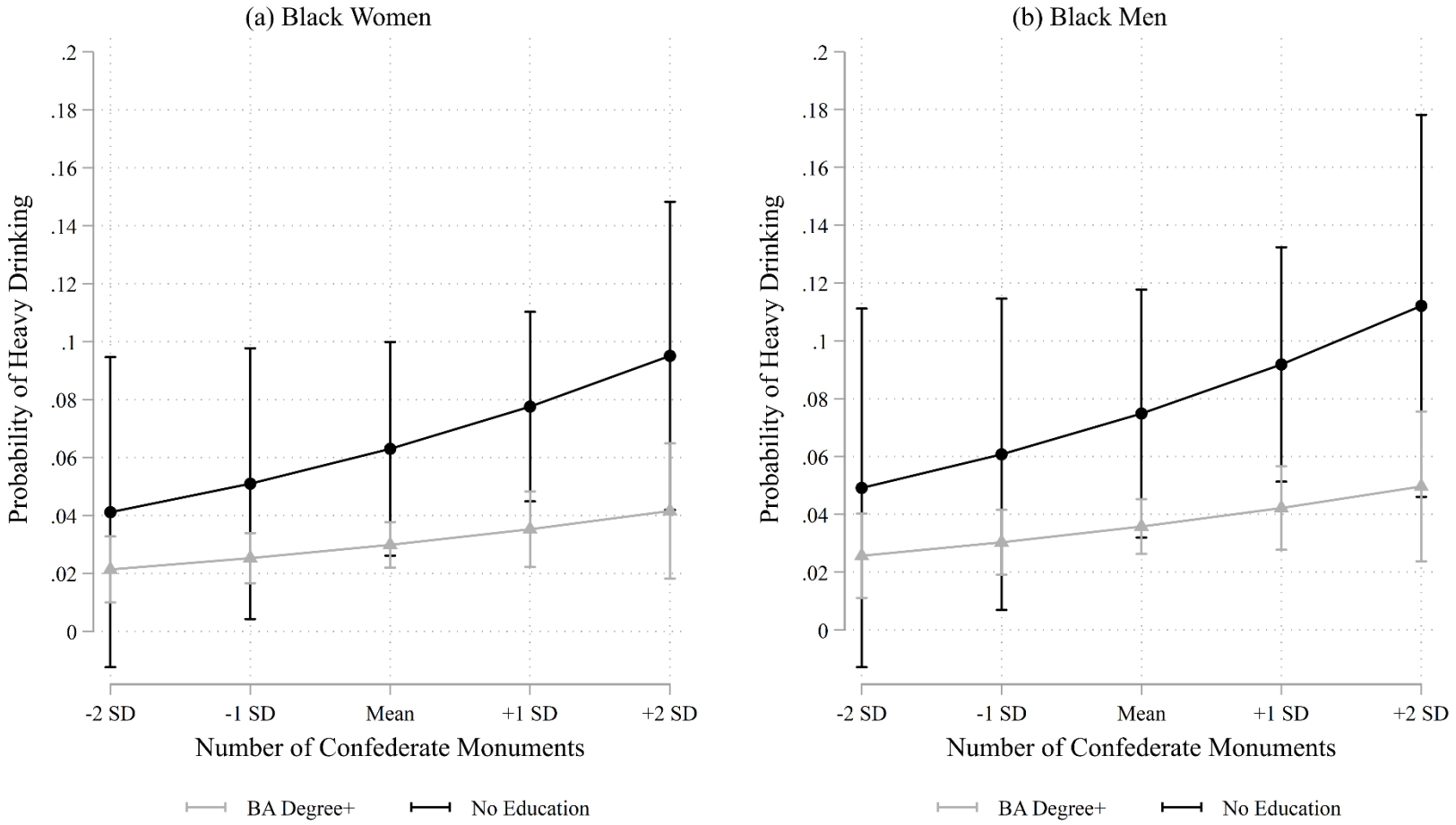
Note: Predictions estimated from full models with interactions.

Appendix F: Predicted Probability of Clinical Depression by Race, Gender, and Education



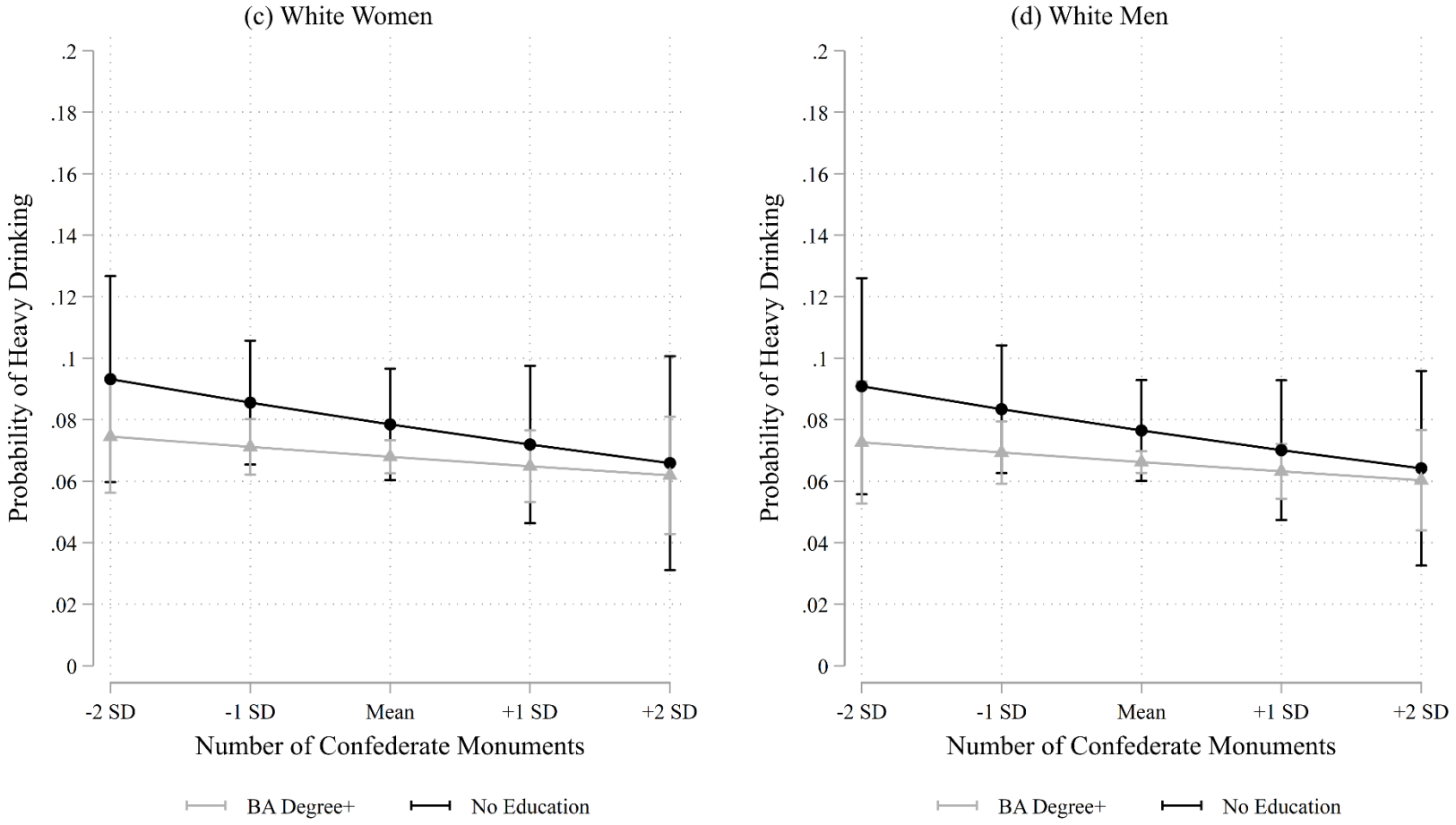
Note: Predictions estimated from full models with interactions.

Appendix G: Predicted Probability of Heavy Drinking by Race, Gender, and Education



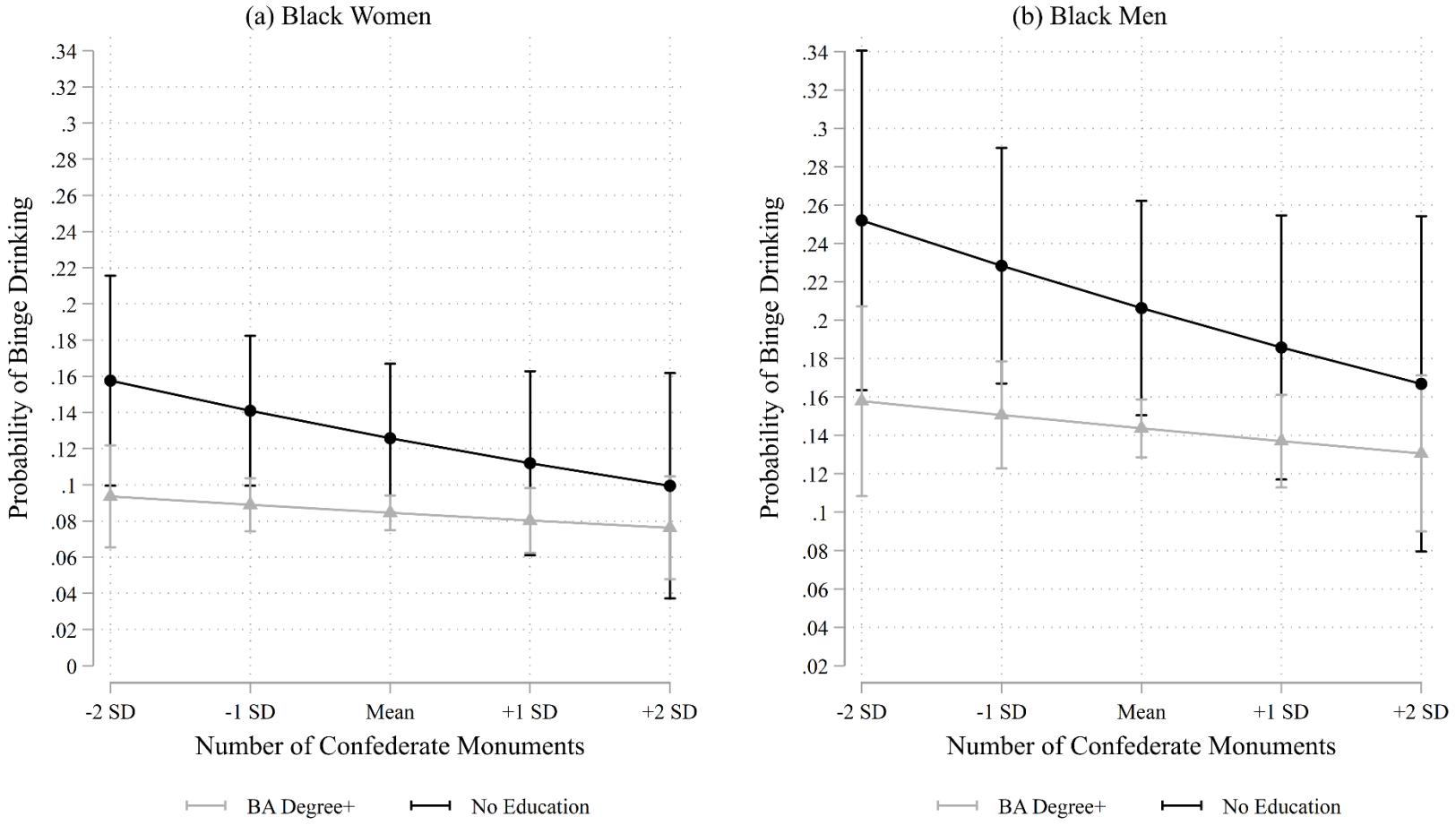
Note: Predictions estimated from full models with interactions.

Appendix H: Predicted Probability of Heavy Drinking by Race, Gender, and Education



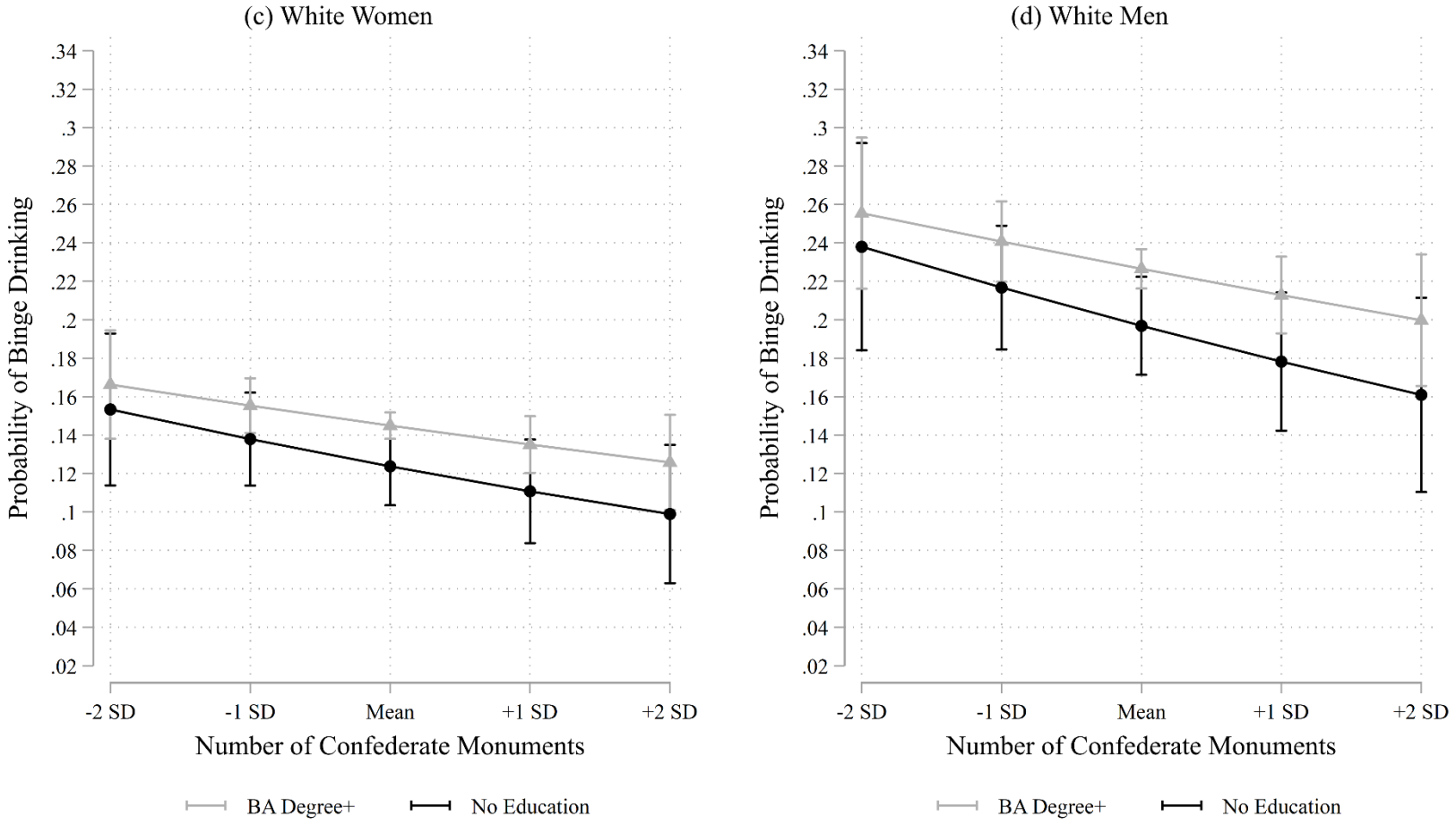
Note: Predictions estimated from full models with interactions.

Appendix I: Predicted Probability of Binge Drinking by Race, Gender, and Education



Note: Predictions estimated from full models with interactions.

Appendix J: Predicted Probability of Binge Drinking by Race, Gender, and Education



Note: Predictions estimated from full models with interactions.

Appendix K. Generalized Mixed Models Estimating Cardiovascular Health Outcomes by Counts of Exposure to Lethal Police Encounters with Unarmed White Americans.

	Hypertension		Diabetes		High Cholesterol		Obesity	
	Blacks	Whites	Blacks	Whites	Blacks	Whites	Blacks	Whites
Variables	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b
White, unarmed, past year	1.025**	1.000	0.976**	0.995	1.000	0.994*	1.014*	1.000
Women (=1)	1.009	0.630***	0.993	0.663***	0.902***	0.818***	1.535***	0.840***
Educational attainment	0.899***	0.874***	0.949***	0.857***	0.979***	1.002	0.942***	0.877***
Age (in years)	2.579***	2.040***	2.065***	1.665***	1.984***	1.870***	1.075***	0.984***
Employed (=1)	0.727***	0.820***	0.620***	0.662***	0.771***	0.921***	1.064***	1.080***
Parent (=1)	0.925***	0.875***	1.014	0.894***	0.930***	0.870***	1.157***	1.085***
Health insurance (=1)	1.232***	1.018	1.177***	1.078***	1.078***	1.184***	1.018	1.025**
Heavy smoker (=1)	1.166***	1.121***	1.010	1.057***	1.139***	1.217***	0.843***	0.941***
Exercised past 30 days (=1)	0.794***	0.717***	0.738***	0.594***	0.877***	0.852***	0.720***	0.546***
South (=1)	1.261	1.210**	1.270**	1.206**	1.146*	1.066	1.082	1.090
Divorced (=1)	1.011**	1.127***	0.935***	1.161***	0.992	1.014*	0.992	1.034***
Widowed (=1)	1.341	1.116***	0.884***	0.966***	0.784***	0.776***	0.775***	0.789***
Separated (=1)	0.977***	1.266***	1.225***	1.238***	1.060*	1.145***	1.137***	1.048**
Never married (=1)	1.176	1.063***	0.943**	1.133***	0.868***	0.816***	0.879***	0.888***
Poor mental health days	1.049***	1.164***	1.159***	1.182***	1.201***	1.196***	1.072***	1.132***
Time since last check up	0.766***	0.780***	0.754***	0.730***	0.806***	0.797***	0.919***	0.899***
Percent black	1.057	1.008	1.041	1.029	1.062	1.050*	1.106**	1.020
Police officers per 100k	0.969	0.935*	0.947	0.931*	0.999	0.960*	0.955	0.930*
Violent crime rate	1.037	1.041	0.963	1.015	0.976	1.028*	1.018	1.006
Gini coefficient	0.914	0.992	0.994	0.989	0.951	1.008	0.951	0.954

Note: Blacks=26,278. Whites=220,226. Odds ratios presented.
*$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

Appendix L. Generalized Mixed Models Estimating Cardiovascular Health Outcomes by Counts of Exposure to Lethal Police Encounters with Unarmed White Americans.

	Heart Attack		Stroke	
	Blacks	Whites	Blacks	Whites
Variables	Model 5a	Model 5b	Model 6a	Model 6b
White, unarmed, past year	0.973*	0.984**	1.001	1.005
Women (=1)	0.698***	0.381***	0.899***	0.774***
Educational attainment	0.900***	0.830***	0.902***	0.858***
Age (in years)	1.827***	2.240***	1.465***	1.827***
Employed (=1)	0.399***	0.568***	0.265***	0.416***
Parent (=1)	0.995	0.928***	0.927*	1.000
Health insurance (=1)	1.194***	0.892***	1.252***	0.905***
Heavy smoker (=1)	1.570***	1.660***	1.368***	1.278***
Exercised past 30 days (=1)	0.767***	0.703***	0.842***	0.702***
South (=1)	1.083	1.150*	1.168	1.202**
Divorced (=1)	1.243***	1.208***	1.565***	1.482***
Widowed (=1)	0.901**	1.120***	1.152***	1.179***
Separated (=1)	1.509***	1.556***	1.506***	1.637***
Never married (=1)	0.975	0.907***	1.156***	1.105***
Poor mental health days	1.201***	1.217***	1.224***	1.258***
Time since last check up	0.890***	0.913***	0.812***	0.894***
Percent black	1.027	1.001	1.060	0.993
Police officers per 100k	1.037	0.965	0.915	0.942
Violent crime rate	0.988	1.014	1.078	1.016
Gini coefficient	0.884*	1.006	1.051	1.007

Note: Blacks=26,278. Whites=220,226. Odds ratios presented.
*$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

Appendix M. Generalized Mixed Models Estimating Cardiovascular Health Events by Counts of Exposure to Lethal Police Encounters with Unarmed Black Americans Accounting for Number of Health Conditions.

	Heart Attack		Stroke	
	Blacks	Whites	Blacks	Whites
Variables	Model 1a	Model 1b	Model 2a	Model 2b
Cardiovascular health conditions[a]	1.609***	1.551***	1.450***	1.368***
Black, unarmed, past year	0.999	1.009	1.024†	1.005
Women (=1)	0.644***	0.403***	0.848***	0.816***
Educational attainment	0.913***	0.847***	0.916***	0.874***
Age (in years)	1.619***	2.158***	1.304***	1.744***
Employed (=1)	0.456***	0.621***	0.292***	0.444***
Parent (=1)	1.001	0.962**	0.929*	1.023
Health insurance (=1)	1.141**	0.832***	1.213***	0.868***
Heavy smoker (=1)	1.584***	1.643***	1.373***	1.267***
Exercised past 30 days (=1)	0.842***	0.800***	0.907***	0.774***
Divorced (=1)	1.277***	1.198***	1.595***	1.464***
Widowed (=1)	0.959	1.158***	1.213***	1.204***
Separated (=1)	1.454***	1.526***	1.443***	1.590***
Never married (=1)	1.019	0.934***	1.198***	1.122***
Poor mental health days	1.156***	1.174***	1.188***	1.224***
Time since last check up	0.962*	0.983***	0.865***	0.939***
Percent black	1.016	1.016	1.072	1.028
Police officers per 100k	1.045	0.977	0.903	0.940*
Violent crime rate	0.995	1.007	1.090	1.014
Gini coefficient	0.888*	0.999	1.063	1.016

Note: Blacks=26,278. Whites=220,226. Odds ratios presented.

[a] Cardiovascular health conditions represents the number of conditions respondents have between hypertension, diabetes, high cholesterol, and obesity.

†$p < .10$ *$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

REFERENCES

Acevedo-Garcia, Dolores, Kimberly A. Lochner, Theresa L. Osypuk, and S. V. Subramanian. 2003. "Future Directions in Residential Segregation and Health Research: A Multilevel Approach." *American Journal of Public Health* 93(2):215–21.

Adler, Nancy E., and David H. Rehkopf. 2008. "U.S. Disparities in Health: Descriptions, Causes, and Mechanisms." *Annual Review of Public Health* 29:235–52.

Adler, Nancy E., and Judith Stewart. 2010. "Health Disparities across the Lifespan: Meaning, Methods, and Mechanisms." *Annals of the New York Academy of Sciences* 1186(1):5–23.

Akinhanmi, Margaret O., Joanna M. Biernacka, Stephen M. Strakowski, Susan L. McElroy, Joyce E. Balls Berry, Kathleen R. Merikangas, Shervin Assari, Melvin G. McInnis, Thomas G. Schulze, Marion LeBoyer, Carol Tamminga, Christi Patten, and Mark A. Frye. 2018. "Racial Disparities in Bipolar Disorder Treatment and Research: A Call to Action." *Bipolar Disorders* 20(6):506–14.

Alexander, Michelle. 2012. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: The New Press.

Allison, Paul David. 2005. *Fixed Effects Regression Methods for Longitudinal Data Using SAS*. Cary, N.C: SAS Institute.

Almeida, David M., Shevaun D. Neupert, Sean R. Banks, and Joyce Serido. 2005. "Do Daily Stress Processes Account for Socioeconomic Health Disparities?" *The Journals of Gerontology: Series B* 60(Special_Issue_2):S34–39.

Amenta, Edwin. 2014. "How to Analyze the Influence of Movements." *Contemporary Sociology* 43(1):16–29.

Amenta, Edwin, Neal Caren, Elizabeth Chiarello, and Yang Su. 2010. "The Political Consequences of Social Movements." *Annual Review of Sociology* 36(1):287–307.

Anderson, Kathryn Freeman. 2013. "Diagnosing Discrimination: Stress from Perceived Racism and the Mental and Physical Health Effects*." *Sociological Inquiry* 83(1):55–81.

Andrews, Kenneth T. 2004. *Freedom Is a Constant Struggle: The Mississippi Civil Rights Movement and Its Legacy*. Chicago: University of Chicago Press.

Aneshensel, Carol S. 1992. "Social Stress: Theory and Research." *Annual Review of Sociology* 18:15–38.

Aneshensel, Carol S. 2009. "Toward Explaining Mental Health Disparities." *Journal of Health and Social Behavior*.

Aneshensel, Carol S., Carolyn M. Rutter, and Peter A. Lachenbruch. 1991. "Social Structure, Stress, and Mental Health: Competing Conceptual and Analytic Models." *American Sociological Review* 56(2):166–78.

Aneshensel, Carol S., and Clea A. Sucoff. 1996. "The Neighborhood Context of Adolescent Mental Health." *Journal of Health and Social Behavior* 37(4):293–310.

Avison, William R., Jennifer Ali, and David Walters. 2007. "Family Structure, Stress, and Psychological Distress: A Demonstration of the Impact of Differential Exposure." *Journal of Health and Social Behavior* 48(3):301–17.

Bailey, Martha, Karen Clay, Price Fishback, Michael Haines, Shawn Kantor, Edson Severnini, and Anna Wentz. 2016. *U.S. County-Level Natality and Mortality Data, 1915-2007*. Inter-university Consortium for Political and Social Research [distributor], 2018-05-02.

Bailey, Zinzi D., Nancy Krieger, Madina Agénor, Jasmine Graves, Natalia Linos, and Mary T. Bassett. 2017. "Structural Racism and Health Inequities in the USA: Evidence and Interventions." *The Lancet* 389(10077):1453–63.

Banaszak-Holl, Jane, Sandra Levitsky, and Mayer Zald. 2010. *Social Movements and the Transformation of American Health Care*. Oxford, New York: Oxford University Press.

Banks, Duren, Paul Ruddle, Erin Kennedy, and Michael G. Planty. 2016. *Arrest-Related Deaths Program Redesign Study, 2015-16: Preliminary Findings*. U.S. Department of Justice.

Barnes, David M., and Lisa M. Bates. 2017. "Do Racial Patterns in Psychological Distress Shed Light on the Black-White Depression Paradox? A Systematic Review." *Social Psychiatry and Psychiatric Epidemiology* 52(8):913–28.

Bell, Derrick. 1993. *Faces at the Bottom of the Well: The Permanence of Racism*. Reprint edition. New York, NY: Basic Books.

Bennett, Gary G., Marcellus M. Merritt, Christopher L. Edwards, and John J. Sollers. 2004. "Perceived Racism and Affective Responses to Ambiguous Interpersonal Interactions among African American Men." *American Behavioral Scientist* 47(7):963–76.

Blight, David W. 2001. *Race and Reunion: The Civil War in American Memory*. Harvard University Press.

Bonilla-Silva, Eduardo. 2001. *White Supremacy and Racism in the Post-Civil Rights Era*. Lynne Rienner Publishers.

Bonilla-Silva, Eduardo. 2017. *Racism without Racists: Color-Blind Racism and the Persistence of Racial Inequality in America*. Rowman & Littlefield Publishers.

Bor, Jacob, Atheendar S. Venkataramani, David R. Williams, and Alexander C. Tsai. 2018a. "Police Killings and Their Spillover Effects on the Mental Health of Black Americans: A Population-Based, Quasi-Experimental Study." *The Lancet* 392(10144):302–10.

Borrell, Luisa N., Ana V. Diez Roux, David R. Jacobs, Steven Shea, Sharon A. Jackson, Sandi Shrager, and Roger S. Blumenthal. 2010. "Perceived Racial/Ethnic Discrimination, Smoking and Alcohol Consumption in the Multi-Ethnic Study of Atherosclerosis (MESA)." *Preventive Medicine* 51(3–4):307–12.

Bosi, Lorenzo, and Marco Giugni. 2012. "The Study of the Consequences of Armed Groups: Lessons from the Social Movement Literature." *Mobilization: An International Quarterly* 17(1):85–98.

Bowleg, Lisa, Ana Maria del Río-González, Mary Mbaba, Cheriko A. Boone, and Sidney L. Holt. 2020. "Negative Police Encounters and Police Avoidance as Pathways to Depressive Symptoms Among US Black Men, 2015–2016." *American Journal of Public Health* 110(S1):S160–66.

Boylstein, Craig. 2018. *When Police Use Force: Context, Methods, Outcomes*. Boulder, Colo: Lynne Rienner Publishers, Inc.

Boynton-Jarrett, Renée, Lynn Rosenberg, Julie R. Palmer, Deborah A. Boggs, and Lauren A. Wise. 2012. "Child and Adolescent Abuse in Relation to Obesity in Adulthood: The Black Women's Health Study." *Pediatrics* 130(2):245–53.

Breslau, Joshua, Kenneth S. Kendler, Maxwell Su, Sergio Gaxiola-Aguilar, and Ronald C. Kessler. 2005. "Lifetime Risk and Persistence of Psychiatric Disorders across Ethnic Groups in the United States." *Psychological Medicine* 35(3):317–27.

Brondolo, Elizabeth, Erica E. Love, Melissa Pencille, Antoinette Schoenthaler, and Gbenga Ogedegbe. 2011. “Racism and Hypertension: A Review of the Empirical Evidence and Implications for Clinical Practice.” *American Journal of Hypertension* 24(5):518–29.

Brosco, Jeffrey P. 1999. “The Early History of the Infant Mortality Rate in America: ‘A Reflection Upon the Past and a Prophecy of the Future’1.” *Pediatrics* 103(2):478–85.

Brown, David W., Lina S. Balluz, Gregory W. Heath, David G. Moriarty, Earl S. Ford, Wayne H. Giles, and Ali H. Mokdad. 2003. “Associations between Recommended Levels of Physical Activity and Health-Related Quality of Life. Findings from the 2001 Behavioral Risk Factor Surveillance System (BRFSS) Survey.” *Preventive Medicine* 37(5):520–28.

Brown, Freida, and Joan Tooley. 1989. “Alcoholism in the Black Community.” Pp. 115–30 in *Alcoholism & substance abuse in special populations*. Gaithersburg, MD, US: Aspen Publishers.

Brown, Phil, Stephen Zavestoski, Sabrina McCormick, Brian Mayer, Rachel Morello-Frosch, and Rebecca Gasior Altman. 2004. “Embodied Health Movements: New Approaches to Social Movements in Health.” *Sociology of Health & Illness* 26(1):50–80.

Brown, Theodore M., and Elizabeth Fee. 2014. “Social Movements in Health.” *Annual Review of Public Health* 35:385–98.

Brown, Tony N. 2003. “Critical Race Theory Speaks to the Sociology of Mental Health: Mental Health Problems Produced by Racial Stratification.” *Journal of Health and Social Behavior* 44(3):292–301.

Brown, Tony N. 2008. “Race, Racism, and Mental Health: Elaboration of Critical Race Theory’s Contribution to the Sociology of Mental Health.” *Contemporary Justice Review* 11(1):53–62.

Brown, Tony N., David R. Williams, James S. Jackson, Harold W. Neighbors, Myriam Torres, Sherrill L. Sellers, and Kendrick T. Brown. 2000. "'Being Black and Feeling Blue': The Mental Health Consequences of Racial Discrimination." *Race and Society* 2(2):117–31.

Browning, Christopher R., Kathleen A. Cagney, and Ming Wen. 2003. "Explaining Variation in Health Status across Space and Time: Implications for Racial and Ethnic Disparities in Self-Rated Health." *Social Science & Medicine (1982)* 57(7):1221–35.

Bruning, John, Ahmed A. Arif, and James E. Rohrer. 2014. "Medical Cost and Frequent Mental Distress among the Non-Elderly US Adult Population." *Journal of Public Health* 36(1):134–39.

Buehler, James W. 2016. "Racial/Ethnic Disparities in the Use of Lethal Force by US Police, 2010–2014." *American Journal of Public Health* 107(2):295–97.

Cable, Noriko, and Amanda Sacker. 2008. "Typologies of Alcohol Consumption in Adolescence: Predictors and Adult Outcomes." *Alcohol and Alcoholism* 43(1):81–90.

Cagney, Kathleen A., Christopher R. Browning, and Ming Wen. 2005. "Racial Disparities in Self-Rated Health at Older Ages: What Difference Does the Neighborhood Make?" *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences* 60(4):S181-190.

Cameron, A. Colin, and Douglas L. Miller. 2015. "A Practitioner's Guide to Cluster-Robust Inference." *Journal of Human Resources* 50(2):317–72.

Campbell, Joan M. 1983. "Ambient Stressors." *Environment and Behavior* 15(3):355–80.

Carmichael, Jason T., and Stephanie L. Kent. 2014. "The Persistent Significance of Racial and Economic Inequality on the Size of Municipal Police Forces in the United States, 1980–2010." *Social Problems* 61(2):259–82.

Carroll, Margaret D. 2017. “Total and High-Density Lipoprotein Cholesterol in Adults: United States, 2015–2016.” (290):8.

Centers for Disease Control and Prevention. 2010. *Adult Obesity: Obesity Rises among Adults*.

Centers for Disease Control and Prevention. 2018. *Diabetes 2017 Report Card*. Atlanta, Georgia.

Centers for Disease Control and Prevention. 2019a. *Alcohol Use and Your Health*. Washington, DC.

Centers for Disease Control and Prevention. 2019b. “Racial and Ethnic Disparities in Heart Disease.”

Centers for Disease Control and Prevention (CDC). 2017. *Behavioral Risk Factor Surveillance System Survey Data 2017*. Atlanta, Georgia: U.S. Department of Health and Human Services.

Chae, David H., Sean Clouston, Mark L. Hatzenbuehler, Michael R. Kramer, Hannah L. F. Cooper, Sacoby M. Wilson, Seth I. Stephens-Davidowitz, Robert S. Gold, and Bruce G. Link. 2015. “Association between an Internet-Based Measure of Area Racism and Black Mortality.” *PLOS ONE* 10(4):e0122963.

Chae, David H., Sean Clouston, Connor D. Martz, Mark L. Hatzenbuehler, Hannah L. F. Cooper, Rodman Turpin, Seth Stephens-Davidowitz, and Michael R. Kramer. 2018. “Area Racism and Birth Outcomes among Blacks in the United States.” *Social Science & Medicine (1982)* 199:49–55.

Chae, David H., Amani M. Nuru-Jeter, Karen D. Lincoln, and Darlene D. Francis. 2011. “Conceptualizing Racial Disparities in Health: Advancement of a Socio-Psychobiological Approach.” *Du Bois Review: Social Science Research on Race* 8(1):63–77.

Chae, David H., Amani M. Nuru-Jeter, Karen D. Lincoln, and Kimberly R. Jacob Arriola. 2012. "Racial Discrimination, Mood Disorders, and Cardiovascular Disease among Black Americans." *Annals of Epidemiology* 22(2):104–11.

Charles, Camille Zubrinsky. 2003. "The Dynamics of Racial Residential Segregation." *Annual Review of Sociology* 29(1):167–207.

Chavez, Laura J., India J. Ornelas, Courtney R. Lyles, and Emily C. Williams. 2015. "Racial/Ethnic Workplace Discrimination: Association with Tobacco and Alcohol Use." *American Journal of Preventive Medicine* 48(1):42–49.

Chen, Alice, Emily Oster, and Heidi Williams. 2016. "Why Is Infant Mortality Higher in the United States Than in Europe?" *American Economic Journal: Economic Policy* 8(2):89–124.

Christie-Mizell, C. André, and Rebecca J. Erickson. 2007. "Mothers and Mastery: The Consequences of Perceived Neighborhood Disorder." *Social Psychology Quarterly* 70(4):340–65.

Christie-Mizell, C. André, Erika T. A. Leslie, and Brittany N. Hearne. 2017. "Self-Rated Health, Discrimination, and Racial Group Identity: The Consequences of Ethnicity and Nativity among Black Americans." *Journal of African American Studies* 21(4):643–64.

Christie-Mizell, C. André, and Robert L. Peralta. 2009. "The Gender Gap in Alcohol Consumption during Late Adolescence and Young Adulthood: Gendered Attitudes and Adult Roles." *Journal of Health and Social Behavior* 50(4):410–26.

Christie-Mizell, C. André, Ryan D. Talbert, Ashleigh R. Hope, Cleothia G. Frazier, and Brittany N. Hearne. 2019. "Depression and African Americans in the First Decade of Midlife: The

Consequences of Social Roles and Gender." *Journal of the National Medical Association* 111(3):285–95.

Church, Jonathan. 2015. *The Cost of "basic Necessities" Has Risen Slightly More than Inflation over the Last 30 Years*. Vol. 4/No. 10. U.S. Bureau of Labor Statistics.

Cohen, Sheldon, Ronald C. Kessler, and Lynn Underwood Gordon, eds. 1995. *Measuring Stress: A Guide for Health and Social Scientists*. New York, NY, US: Oxford University Press.

Colen, Cynthia G., David M. Ramey, Elizabeth C. Cooksey, and David R. Williams. 2018. "Racial Disparities in Health among Nonpoor African Americans and Hispanics: The Role of Acute and Chronic Discrimination." *Social Science & Medicine* 199:167–80.

Collins, Chiquita A., and David R. Williams. 1999. "Segregation and Mortality: The Deadly Effects of Racism?" *Sociological Forum* 14(3):495–523.

Collins, J. W., and R. J. David. 1993. "Race and Birthweight in Biracial Infants." *American Journal of Public Health* 83(8):1125–29.

Conley, Dalton, and Neil G. Bennett. 2000. "Is Biology Destiny? Birth Weight and Life Chances." *American Sociological Review* 65(3):458–67.

Conley, Dalton, and Neil G. Bennett. 2001. "Birth Weight and Income: Interactions across Generations." *Journal of Health and Social Behavior* 42(4):450–65.

Connelly, Thomas Lawrence, and Barbara L. Bellows. 1995. *God and General Longstreet: The Lost Cause and the Southern Mind*. LSU Press.

Cooper, Christopher A., and H. Gibbs Knotts. 2006. "Region, Race, and Support for the South Carolina Confederate Flag*." *Social Science Quarterly* 87(1):142–54.

Coski, John M. 2005. *The Confederate Battle Flag*. Harvard University Press.

Cross, Christina J., Robert Joseph Taylor, and Linda M. Chatters. 2018. “Ethnic and Gender Differences in Family Social Support among Black Adolescents.” *Healthcare* 6(1):20.

Crossley, Nick. 2005. “How Social Movements Move: From First to Second Wave Developments in the UK Field of Psychiatric Contention.” *Social Movement Studies* 4(1):21–48.

Crowder, Kyle, Scott J. South, and Erick Chavez. 2006. “Wealth, Race, and Inter-Neighborhood Migration.” *American Sociological Review* 71(1):72–94.

Cunningham, David. 2009. “Ambivalence and Control: State Action Against the Civil Rights-Era Ku Klux Klan.” *Qualitative Sociology* 32(4):355–77.

Cunningham, David. 2012. *Klansville, U.S.A.: The Rise and Fall of the Civil Rights-Era Ku Klux Klan*. Oxford, New York: Oxford University Press.

Cunningham, David, and Rachel S. Madsen. 2015. “What Is the KKK a Case Of? Extreme Cases as Analytic Device.” *Sociology Compass* 9(4):299–308.

Cunningham, David, and Benjamin T. Phillips. 2007. “Contexts for Mobilization: Spatial Settings and Klan Presence in North Carolina, 1964–1966.” *American Journal of Sociology* 113(3):781–814.

Dagadu, Helena E., and C. André Christie-Mizell. 2014. “Heart Trouble and Racial Group Identity: Exploring Ethnic Heterogeneity Among Black Americans.” *Race and Social Problems; New York* 6(2):143–60.

Dolezsar, Cynthia M., Jennifer J. McGrath, Alyssa J. M. Herzig, and Sydney B. Miller. 2014. “Perceived Racial Discrimination and Hypertension: A Comprehensive Systematic Review.” *Health Psychology : Official Journal of the Division of Health Psychology, American Psychological Association* 33(1):20–34.

Downey, Liam, and Marieke Van Willigen. 2005. “Environmental Stressors: The Mental Health Impacts of Living Near Industrial Activity.” *Journal of Health and Social Behavior* 46(3):289–305.

Du Bois, W. E. B. 1904. *The Souls of Black Folk*. New York: Penguin Books.

Du Bois, W. E. B. 1996. *The Philadelphia Negro: A Social Study*. University of Pennsylvania Press.

Durkheim, Émile. 1965. *The Elementary Forms of the Religious Life*. Free Press.

Edwards, Frank, Michael H. Esposito, and Hedwig Lee. 2018. “Risk of Police-Involved Death by Race/Ethnicity and Place, United States, 2012–2018.” *American Journal of Public Health* 108(9):1241–48.

Ehrlinger, Joyce, E. Ashby Plant, Richard P. Eibach, Corey J. Columb, Joanna L. Goplen, Jonathan W. Kunstman, and David A. Butz. 2011. “How Exposure to the Confederate Flag Affects Willingness to Vote for Barack Obama.” *Political Psychology* 32(1):131–46.

Elder, Glen H., Monica Kirkpatrick Johnson, and Robert Crosnoe. 2003. “The Emergence and Development of Life Course Theory.” Pp. 3–19 in *Handbook of the Life Course*, *Handbooks of Sociology and Social Research*, edited by J. T. Mortimer and M. J. Shanahan. Boston, MA: Springer US.

Emirbayer, Mustafa, and Matthew Desmond. 2015. *The Racial Order*. University of Chicago Press.

Ensel, Walter M., and Nan Lin. 2000. “Age, the Stress Process, and Physical Distress: The Role of Distal Stressors.” *Journal of Aging and Health* 12(2):139–68.

Epp, Charles R., Steven Maynard-Moody, and Donald P. Haider-Markel. 2014. *Pulled over: How Police Stops Define Race and Citizenship*. Chicago ; London: The University of Chicago Press.

Equal Justice Initiative. 2018. *Segregation in America*.

Erving, Christy L., and Courtney S. Thomas. 2018. "Race, Emotional Reliance, and Mental Health." *Society and Mental Health* 8(1):69–83.

Erving, Christy L., Courtney S. Thomas, and Cleothia Frazier. 2019. "Is the Black-White Mental Health Paradox Consistent Across Gender and Psychiatric Disorders?" *American Journal of Epidemiology* 188(2):314–22.

Esser, Marissa B., Sarra L. Hedden, Dafna Kanny, Robert D. Brewer, Joseph C. Gfroerer, and Timothy S. Naimi. 2014. "Prevalence of Alcohol Dependence Among US Adult Drinkers, 2009–2011." *Preventing Chronic Disease* 11.

Fagundes, Christopher P., Kyle W. Murdock, Angie LeRoy, Faiza Baameur, Julian F. Thayer, and Cobi Heijnen. 2018. "Spousal Bereavement Is Associated with More Pronounced Ex Vivo Cytokine Production and Lower Heart Rate Variability: Mechanisms Underlying Cardiovascular Risk?" *Psychoneuroendocrinology* 93:65–71.

Feagin, Joe R. 2006. *Systemic Racism: A Theory of Oppression*. Taylor & Francis.

Feagin, Joe R. 2010. *Racist America: Roots, Current Realities, and Future Reparations*. Taylor & Francis.

Ferraro, Kenneth F., Tetyana Pylypiv Shippee, and Markus H. Schafer. 2009. "Cumulative Inequality Theory for Research on Aging and the Life Course." Pp. 413–33 in *Handbook of theories of aging, 2nd ed*. New York, NY, US: Springer Publishing Co.

Ferraro, Kenneth F., and Lindsay R. Wilkinson. 2013. “Age, Aging, and Mental Health.” Pp. 183–203 in *Handbook of the Sociology of Mental Health, Handbooks of Sociology and Social Research,* edited by C. S. Aneshensel, J. C. Phelan, and A. Bierman. Dordrecht: Springer Netherlands.

Ford, Jodi L., and Christopher R. Browning. 2014. “Effects of Exposure to Violence with a Weapon during Adolescence on Adult Hypertension.” *Annals of Epidemiology* 24(3):193–98.

Ford, Jodi L., and Maggie Rechel. 2012. “Parental Perceptions of the Neighborhood Context and Adolescent Depression.” *Public Health Nursing (Boston, Mass.)* 29(5):390–402.

Fredrickson, George M. 1981. *A Comparative Study of American and South African History*. Oxford University Press.

Fryar, Cheryl D., Te-Ching Chen, and Xianfen Li. 2012. “Prevalence of Uncontrolled Risk Factors for Cardiovascular Disease: United States, 1999-2010.” *NCHS Data Brief* (103):1–8.

Galea, Sandro, Melissa Tracy, Katherine J. Hoggatt, Charles DiMaggio, and Adam Karpati. 2011. “Estimated Deaths Attributable to Social Factors in the United States.” *American Journal of Public Health* 101(8):1456–65.

Gee, Gilbert C. 2002. “A Multilevel Analysis of the Relationship Between Institutional and Individual Racial Discrimination and Health Status.” *American Journal of Public Health* 92(4):615–23.

Gee, Gilbert C., and Chandra L. Ford. 2011. “Structural Racism and Health Inequities.” *Du Bois Review: Social Science Research on Race* 8(01):115–32.

Gee, Gilbert C., Anna Hing, Selina Mohammed, Derrick C. Tabor, and David R. Williams. 2019. "Racism and the Life Course: Taking Time Seriously." *American Journal of Public Health* 109(S1):S43–47.

Gee, Gilbert C., Michael S. Spencer, Juan Chen, and David Takeuchi. 2007. "A Nationwide Study of Discrimination and Chronic Health Conditions Among Asian Americans." *American Journal of Public Health* 97(7):1275–82.

Gee, Gilbert C., Katrina M. Walsemann, and Elizabeth Brondolo. 2012. "A Life Course Perspective on How Racism May Be Related to Health Inequities." *American Journal of Public Health* 102(5):967–74.

Geller, Amanda, Jeffrey Fagan, Tom Tyler, and Bruce G. Link. 2014. "Aggressive Policing and the Mental Health of Young Urban Men." *American Journal of Public Health* 104(12):2321–27.

Gelman, Andrew. 2007. "Struggles with Survey Weighting and Regression Modeling." *Statistical Science* 22(2):153–64.

Geronimus, Arline T. 1992. "The Weathering Hypothesis and the Health of African American Women and Infants: Evidence and Speculation." *Ethnicity & Disease* 2(3):207–21.

Geronimus, Arline T. 2013. "Deep Integration: Letting the Epigenome Out of the Bottle Without Losing Sight of the Structural Origins of Population Health." *American Journal of Public Health* 103(Suppl 1):S56–63.

Geronimus, Arline T., John Bound, and Cynthia G. Colen. 2011. "Excess Black Mortality in the United States and in Selected Black and White High-Poverty Areas, 1980–2000." *American Journal of Public Health* 101(4):720–29.

Geronimus, Arline T., Margaret Hicken, Danya Keene, and John Bound. 2006. "'Weathering' and Age Patterns of Allostatic Load Scores Among Blacks and Whites in the United States." *American Journal of Public Health* 96(5):826–33.

Gibbons, Frederick X., John H. Kingsbury, Chih-Yuan Weng, Meg Gerrard, Carolyn Cutrona, Thomas A. Wills, and Michelle Stock. 2014. "Effects of Perceived Racial Discrimination on Health Status and Health Behavior: A Differential Mediation Hypothesis." *Health Psychology : Official Journal of the Division of Health Psychology, American Psychological Association* 33(1):11–19.

Gibson, Campbell, and Kay Jung. 2002. "Historical Census Statistics on Population Totals by Race, 1790 to 1990, and by Hispanic Origin, 1970 to 1990, For The United States, Regions, Divisions, and States." 177.

Gilbert, Paul A., and Sarah E. Zemore. 2016. "Discrimination and Drinking: A Systematic Review of the Evidence." *Social Science & Medicine (1982)* 161:178–94.

Gillespie, Cathleen D., and Kimberly A. Hurvitz. 2013. *Prevalence of Hypertension and Controlled Hypertension - United States, 2007-2010*.

Giugni, Marco G. 1998. "Was It Worth the Effort? The Outcomes and Consequences of Social Movements." *Annual Review of Sociology* 24(1):371–93.

Giugni, Marco G. 2004. "Personal and Biographical Consequences." Pp. 489–507 in *The Blackwell Companion to Social Movements*. John Wiley & Sons, Ltd.

Giugni, Marco G. 2007. "Useless Protest? A Time-Series Analysis of the Policy Outcomes of Ecology, Antinuclear, and Peace Movements in the United States, 1977-1995." *Mobilization: An International Quarterly* 12(1):53–77.

Giugni, Marco G. 2008. “Political, Biographical, and Cultural Consequences of Social Movements.” *Sociology Compass* 2(5):1582–1600.

Giurgescu, Carmen, Barbara L. McFarlin, Jeneen Lomax, Cindy Craddock, and Amy Albrecht. 2011. “Racial Discrimination and the Black-White Gap in Adverse Birth Outcomes: A Review.” *Journal of Midwifery & Women’s Health* 56(4):362–70.

Glover LáShauntá M., Cain-Shields Loretta R., Spruill Tanya M., O’Brien Emily C., Barber Sharrelle, Loehr Laura, and Sims Mario. 2020. “Goal-Striving Stress and Incident Cardiovascular Disease in Blacks: The Jackson Heart Study.” *Journal of the American Heart Association* 9(9):e015707.

Gorman, B. K. 1999. “Racial and Ethnic Variation in Low Birthweight in the United States: Individual and Contextual Determinants.” *Health & Place* 5(3):195–207.

Gortmaker, Steven L., and Paul H. Wise. 1997. “The First Injustice: Socioeconomic Disparities, Health Services Technology, and Infant Mortality.” *Annual Review of Sociology* 23(1):147–70.

Griffin, Larry J. 1993. “Narrative, Event-Structure Analysis, and Causal Interpretation in Historical Sociology.” *American Journal of Sociology* 98(5):1094–1133.

Gupta, Geeta Rao, Justin O. Parkhurst, Jessica A. Ogden, Peter Aggleton, and Ajay Mahal. 2008. “Structural Approaches to HIV Prevention.” *The Lancet* 372(9640):764–75.

Harrell, Camara Jules P., Tanisha I. Burford, Brandi N. Cage, Travette McNair Nelson, Sheronda Shearon, Adrian Thompson, and Steven Green. 2011. “Multiple Pathways Linking Racism To Health Outcomes.” *Du Bois Review: Social Science Research on Race* 8(1):143–57.

Harrell, Shelly P. 2000. “A Multidimensional Conceptualization of Racism-Related Stress: Implications for the Well-Being of People of Color.” *American Journal of Orthopsychiatry* 70(1):42–57.

Hearne, Brittany, and André C. Christie-Mizell. 2018. “Educational Attainment in Young Adulthood, Depressive Symptoms, and Race-Ethnicity: The Long-Reach of Parenting Styles in Adolescence.” *The Journal of Sociology & Social Welfare* 45(2).

Heikkilä, Katriina, Jaana Pentti, Ida E. H. Madsen, Tea Lallukka, Marianna Virtanen, Lars Alfredsson, Jakob Bjorner, Marianne Borritz, Eric Brunner, Hermann Burr, Jane E. Ferrie, Anders Knutsson, Aki Koskinen, Constanze Leineweber, Linda L. Magnusson Hanson, Martin L. Nielsen, Solja T. Nyberg, Tuula Oksanen, Jan H. Pejtersen, Olli Pietiläinen, Ossi Rahkonen, Reiner Rugulies, Archana Singh-Manoux, Andrew Steptoe, Sakari Suominen, Töres Theorell, Jussi Vahtera, Ari Väänänen, Hugo Westerlund, and Mika Kivimäki. 2020. “Job Strain as a Risk Factor for Peripheral Artery Disease: A Multi-Cohort Study.” *Journal of the American Heart Association* 9(9).

Hicken, Margaret T., Hedwig Lee, and Anna K. Hing. 2018. “The Weight of Racism: Vigilance and Racial Inequalities in Weight-Related Measures.” *Social Science & Medicine (1982)* 199:157–66.

Hicken, Margaret T., Hedwig Lee, Jeffrey Morenoff, James S. House, and David R. Williams. 2014. “Racial/Ethnic Disparities in Hypertension Prevalence: Reconsidering the Role of Chronic Stress.” *American Journal of Public Health* 104(1):117–23.

Hirai, Ashley H., William M. Sappenfield, Michael D. Kogan, Wanda D. Barfield, David A. Goodman, Reem M. Ghandour, and Michael C. Lu. 2014. “Contributors to Excess Infant Mortality in the U.S. South.” *American Journal of Preventive Medicine* 46(3):219–27.

Hoover, J. Edgar. 1966. “The Resurgent Klan.” *American Bar Association Journal* 52:617–20.

Horwitz, Allan V. 2002. *Creating Mental Illness*. Chicago, IL, US: University of Chicago Press.

House, James. S., J. M. Lepkowski, A. M. Kinney, R. P. Mero, R. C. Kessler, and A. R. Herzog. 1994. “The Social Stratification of Aging and Health.” *Journal of Health and Social Behavior* 35(3):213–34.

House, James S., Paula M. Lantz, and Pamela Herd. 2005. “Continuity and Change in the Social Stratification of Aging and Health Over the Life Course: Evidence From a Nationally Representative Longitudinal Study From 1986 to 2001/2002 (Americans’ Changing Lives Study).” *The Journals of Gerontology: Series B* 60(Special_Issue_2):S15–26.

Hughes, Michael, and David H. Demo. 1989. “Self-Perceptions of Black Americans: Self-Esteem and Personal Efficacy.” *American Journal of Sociology* 95(1):132–59.

Hughes, Michael, and Melvin E. Thomas. 1998. “The Continuing Significance of Race Revisited: A Study of Race, Class, and Quality of Life in America, 1972 to 1996.” *American Sociological Review* 63(6):785–95.

Hunte, Haslyn E. R., and Adam E. Barry. 2012. “Perceived Discrimination and DSM-IV–Based Alcohol and Illicit Drug Use Disorders.” *American Journal of Public Health* 102(12):e111–17.

Hwang, Wei-Chin, and Hector F. Myers. 2013. “The Explanatory Model of Illness Catalogue: Ethnic Differences in Women’s Illness Beliefs and Help-Seeking for Depression.” *Journal of Cultural Diversity* 20(2):57–65.

Isaac, Larry. 2009. “Movements, Aesthetics, and Markets in Literary Change: Making the American Labor Problem Novel.” *American Sociological Review* 74(6):938–65.

Isaac, Larry, and Lars Christiansen. 2002. “How the Civil Rights Movement Revitalized Labor Militancy.” *American Sociological Review* 67(5):722–46.

Isaac, Larry, and William R. Kelly. 1981. “Racial Insurgency, the State, and Welfare Expansion: Local and National Level Evidence from the Postwar United States.” *American Journal of Sociology* 86(6):1348–86.

Isaac, Larry W., Anna W. Jacobs, Jaime Kucinskas, and Allison R. McGrath. 2020. “Social Movement Schools: Sites for Consciousness Transformation, Training, and Prefigurative Social Development.” *Social Movement Studies* 19(2):160–82.

Jackson, James S., Katherine M. Knight, and Jane A. Rafferty. 2010. “Race and Unhealthy Behaviors: Chronic Stress, the HPA Axis, and Physical and Mental Health Disparities over the Life Course.” *American Journal of Public Health* 100(5):933–39.

Jones-Brown, Delores D., Jaspreet Gill, Jennifer Trone, John Jay College of Criminal Justice, and Crime and Justice Center on Race. 2010. *Stop, Question & Frisk Policing Practices in New York City: A Primer.* New York, N.Y.: Center on Race, Crime and Justice, John Jay College of Criminal Justice.

Kaplan, G. A., E. R. Pamuk, J. W. Lynch, R. D. Cohen, and J. L. Balfour. 1996. “Inequality in Income and Mortality in the United States: Analysis of Mortality and Potential Pathways.” *BMJ (Clinical Research Ed.)* 312(7037):999–1003.

Kawachi, I., B. P. Kennedy, K. Lochner, and D. Prothrow-Stith. 1997. “Social Capital, Income Inequality, and Mortality.” *American Journal of Public Health* 87(9):1491–98.

Kessler, R. C., K. D. Mickelson, and D. R. Williams. 1999. “The Prevalence, Distribution, and Mental Health Correlates of Perceived Discrimination in the United States.” *Journal of Health and Social Behavior* 40(3):208–30.

Kessler, Ronald C., Katherine A. McGonagle, Shanyang Zhao, Christopher B. Nelson, Michael Hughes, Suzann Eshleman, Hans-Ulrich Wittchen, and Kenneth S. Kendler. 1994. "Lifetime and 12-Month Prevalence of DSM-III-R Psychiatric Disorders in the United States: Results From the National Comorbidity Survey." *Archives of General Psychiatry* 51(1):8–19.

Keyes, Corey L. M. 2007. "Promoting and Protecting Mental Health as Flourishing: A Complementary Strategy for Improving National Mental Health." *American Psychologist* 62(2):95–108.

Kim, Jinyoung, and Emily Durden. 2007. "Socioeconomic Status and Age Trajectories of Health." *Social Science & Medicine (1982)* 65(12):2489–2502.

King, Brayden G., and Nicholas A. Pearce. 2010. "The Contentiousness of Markets: Politics, Social Movements, and Institutional Change in Markets." *Annual Review of Sociology* 36(1):249–67.

Kirk, David S., and Sara Wakefield. 2018. "Collateral Consequences of Punishment: A Critical Review and Path Forward." *Annual Review of Criminology* 1(1):171–94.

Klawiter, Maren. 2005. "Breast Cancer in Two Regimes: The Impact of Social Movements on Illness Experience." *Sociology of Health & Illness* 26(6):845–74.

Kramer, Michael R., Nyesha C. Black, Stephen A. Matthews, and Sherman A. James. 2017. "The Legacy of Slavery and Contemporary Declines in Heart Disease Mortality in the U.S. South." *SSM - Population Health* 3:609–17.

Krieger, Nancy. 2001. "Theories for Social Epidemiology in the 21st Century: An Ecosocial Perspective." *International Journal of Epidemiology* 30(4):668–77.

Krieger, Nancy. 2012. “Methods for the Scientific Study of Discrimination and Health: An Ecosocial Approach.” *American Journal of Public Health* 102(5):936–44.

Krieger, Nancy, Pamela D. Waterman, Neelesh Batra, Johnna S. Murphy, Daniel P. Dooley, and Snehal N. Shah. 2017. “Measures of Local Segregation for Monitoring Health Inequities by Local Health Departments.” *American Journal of Public Health* 107(6):903–6.

Krieger, Nancy, Pamela D. Waterman, Jasmina Spasojevic, Wenhui Li, Gil Maduro, and Gretchen Van Wye. 2015. “Public Health Monitoring of Privilege and Deprivation With the Index of Concentration at the Extremes.” *American Journal of Public Health* 106(2):256–63.

Kutz-Flamenbaum, Rachel V. 2016. “The Importance of Micro-Level Effects on Social Movement Outcomes: MachsomWatch at Israeli Checkpoints.” *Sociological Perspectives* 59(2):441–59.

Kuzawa, Christopher W., and Elizabeth Sweet. 2009. “Epigenetics and the Embodiment of Race: Developmental Origins of US Racial Disparities in Cardiovascular Health.” *American Journal of Human Biology: The Official Journal of the Human Biology Council* 21(1):2–15.

Kwate, Naa Oyo A., and Ilan H. Meyer. 2011. “On Sticks And Stones And Broken Bones: Stereotypes and African American Health.” *Du Bois Review: Social Science Research on Race* 8(1):191–98.

Lantz, Paula M., James S. House, Richard P. Mero, and David R. Williams. 2005. “Stress, Life Events, and Socioeconomic Disparities in Health: Results from the Americans’ Changing Lives Study.” *Journal of Health and Social Behavior* 46(3):274–88.

Lauderdale, Diane S. 2006. “Birth Outcomes for Arabic-Named Women in California before and after September 11.” *Demography* 43(1):185–201.

LaVeist, Thomas A. 1993. “Segregation, Poverty, and Empowerment: Health Consequences for African Americans.” *The Milbank Quarterly* 71(1):41–64.

Lee, Hedwig, Christopher Wildeman, Emily A. Wang, Niki Matusko, and James S. Jackson. 2014. “A Heavy Burden: The Cardiovascular Health Consequences of Having a Family Member Incarcerated.” *American Journal of Public Health* 104(3):421–27.

Lee, Jocelyn R. Smith, and Michael A. Robinson. 2019. “‘That’s My Number One Fear in Life. It’s the Police’: Examining Young Black Men’s Exposures to Trauma and Loss Resulting From Police Violence and Police Killings:” *Journal of Black Psychology*.

Lee, Yeonjin, Peter Muennig, Ichiro Kawachi, and Mark L. Hatzenbuehler. 2015. “Effects of Racial Prejudice on the Health of Communities: A Multilevel Survival Analysis.” *American Journal of Public Health* 105(11):2349–55.

Leitner, Jordan B., Eric Hehman, Ozlem Ayduk, and Rodolfo Mendoza-Denton. 2016. “Blacks’ Death Rate Due to Circulatory Diseases Is Positively Related to Whites’ Explicit Racial Bias: A Nationwide Investigation Using Project Implicit.” *Psychological Science* 27(10):1299–1311.

Lewis, Tené T., Susan A. Everson-Rose, Lynda H. Powell, Karen A. Matthews, Charlotte Brown, Kelly Karavolos, Kim Sutton-Tyrrell, Elizabeth Jacobs, and Deidre Wesley. 2006. “Chronic Exposure to Everyday Discrimination and Coronary Artery Calcification in African-American Women: The SWAN Heart Study.” *Psychosomatic Medicine* 68(3):362–68.

Lewis, Tené T., David R. Williams, Mahader Tamene, and Cheryl R. Clark. 2014a. "Self-Reported Experiences of Discrimination and Cardiovascular Disease." *Current Cardiovascular Risk Reports* 8(1):365.

Lewis, Tené T., David R. Williams, Mahader Tamene, and Cheryl R. Clark. 2014b. "Self-Reported Experiences of Discrimination and Cardiovascular Disease." *Current Cardiovascular Risk Reports* 8(1):365.

Lin, Nan, and Walter M. Ensel. 1989. "Life Stress and Health: Stressors and Resources." *American Sociological Review* 54(3):382–99.

Lines, Lisa, Matthew Urato, Michael Halpern, and Sujha Subramanian. 2014. "Insurance Coverage and Preventive Care among Adults." *Research Triangle Park, NC: RTI Press* RTI Press Publication No. RR-0021-1404.

Link, Bruce G., and Jo Phelan. 1995. "Social Conditions As Fundamental Causes of Disease." *Journal of Health and Social Behavior* 80–94.

Lipold, Paul F., and Larry W. Isaac. 2009. "Striking Deaths: Lethal Contestation and the 'Exceptional' Character of the American Labor Movement, 1870–1970*." *International Review of Social History* 54(2):167–205.

Loewen, James W. 2019. *Lies Across America: What Our Historic Sites Get Wrong*. Revised, Updated ed. edition. The New Press.

Long, J. Scott, and Sarah A. Mustillo. 2018. "Using Predictions and Marginal Effects to Compare Groups in Regression Models for Binary Outcomes." *Sociological Methods & Research* 0049124118799374.

Longest, Kyle C., and Peggy A. Thoits. 2012. "Gender, the Stress Process, and Health: A Configurational Approach." *Society and Mental Health*.

Louie, Patricia, and Blair Wheaton. 2019. “The Black-White Paradox Revisited: Understanding the Role of Counterbalancing Mechanisms during Adolescence:” *Journal of Health and Social Behavior*.

Lukachko, Alicia, Mark L. Hatzenbuehler, and Katherine M. Keyes. 2014. “Structural Racism and Myocardial Infarction in the United States.” *Social Science & Medicine (1982)* 103:42–50.

MacDorman, Marian F., and Sharon Kirmeyer. 2009. *The Challenge of Fetal Mortality*. National Center for Health Statistics.

Madigan, Sheri, Mark Wade, Andre Plamondon, Jonathon L. Maguire, and Jennifer M. Jenkins. 2017. “Maternal Adverse Childhood Experience and Infant Health: Biomedical and Psychosocial Risks as Intermediary Mechanisms.” *The Journal of Pediatrics* 187:282-289.e1.

Malat, Jennifer, Sarah Mayorga-Gallo, and David R. Williams. 2017. “The Effects of Whiteness on the Health of Whites in the USA.” *Social Science & Medicine*.

Marcelin, Jasmine R., Dawd S. Siraj, Robert Victor, Shaila Kotadia, and Yvonne A. Maldonado. 2019. “The Impact of Unconscious Bias in Healthcare: How to Recognize and Mitigate It.” *The Journal of Infectious Diseases* 220(Supplement_2):S62–73.

Marks, James S., James W. Buehler, Lilo T. Strauss, Carol J. R. Hogue, and Jack C. Smith. 1987. “Variation in State-Specific Infant Mortality Risks.” *Public Health Reports (1974-)* 102(2):146–51.

Martin, Jack K., Steven A. Tuch, and Paul M. Roman. 2003. “Problem Drinking Patterns among African Americans: The Impacts of Reports of Discrimination, Perceptions of Prejudice, and ‘Risky’ Coping Strategies.” *Journal of Health and Social Behavior* 44(3):408–25.

Mask, Deirdre. 2020. *The Address Book: What Street Addresses Reveal About Identity, Race, Wealth, and Power*. St. Martin's Publishing Group.

Mathews, T. J., Marian F. MacDorman, and Fay Menacker. 2015. "Infant Mortality Statistics from the 1999 Period: Linked Birth/Infant Death Data Set: (558952006-001)."

Matoba, Nana, and James W. Collins. 2017. "Racial Disparity in Infant Mortality." *Seminars in Perinatology* 41(6):354–59.

McDonough, P., and V. Walters. 2001. "Gender and Health: Reassessing Patterns and Explanations." *Social Science & Medicine (1982)* 52(4):547–59.

McDonough, Peggy, Diana Worts, Cara Booker, Anne McMunn, and Amanda Sacker. 2015. "Cumulative Disadvantage, Employment–Marriage, and Health Inequalities among American and British Mothers." *Advances in Life Course Research* 25:49–66.

McFarland, Michael J., Amanda Geller, and Cheryl McFarland. 2019. "Police Contact and Health among Urban Adolescents: The Role of Perceived Injustice." *Social Science & Medicine (1982)* 238:112487.

McFarland, Michael J., John Taylor, Cheryl A. S. McFarland, and Katherine L. Friedman. 2018. "Perceived Unfair Treatment by Police, Race, and Telomere Length: A Nashville Community-Based Sample of Black and White Men." *Journal of Health and Social Behavior* 59(4):585–600.

McVeigh, Rory, and David Cunningham. 2012. "Enduring Consequences of Right-Wing Extremism: Klan Mobilization and Homicides in Southern Counties." *Social Forces* 90(3):843–62.

McVeigh, Rory, David Cunningham, and Justin Farrell. 2014. "Political Polarization as a Social Movement Outcome: 1960s Klan Activism and Its Enduring Impact on Political

Realignment in Southern Counties, 1960 to 2000." *American Sociological Review* 79(6):1144– 1171.

McVeigh, Rory, and Kevin Estep. 2019. *The Politics of Losing: Trump, the Klan, and the Mainstreaming of Resentment*. Columbia University Press.

Menifield, CHARLES E., and JACOB Dawson. 2008. "Infant Mortality In Southern States: A Bureaucratic Nightmare." *Journal of Health and Human Services Administration* 31(3):385–402.

Mesic, Aldina, Lydia Franklin, Alev Cansever, Fiona Potter, Anika Sharma, Anita Knopov, and Michael Siegel. 2018. "The Relationship Between Structural Racism and Black-White Disparities in Fatal Police Shootings at the State Level." *Journal of the National Medical Association* 110(2):106–16.

Messer, Lynne C., Jay S. Kaufman, Nancy Dole, David A. Savitz, and Barbara A. Laraia. 2006. "Neighborhood Crime, Deprivation, and Preterm Birth." *Annals of Epidemiology* 16(6):455–62.

Messner, S., Luc Anselin, D. Hawkins, Glenn Deane, S. Tolnay, and R. Baller. 2000. "An Atlas of the Spatial Patterning of County-Level Homicide, 1960–1990." *Pittsburgh, PA: National Consortium on Violence Research (NCOVR).*

Metzl, Jonathan M. 2019. *Dying of Whiteness: How the Politics of Racial Resentment Is Killing America's Heartland*. Basic Books.

Mills, Charles W. 1997. *The Racial Contract*. Cornell University Press.

Mirowsky, John, and Catherine E. Ross. 2015. "Education, Health, and the Default American Lifestyle." *Journal of Health and Social Behavior* 56(3):297–306.

Monk, Ellis P. 2015. “The Cost of Color: Skin Color, Discrimination, and Health among African-Americans.” *American Journal of Sociology* 121(2):396–444.

Morenoff, Jeffrey D., James S. House, Ben B. Hansen, David R. Williams, George A. Kaplan, and Haslyn E. Hunte. 2007. “Understanding Social Disparities in Hypertension Prevalence, Awareness, Treatment, and Control: The Role of Neighborhood Context.” *Social Science & Medicine (1982)* 65(9):1853–66.

Moriarty, David G., Matthew M. Zack, James B. Holt, Daniel P. Chapman, and Marc A. Safran. 2009. “Geographic Patterns of Frequent Mental Distress: U.S. Adults, 1993–2001 and 2003–2006.” *American Journal of Preventive Medicine* 36(6):497–505.

Mouzon, Dawne M. 2014. “Relationships of Choice: Can Friendships or Fictive Kinships Explain the Race Paradox in Mental Health?” *Social Science Research* 44:32–43.

Mouzon, Dawne M. 2017. “Religious Involvement and the Black–White Paradox in Mental Health.” *Race and Social Problems* 9(1):63–78.

Mozaffarian, Dariush, Emelia J. Benjamin, Alan S. Go, Donna K. Arnett, Michael J. Blaha, Mary Cushman, Sarah de Ferranti, Jean-Pierre Després, Heather J. Fullerton, Virginia J. Howard, Mark D. Huffman, Suzanne E. Judd, Brett M. Kissela, Daniel T. Lackland, Judith H. Lichtman, Lynda D. Lisabeth, Simin Liu, Rachel H. Mackey, David B. Matchar, Darren K. McGuire, Emile R. Mohler, Claudia S. Moy, Paul Muntner, Michael E. Mussolino, Khurram Nasir, Robert W. Neumar, Graham Nichol, Latha Palaniappan, Dilip K. Pandey, Mathew J. Reeves, Carlos J. Rodriguez, Paul D. Sorlie, Joel Stein, Amytis Towfighi, Tanya N. Turan, Salim S. Virani, Joshua Z. Willey, Daniel Woo, Robert W. Yeh, Melanie B. Turner, and American Heart Association Statistics Committee and Stroke Statistics Subcommittee. 2015. “Heart Disease and Stroke

Statistics--2015 Update: A Report from the American Heart Association." *Circulation* 131(4):e29-322.

Mulia, Nina, and Sarah E. Zemore. 2012. "Social Adversity, Stress, and Alcohol Problems: Are Racial/Ethnic Minorities and the Poor More Vulnerable?" *Journal of Studies on Alcohol and Drugs* 73(4):570–80.

Mustillo, Sarah A., Omar A. Lizardo, and Rory M. McVeigh. 2018. "Editors' Comment: A Few Guidelines for Quantitative Submissions." *American Sociological Review* 83(6):1281–83.

Myers, Hector F., Gail E. Wyatt, Jodie B. Ullman, Tamra B. Loeb, Dorothy Chin, Nicole Prause, Muyu Zhang, John K. Williams, George M. Slavich, and Honghu Liu. 2015. "Cumulative Burden of Lifetime Adversities: Trauma and Mental Health in Low-SES African Americans and Latino/As." *Psychological Trauma: Theory, Research, Practice and Policy* 7(3):243–51.

National Center for Health Statistics. 2016. *Health, United States, 2015: With Special Feature on Racial and Ethnic Health Disparities*. Hyattsville, MD.

Novak, Nicole L., Arline T. Geronimus, and Aresha M. Martinez-Cardoso. 2017. "Change in Birth Outcomes among Infants Born to Latina Mothers after a Major Immigration Raid." *International Journal of Epidemiology* 46(3):839–49.

Oliver, Melvin L., Thomas M. Shapiro, and Thomas Shapiro. 2006. *Black Wealth, White Wealth: A New Perspective on Racial Inequality*. Taylor & Francis.

Omi, Michael, and Howard Winant. 2014. *Racial Formation in the United States*. Routledge.

Osypuk, Theresa L., and Sandro Galea. 2007. "What Level Macro? Choosing Appropriate Levels to Assess How Place Influences Population Health." Pp. 399–435 in *Macrosocial*

Determinants of Population Health, edited by S. Galea. New York, NY: Springer New York.

Owens, Peter B., David Cunningham, and Geoff Ward. 2015. "Threat, Competition, and Mobilizing Structures: Motivational and Organizational Contingencies of the Civil Rights-Era Ku Klux Klan." *Social Problems* 62(4):572–604.

Padela, Aasim I., and Michele Heisler. 2010. "The Association of Perceived Abuse and Discrimination After September 11, 2001, With Psychological Distress, Level of Happiness, and Health Status Among Arab Americans." *American Journal of Public Health* 100(2):284–91.

Palmer, Brian, and Seth Freed Wessler. 2018. "The Costs of the Confederacy." *Smithsonian Magazine*.

Paradies, Yin. 2006. "A Systematic Review of Empirical Research on Self-Reported Racism and Health." *International Journal of Epidemiology* 35(4):888–901.

Paradies, Yin, Jehonathan Ben, Nida Denson, Amanuel Elias, Naomi Priest, Alex Pieterse, Arpana Gupta, Margaret Kelaher, and Gilbert Gee. 2015. "Racism as a Determinant of Health: A Systematic Review and Meta-Analysis." *PLOS ONE* 10(9):e0138511.

Parke, Ross, and K. Alison Clarke-Stewart. 2002. "Effects of Parental Incarceration on Young Children." 20.

Patterson, Evelyn J. 2010. "Incarcerating Death: Mortality in U.S. State Correctional Facilities, 1985–1998." *Demography* 47(3):587–607.

Patterson, Evelyn J. 2013. "The Dose–Response of Time Served in Prison on Mortality: New York State, 1989–2003." *American Journal of Public Health* 103(3):523–28.

Pavalko, E. K., and S. Woodbury. 2000. “Social Roles as Process: Caregiving Careers and Women’s Health.” *Journal of Health and Social Behavior* 41(1):91–105.

Pearlin, Leonard I., Carol S. Aneshensel, and A. J. LeBlanc. 1997. “The Forms and Mechanisms of Stress Proliferation: The Case of AIDS Caregivers.” *Journal of Health and Social Behavior* 38(3):223–36.

Pearlin, Leonard I. 1989. “The Sociological Study of Stress.” *Journal of Health and Social Behavior* 30(3):241–56.

Pearlin, Leonard I. 1999. “The Stress Process Revisited: Reflections on Concepts and Their Interrelationships.” Pp. 395–415 in *Handbook of sociology of mental health*, *Handbook of sociology and social research*. Dordrecht, Netherlands: Kluwer Academic Publishers.

Pearlin, Leonard I., Elizabeth G. Menaghan, Morton A. Lieberman, and Joseph T. Mullan. 1981. “The Stress Process.” *Journal of Health and Social Behavior* 22(4):337–56.

Pearlin, Leonard I., and Carmi Schooler. 1978. “The Structure of Coping.” *Journal of Health and Social Behavior* 19(1):2–21.

Pearlin, Leonard I., and Marilyn McKean Skaff. 1996. “Stress and the Life Course: A Paradigmatic Alliance.” *The Gerontologist* 36(2):239–47.

Pew Research Center. 2011. *Positive Reaction to the Confederate Flag*. Washington, DC: Pew Research Center.

Pew Research Center. 2015. *Across Racial Lines, More Say Nation Needs to Make Changes to Achieve Racial Equality*. Washington, DC: Pew Research Center.

Pew Research Center. 2016. *Social Media Conversations about Race: How Social Media Users See, Share and Discuss Race and the Rise of Hashtags like #BlackLivesMatter*. Washington, DC.

Preston, Samuel H., M. E. Hill, and G. L. Drevenstedt. 1998. "Childhood Conditions That Predict Survival to Advanced Ages among African-Americans." *Social Science & Medicine (1982)* 47(9):1231–46.

Priest, Naomi, Natalie Slopen, Susan Woolford, Jeny Tony Philip, Dianne Singer, Anna Daly Kauffman, Kathryn Mosely, Matthew Davis, Yusuf Ransome, and David Williams. 2018. "Stereotyping across Intersections of Race and Age: Racial Stereotyping among White Adults Working with Children." *PLOS ONE* 13(9):e0201696.

Primo, David M., Matthew L. Jacobsmeier, and Jeffrey Milyo. 2007. "Estimating the Impact of State Policies and Institutions with Mixed-Level Data." *State Politics & Policy Quarterly* 7(4):446–59.

Quadagno, Jill. 2010. "Institutions, Interest Groups, and Ideology: An Agenda for the Sociology of Health Care Reform." *Journal of Health and Social Behavior* 51(2):125–36.

Quadagno, Jill, and JoEllen Pederson. 2012. "Has Support for Social Security Declined? Attitudes toward the Public Pension Scheme in the USA, 2000 and 2010." *International Journal of Social Welfare* 21(s1):S88–100.

Quadagno, Jill S. 1994. *The Color of Welfare: How Racism Undermined the War on Poverty*. Oxford University Press.

Rehm, Jürgen. 1998. "Measuring Quantity, Frequency, and Volume of Drinking." *Alcoholism: Clinical and Experimental Research* 22(S2):4s–14s.

Reskin, Barbara. 2012. "The Race Discrimination System." *Annual Review of Sociology* 38(1):17–35.

Riolo, Stephanie A., Tuan Anh Nguyen, John F. Greden, and Cheryl A. King. 2005. "Prevalence of Depression by Race/Ethnicity: Findings from the National Health and Nutrition Examination Survey III." *American Journal of Public Health* 95(6):998–1000.

Rios, Victor M. 2011. *Punished: Policing the Lives of Black and Latino Boys*. New York: NYU Press.

Robert, Stephanie A., and Eric N. Reither. 2004. "A Multilevel Analysis of Race, Community Disadvantage, and Body Mass Index among Adults in the US." *Social Science & Medicine (1982)* 59(12):2421–34.

Robert, Stephanie A., and Erin E. Ruel. 2006. "Racial Segregation and Health Disparities between Black and White Older Adults." *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences* 61(4).

Robert, Stephanie, Kate Cagney, and Maggie Weden. 2010. "A Life Course Approach to the Study of Neighborhoods and Health." Pp. 124–43 in *Handbook of Medical Sociology*, edited by C. Bird, P. Conrad, and A. M. Fremont. Nashville, TN: Vanderbilt University Press.

Rodriquez, Erik J., Steven E. Gregorich, Jennifer Livaudais-Toman, and Eliseo J. Pérez-Stable. 2017. "Coping With Chronic Stress by Unhealthy Behaviors: A Re-Evaluation Among Older Adults by Race/Ethnicity." *Journal of Aging and Health* 29(5):805–25.

Roediger, David R. 2007. *The Wages of Whiteness: Race and the Making of the American Working Class*. Verso.

Ross, C. E., and S. J. Jang. 2000. "Neighborhood Disorder, Fear, and Mistrust: The Buffering Role of Social Ties with Neighbors." *American Journal of Community Psychology* 28(4):401–20.

Ross, Catherine E., and John Mirowsky. 2009. "Neighborhood Disorder, Subjective Alienation, and Distress." *Journal of Health and Social Behavior* 50(1):49–64.

Saigal, Saroj, Kimberly L. Day, Ryan J. Van Lieshout, Louis A. Schmidt, Katherine M. Morrison, and Michael H. Boyle. 2016. "Health, Wealth, Social Integration, and Sexuality of Extremely Low-Birth-Weight Prematurely Born Adults in the Fourth Decade of Life." *JAMA Pediatrics* 170(7):678–86.

Schwartz, Barry. 1982. "The Social Context of Commemoration: A Study in Collective Memory." *Social Forces* 61(2):374–402.

Seeman, Teresa E., and Eileen Crimmins. 2001. "Social Environment Effects on Health and Aging: Integrating Epidemiologic and Demographic Approaches and Perspectives." Pp. 88–117 in *Population health and aging: Strengthening the dialogue between epidemiology and demography*, *Annals of the New York Academy of Sciences*. New York, NY, US: New York Academy of Sciences.

Sewell, Abigail A. 2017. "The Illness Associations of Police Violence: Differential Relationships by Ethnoracial Composition." *Sociological Forum* 32(S1):975–97.

Sewell, Abigail A., Kevin A. Jefferson, and Hedwig Lee. 2016. "Living under Surveillance: Gender, Psychological Distress, and Stop-Question-and-Frisk Policing in New York City." *Social Science & Medicine* 159:1–13.

Sharkey, Patrick. 2008. "The Intergenerational Transmission of Context." *American Journal of Sociology* 113(4):931–69.

Shin, Eui Hang. 1975. "Black-White Differentials in Infant Mortality in the South, 1940-1970." *Demography* 12(1):1–19.

Sinyangwe, Samuel, DeRay Mckesson, and Brittany Packnett. 2016. *2017 Police Violence Report*. Mapping Police Violence.

Slabaugh, S. Lane, Mona Shah, Matthew Zack, Laura Happe, Tristan Cordier, Eric Havens, Evan Davidson, Michael Miao, Todd Prewitt, and Haomiao Jia. 2017. "Leveraging Health-Related Quality of Life in Population Health Management: The Case for Healthy Days." *Population Health Management* 20(1):13–22.

Smedley, Brian D., and Hector F. Myers. 2014. "Conceptual and Methodological Challenges for Health Disparities Research and Their Policy Implications." *Journal of Social Issues* 70(2):382–91.

Smith, Brad W. 2004. "Structural and Organizational Predictors of Homicide by Police." *Policing: An International Journal of Police Strategies & Management* 27(4):539–57.

Snijders, Tom A. B., and Roel J. Bosker. 2011. *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling*. SAGE.

Sorkin, Dara H., Elizabeth Pham, and Quyen Ngo-Metzger. 2009. "Racial and Ethnic Differences in the Mental Health Needs and Access to Care of Older Adults in California." *Journal of the American Geriatrics Society* 57(12):2311–17.

Southern Poverty Law Center. 2018. *2018 Hate Map*. Southern Poverty Law Center.

Southern Poverty Law Center. 2019. *Whose Heritage? Public Symbols of the Confederacy*. Southern Poverty Law Center.

Staggers-Hakim, Raja. 2016. "The Nation's Unprotected Children and the Ghost of Mike Brown, or the Impact of National Police Killings on the Health and Social Development of African American Boys." *Journal of Human Behavior in the Social Environment* 26(3–4):390–99.

Sternthal, M. J., H. J. Jun, F. Earls, and R. J. Wright. 2010. “Community Violence and Urban Childhood Asthma: A Multilevel Analysis.” *The European Respiratory Journal* 36(6):1400–1409.

Strine, Tara W., Catherine A. Okoro, Daniel P. Chapman, Lina S. Balluz, Earl S. Ford, Umed A. Ajani, and Ali H. Mokdad. 2005. “Health-Related Quality of Life and Health Risk Behaviors among Smokers.” *American Journal of Preventive Medicine* 28(2):182–87.

Strother, Logan, Spencer Piston, and Thomas Ogorzalek. 2017. “PRIDE OR PREJUDICE?: Racial Prejudice, Southern Heritage, and White Support for the Confederate Battle Flag.” *Du Bois Review: Social Science Research on Race* 14(1):295–323.

Susser, E. S., and S. P. Lin. 1992. “Schizophrenia after Prenatal Exposure to the Dutch Hunger Winter of 1944-1945.” *Archives of General Psychiatry* 49(12):983–88.

Szanton, Sarah L., Joseph M. Rifkind, Joy G. Mohanty, Edgar R. Miller, Roland J. Thorpe, Eneka Nagababu, Elissa S. Epel, Alan B. Zonderman, and Michele K. Evans. 2012. “Racial Discrimination Is Associated with a Measure of Red Blood Cell Oxidative Stress: A Potential Pathway for Racial Health Disparities.” *International Journal of Behavioral Medicine* 19(4):489–95.

Talbert, Ryan D. 2017. “Culture and the Confederate Flag: Attitudes toward a Divisive Symbol.” *Sociology Compass* 11(2):e12454.

Talbert, Ryan D., and Evelyn J. Patterson. 2020. “Racial Stratification and the Confederate Flag: Comparing Four Perspectives to Explain Flag Support.” *Race and Social Problems*.

Thoits, Peggy A. 2010. “Stress and Health: Major Findings and Policy Implications.” *Journal of Health and Social Behavior* 51(1_suppl):S41–53.

Tolnay, Stewart Emory, and E. M. Beck. 1995. *A Festival of Violence: An Analysis of Southern Lynchings, 1882-1930*. University of Illinois Press.

Torche, Florencia. 2011. "The Effect of Maternal Stress on Birth Outcomes: Exploiting a Natural Experiment." *Demography* 48(4):1473–91.

Turner, R. Jay. 2013. "Understanding Health Disparities: The Relevance of the Stress Process Model." *Society and Mental Health* 3(3):170–86.

Turner, R. Jay, and William R. Avison. 2003. "Status Variations in Stress Exposure: Implications for the Interpretation of Research on Race, Socioeconomic Status, and Gender." *Journal of Health and Social Behavior* 44(4):488–505.

Turner, R. Jay, and Donald A. Lloyd. 1995. "Lifetime Traumas and Mental Health: The Significance of Cumulative Adversity." *Journal of Health and Social Behavior* 36(4):360–76.

Turner, R. Jay, Blair Wheaton, and Donald A. Lloyd. 1995. "The Epidemiology of Social Stress." *American Sociological Review* 60(1):104–25.

United States Public Health Service. 1962. *Vital Statistics of the United States 1960: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1963. *Vital Statistics of the United States 1961: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1964. *Vital Statistics of the United States 1962: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1975a. *Vital Statistics of the United States 1970: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1975b. *Vital Statistics of the United States 1971: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1976. *Vital Statistics of the United States 1972: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1984. *Vital Statistics of the United States 1980: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1985. *Vital Statistics of the United States 1981: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1986. *Vital Statistics of the United States 1982: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1994. *Vital Statistics of the United States 1990: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1995. *Vital Statistics of the United States 1991: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 1996. *Vital Statistics of the United States 1992: Volume I.* Washington, DC: Government Printing Office.

United States Public Health Service. 2000. *Table 2-1. Live Births by County of Occurrence and Place of Residence, by Race of Mother: United States, Each State and County, and Specified Urban Places of 10,000 or More, 2000.* Washington, DC: Government Printing Office.

United States Public Health Service. 2002. *2-1. Live Births by County of Occurrence and Place of Residence, by Race of Mother: United States, Each State and County, and Specified Urban Places of 10,000 or More, 2002*. Washington, DC: Government Printing Office.

United States Public Health Service. 2001 *Table 2-1. Live Births by County of Occurrence and Place of Residence, by Race of Mother: United States, Each State and County, and Specified Urban Places of 10,000 or More, 2001*. Washington, DC: Government Printing Office: 2001.

U.S. Census Bureau. 2007. *U.S. Census Bureau, Census 2000 Summary File 1: Hispanic or Latino by Race*. U.S. Census Bureau.

Van Dyke, Nella, and Verta Taylor. 2018. "The Cultural Outcomes of Social Movements." Pp. 482–98 in *The Wiley Blackwell Companion to Social Movements*. John Wiley & Sons, Ltd.

Van Lieshout, Ryan J., Michael H. Boyle, Saroj Saigal, Katherine Morrison, and Louis A. Schmidt. 2015. "Mental Health of Extremely Low Birth Weight Survivors in Their 30s." *Pediatrics* 135(3):452–59.

Vega, William A., and Rubén G. Rumbaut. 1991. "Ethnic Minorities and Mental Health." *Annual Review of Sociology* 17(1):351–83.

Villarosa, Linda. 2018. "Why America's Black Mothers and Babies Are in a Life-or-Death Crisis." *New York Times*.

Viloria, Dennis. 2016. *Education Matters*. U.S. Bureau of Labor Statistics.

Voigt, Rob, Nicholas P. Camp, Vinodkumar Prabhakaran, William L. Hamilton, Rebecca C. Hetey, Camilla M. Griffiths, David Jurgens, Dan Jurafsky, and Jennifer L. Eberhardt. 2017. "Language from Police Body Camera Footage Shows Racial Disparities in Officer Respect." *Proceedings of the National Academy of Sciences* 114(25):6521–26.

Wagner-Pacifici, Robin, and Barry Schwartz. 1991. "The Vietnam Veterans Memorial: Commemorating a Difficult Past." *American Journal of Sociology* 97(2):376–420.

Wallace, Maeve, Joia Crear-Perry, Lisa Richardson, Meshawn Tarver, and Katherine Theall. 2017. “Separate and Unequal: Structural Racism and Infant Mortality in the US.” *Health & Place* 45:140–44.

Wen, Ming, Christopher R. Browning, and Kathleen A. Cagney. 2003. “Poverty, Affluence, and Income Inequality: Neighborhood Economic Structure and Its Implications for Health.” *Social Science & Medicine (1982)* 57(5):843–60.

Wheaton, Blair. 1994. “Sampling the Stress Universe.” Pp. 77–114 in *Stress and Mental Health: Contemporary Issues and Prospects for the Future, The Springer Series on Stress and Coping*, edited by W. R. Avison and I. H. Gotlib. Boston, MA: Springer US.

Wheaton, Blair. 2001. “The Role of Sociology in the Study of Mental Health ... and the Role of Mental Health in the Study of Sociology.” *Journal of Health and Social Behavior* 42(3):221.

Wheaton, Blair, Marisa Young, Shirin Montazer, and Katie Stuart-Lahman. 2013. “Social Stress in the Twenty-First Century.” Pp. 299–323 in *Handbook of the Sociology of Mental Health, Handbooks of Sociology and Social Research*, edited by C. S. Aneshensel, J. C. Phelan, and A. Bierman. Dordrecht: Springer Netherlands.

Whittier, Nancy. 2004. “The Consequences of Social Movements for Each Other.” Pp. 531–51 in *The Blackwell Companion to Social Movements*. John Wiley & Sons, Ltd.

Wildeman, Christopher, and Emily A. Wang. 2017. “Mass Incarceration, Public Health, and Widening Inequality in the USA.” *The Lancet* 389(10077):1464–74.

Williams, David R., and C. Collins. 2001. “Racial Residential Segregation: A Fundamental Cause of Racial Disparities in Health.” *Public Health Reports* 116(5):404–16.

Williams, David R. Lavizzo-Mourey, and R. C. Warren. 1994. “The Concept of Race and Health Status in America.” *Public Health Reports (Washington, D.C.: 1974)* 109(1):26–41.

Williams, David R. 2012. “Miles to Go Before We Sleep: Racial Inequities in Health.” *Journal of Health and Social Behavior* 53(3):279–95.

Williams, David R. 2018. “Stress and the Mental Health of Populations of Color: Advancing Our Understanding of Race-Related Stressors.” *Journal of Health and Social Behavior* 59(4):466–85.

Williams, David R., and Lisa A. Cooper. 2019. “Reducing Racial Inequities in Health: Using What We Already Know to Take Action.” *International Journal of Environmental Research and Public Health* 16(4).

Williams, David R., Hector M. González, Harold Neighbors, Randolph Nesse, Jamie M. Abelson, Julie Sweetman, and James S. Jackson. 2007. “Prevalence and Distribution of Major Depressive Disorder in African Americans, Caribbean Blacks, and Non-Hispanic Whites: Results from the National Survey of American Life.” *Archives of General Psychiatry* 64(3):305–15.

Williams, David R., and Pamela Braboy Jackson. 2005. “Social Sources of Racial Disparities in Health.” *Health Affairs (Project Hope)* 24(2):325–34.

Williams, David R., Jourdyn A. Lawrence, and Brigette A. Davis. 2019. “Racism and Health: Evidence and Needed Research.” *Annual Review of Public Health* 40:105–25.

Williams, David R., and Selina A. Mohammed. 2009. “Discrimination and Racial Disparities in Health: Evidence and Needed Research.” *Journal of Behavioral Medicine* 32(1):20–47.

Williams, David R., and Selina A. Mohammed. 2013. “Racism and Health I: Pathways and Scientific Evidence.” *American Behavioral Scientist* 57(8):1152–73.

Williams, David R., Harold W. Neighbors, and James S. Jackson. 2003. “Racial/Ethnic Discrimination and Health: Findings from Community Studies.” *American Journal of Public Health* 93(2):200–208.

Williams, David R., Harold W. Neighbors, and James S. Jackson. 2008. “Racial/Ethnic Discrimination and Health: Findings From Community Studies.” *American Journal of Public Health* 98(Suppl 1):S29–37.

Williams, David R., and Michelle Sternthal. 2010. “Understanding Racial-Ethnic Disparities in Health: Sociological Contributions.” *Journal of Health and Social Behavior* 51(1_suppl):S15–27.

Williams, David R., Yan Yu, James S. Jackson, and Norman B. Anderson. 1997. “Racial Differences in Physical and Mental Health: Socio-Economic Status, Stress and Discrimination.” *Journal of Health Psychology* 2(3):335–51.

Wilson, William Julius. 1987. *The Truly Disadvantaged*. Chicago: University of Chicago Press.

Wise, Paul H., and DeWayne M. Pursley. 1992. “Infant Mortality as a Social Mirror.” *New England Journal of Medicine* 326(23):1558–60.

Witbrodt, Jane, Nina Mulia, Sarah E. Zemore, and William C. Kerr. 2014. “Racial/Ethnic Disparities in Alcohol-Related Problems: Differences by Gender and Level of Heavy Drinking.” *Alcoholism: Clinical and Experimental Research* 38(6):1662–70.

World Health Organization. 2017. *Depression and Other Common Mental Disorders: Global Health Estimates*. Geneva: Licence: CC BY-NC-SA 3.0 IGO.

World Health Organization. 2018. *Global Status Report on Alcohol and Health 2018*. Geneva: World Health Organization.

World Health Organization. 2020. *Basic Documents: Constitution*. Licence: CC BY-NC-SA 3.0 IGO. Geneva.

Xu, Jiaquan, Sherry L. Murphy, Kenneth Kochanek, and Elizabeth Arias. 2016. *Mortality in the United States, 2015*. 267. National Center for Health Statistics.

Yao, Li, and Stephanie A. Robert. 2008. "The Contributions of Race, Individual Socioeconomic Status, and Neighborhood Socioeconomic Context on the Self-Rated Health Trajectories and Mortality of Older Adults." *Research on Aging* 30(2):251–73.

Zimring, Franklin. 2018. *When Police Kill*. Cambridge, MA: Harvard University Press.