POLICING AND COMMUNITIES OF COLOR: A MULTILEVEL
INTERSECTIONAL EXAMINATION OF POLICE FATAL FORCE ENCOUNTERS

by

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DEDICATION

This is dedicated to my parents, Sandra and Wayne Blake, who have sacrificed so much for me to get to this point. Thank you both so much for all that you've done.

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I would like to thank each and every friend, relative, and loved one who supported me throughout this whole process. Your never ending support was so needed and so greatly appreciated. Also, thank you to each member of my dissertation committee: Drs. Shannon N. Davis, Angela J. Hattery, and Brian L. Levy. I gained so much knowledge from each of you as you all helped me make it through to the finish line.

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ABSTRACT

POLICING AND COMMUNITIES OF COLOR: A MULTILEVEL INTERSECTIONAL EXAMINATION OF POLICE FATAL FORCE ENCOUNTERS

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Police brutality is a multifaceted issue, and it has to be understood at multiple levels. The murder of George Floyd has re-fueled conversations surrounding police brutality and the death of unarmed Black men. However, little attention has been shown to how Black women are also disproportionately subject to police violence, in addition to the neighborhood- and agency-level factors that also facilitate police brutality as a whole. My dissertation contributes to the scholarly discussion on police brutality by answering the following questions: how do individual characteristics, neighborhood-level factors, and between policy agency factors shape lethal police force encounters? Building on intersectional theories, I examine the differential likelihood of experiencing a lethal encounter with police for Black and Latinx women and men relative to white women and men, and situate those experiences in neighborhoods and in the local police agencies in which law enforcement officers operate. This study utilized multivariate regression

modeling for male (N = 6,428) and female (N = 400) fatal victims separately to examine how individual characteristics of alleged perpetrators, the neighborhood in which they live, and the formal organization in which the police serve shape the likelihood of lethal police force encounters with people of color. Data were drawn from the Mapping Police Violence dataset (2013-2018), the 2017 American Community Survey (ACS) 5-year sample, and the 2013 Law Enforcement Management and Administrative Statistics (LEMAS). The results indicated that individual characteristics, neighborhood-level factors, and between-agency factors all impact the likelihood of lethal police encounters with people of color relative to whites. Of these factors, the majority of the explanation for both male and female fatalities was accounted for by neighborhood-level factors in the multivariate analysis. To triangulate these results, a six-city case study was also performed, further examining cities in the top quartile of police killings: Baltimore, Maryland; San Antonio, Texas; Philadelphia, Pennsylvania; Houston, Texas; Oklahoma City, Oklahoma; and Bakersfield. California. The case study further explored neighborhood-level and agency factors, emphasizing the negative impact of neighborhood disadvantage and segregation, while also demonstrating a culture of unaccountability and lack of transparency among the agencies in each of the six cities. Therefore, this dissertation demonstrates that understandings of police brutality need to move beyond a unilateral conceptualization to one that is both intersectional and multi-layered to effectively address this complex and concerning social issue.

CHAPTER ONE

> The only way to police the ghetto is to be oppressive…They represent the force of the white world, and that world's criminal profit and ease, to keep the Black man, corralled up here, in his place. The badge, the gun in the holster, and the swinging club make vivid what will happen should his rebellion become overt… He moves through Harlem, therefore, like an occupied soldier in a bitterly hostile country, which is precisely what, and where he is, and is the reason he walks in twos and threes.
>
> -James Baldwin, Nobody Knows My Name

Introduction

On April 12, 2015 at around 8:40am, a bystander's cellphone footage shows Freddie Gray on Presbury Street in Sandtown (BBC 2016). Two men in Baltimore Police uniforms are seen pinning him to the ground. According to the Statement of Charges, Gray "fled unprovoked upon noticing police presence," and he "was arrested without force or incident". His charge, unlawfully carrying a switchblade knife. As the footage continues, Freddie Gray is heard screaming before the arrival of the police van. He arrived at Shock Transport in critical condition. While briefing the media on the results of Freddie Gray's autopsy, Commissioner Jerry Rodriguez stated that he "did suffer a very tragic injury to his spinal cord which resulted in his death." Freddie Gray's spine was 80% severed at his neck (BBC 2016), which took a significant amount of force (Dance 2015). Chaos would later ensure in Baltimore as some peaceful protests turned violent with the release of more information to the public.

What happened to Freddie Gray that morning extends beyond just interactions between police and residents. Baltimore city's population is just over sixty percent Black, with 21.8% of its residents living below the poverty line, almost double the nationwide rate (United States Census Bureau 2018). In addition to poverty, crime has also plagued Baltimore for decades. Also plaguing Baltimore is the "legacy of government-sanctioned discrimination," segregation, and police brutality (Department of Justice 2016). This segregation is still evident today. In areas with a higher percentage of Black residents, there are more vacant buildings and lots, with the violence that erupted the Monday following Freddie Gray's arrest being primarily in those areas (Scheller 2017). Officer involved shootings are also concentrated in areas that have predominately Black residents. Between 2011 and 2014 alone, the city of Baltimore paid $5.7 million in court settlements for victims of police brutality (Scheller 2017).

Baltimore shows just how complex police brutality can be. What has occurred in Baltimore also demonstrates how important that it is to situate police brutality within context socially and culturally, as well as examining it as an interaction. As we can also see, however, Baltimore is not an anomaly. Concerns have long been raised regarding the policing of communities of color. Of these concerns has been discrimination (Feagin 1991), and police brutality (Holmes 2000; Myrdal 1944), with the lynching of Black people by police as an early example (Onyemaobim 2016; Pfeifer 2006). More recently, new technology along with social media has allowed police brutality to become more visible. The increased visibility has sparked more discussions over these concerns,

garnering nationwide attention, as was seen with the police murder of Black Minneapolis resident George Floyd whose death put gas to an already burning flame.

While most commonly attention has centered on the plight of Black men in incidences of police brutality as well as incarceration, both are patterned by race and gender. The "Say Her Name" initiative brings attention to Black women who have been killed by police. In the "Say Her Name" report, Crenshaw (Crenshaw and Ritchie 2015: para 4) states:

> Although Black women are routinely killed, raped, and beaten by the police, their experiences are rarely foregrounded in popular understandings of police brutality. Yet, inclusion of Black women's experiences in social movements, media narratives, and policy demands around policing and police brutality is critical to effectively combating racialized state violence for Black communities and other communities of color.

Additionally, individuals who display symptoms of serious psychiatric illness are more likely to be arrested by the police (Corrigan 2004), and typically spend more time incarcerated than those without psychiatric illness (Corrigan 2004). As an often-overlooked axis of oppression, disability, like gender, permeates all aspects of culture and has implications at a variety of levels, and disability passing has a different meaning depending on specific contexts of gender, race, class, and sexuality (Brune and Wilson, 2013).

Therefore, police brutality is a multifaceted issue, and it has to be understood at multiple levels. My dissertation sought to obtain this understanding by answering the question of how the individual characteristics of alleged perpetrator impact the likelihood of lethal police encounters with people of color relative to whites, to what extent

neighborhood-level factors influence lethal police encounters is prevalent in a neighborhood, and how between-agency factors impact the likelihood of lethal police encounters relative to whites. In Chapter two, I discuss incidences of police brutality in the United States. I examine them intersectionally, taking into account race, gender, and disability. I then delve into cultural and social factors at the neighborhood-level that facilitate police brutality, as well the agency-level factor also at play. Lastly, I end the chapter by providing my hypotheses.

Next, in Chapter 3 I address the quantitative research design and analytical strategy that was used as well as the source of data for the multivariate analysis. I then discuss, in Chapter 4, the descriptive statistics results, the multivariate analysis results, significance of my findings, and how they relate to each hypothesis.

In Chapter 5, I utilize a case study to take closer look at social indicators and the engagement between police and the community in six cities that were in the top quartile of fatality incidents according to the Mapping Police Violence database: Baltimore, Maryland; San Antonio, Texas; Philadelphia, Pennsylvania; Houston, Texas; Oklahoma City, Oklahoma; and Bakersfield. California. Chapter 6 synthesizes the national findings in Chapter 4 with the case study findings from Chapter 5; in this chapter I make claims about the key contributions of my research. To foreshadow these findings, local context, shaped by local racial histories, shapes much of the experiences that lead to lethal police encounters, but national level policing policies matter as well. Lastly, I frame my research as an example of public sociology in Chapter 7.

Significance of Research

    This research supports earlier scholarship on intersectionality, neighborhood disadvantage, and organizational theory. However, it is novel in that it puts all three into dialogue with one another and explores them each in relation to police brutality. The findings of this study indicate the interwoven nature of individuals, neighborhoods, and organizations. Also, key to the contribution of this research is the inclusion of disability into intersectionality. Instead of examining race, gender, and disability as distinct concepts regarding incidents of fatal force encounters, it examined how they are all interwoven, and how each uniquely impact perceptions of threat. Lastly, my research is innovative in that it employs both a multivariate analysis and a case study to examine police brutality, in which the case study offered a understanding at the city level that the national Mapping Police Violence data was unable to, particularly as it pertains to the culture and patterns of police agencies, a topic where existing data is far and few in between. Therefore, the use of both methods allows for a fuller view of the police brutality, and who it most affects. Police brutality is multifaceted issue. It has to be examined as such in order to bring about change, and public sociology has the tools to do so.

CHAPTER TWO

> Segregation and poverty have created in the racial ghetto a destructive environment totally unknown to most white Americans. What white Americas have never fully understood—but what the Negro can never forget—is that white society is deeply implicated in the ghetto. White institutions created it, white institutions maintain in, and white society condones it.
>
> -U.S. National Advisory Commission on Civil Disorders (1988), The Kerner Report

Police brutality is not a new phenomenon, nor does it operate in a vacuum. Its roots are far reaching and has implications on many levels. Thus, this chapter will attempt to give an overview of police brutality, providing an explanation through several theoretical lenses. First, I will describe what is known about the occurrences of police brutality in the United States. Then, I will address intersectionality and its importance in understanding police brutality at the individual level. Next, I will address neighborhood disadvantage and the importance of neighborhood effects when examining police brutality, as well as the importance of police agency-level factors. Lastly, I will present the hypotheses that were derived from previous research and then tested in this dissertation.

Police Brutality

From the abuses of force by officers during marches in the Civil Rights era to the beating of Rodney King, justice has long been sought, but rarely received, for police brutality towards Blacks. Its roots, however, are far reaching, dating back to the slave

patrol as well as postbellum lynching of Black people (Onyemaobim 2016; Pfeifer 2006). According to Pfeifer (2006):

> The excessive and all-too-often deadly force wielded by the police, particularly against African American and Latinos, also pursues tactics and goals inherited from the antebellum slave patrol and postbellum lynch mob. Brutal, racialized policing, which exists as an informal, ritualized set of practices than as a written or formalized set of policies, asserts that the arbitrary and the lethal use of force is the most appropriate response to the resistance and criminality of Blacks and Hispanics.

Lynching, as a tool of white supremacy, evoked resilient memories in African Americans and greatly impacted African American communities economically, politically, and psychologically (Ifill 2018). The history of racial terrorism still shapes Blacks' and whites' relationships in communities throughout the country, and Blacks' relationship with the criminal justice system. The traces of lynchings are visible in the communities impacted, as well as in the criminal justice system and policing today.

Even in more recent accounts of police brutality, such as Freddie Gray, rarely are police officers charged in the deaths of Black people. In 2015, there were 1,146 people killed by police (Swaine et al. 2016). Of those killed, 26.8 percent were Black, with about a quarter of those killed being unarmed. Of the 102 cases where an unarmed Black man was killed by police in 2015, only 10 cases resulted in the officer being charged (Hattery and Smith 2017). As Hattery and Smith (2017:168) stress, "… the bodies of Black men are significantly more likely to be policed; their unarmed bodies are shot and killed 2.5 times more often than are the bodies of white men. And, compared to police killings of unarmed white men, more than not the police killings of unarmed Black men are both a symptom of and generate response to the decades-long tension between the police and the

Black community."

This racial disparity can even be seen with nonfatal force. According to the Police Use of Nonfatal Force, 2002-11 (Hyland, Langton, and Davis 2015), Blacks report experiencing nonfatal force at a rate substantially higher than whites and Latinxs during their most recent encounter with police. Blacks were also more likely to experience nonfatal force during street stops, and twice as likely as whites to experience force during contact involving a personal search.

However, many of the unarmed Black men are who are killed by police are also caught in the same snare that pulls Black men into the criminal justice system in record numbers (Hattery and Smith 2017). Consequently, incarceration rates are also patterned by race. For U.S. residents born in 2001, the likelihood of imprisonment was significantly higher for Blacks, with 1 in 3 Black men likely to be imprisoned compared to 1 in 6 Latino men and 1 in 17 white men respectively (The Sentencing Project 2016). Additionally, at the beginning of the twenty-first century, the incarceration rate of white men has increased by 4 percent while the incarceration of Black men increased by 21 percent (Hattery and Smith 2017).

We can also see an alarming picture when examining gender in the criminal justice system. Since 2015, almost 250 women have been fatally shot by police, 89 of which were killed at home or at a residence where they sometimes stayed (Iati, Jenkins, and Brugal 2020). Even beyond fatal encounters, the rate of incarceration for women has almost doubled the rate of men since 1985 (The Sentencing Project 2015). At the beginning of the twenty-first century, the incarceration rate for women, both white and

Black, has grown at a rate of 50 percent (Hattery and Smith 2017). However, when looking at the incarceration rate of women by race, one in 18 Black women are likely to be incarcerated compared to 1 in 45 Latina women and 1 in 111 White women (The Sentencing Project 2016). In 2005 alone, Black women were more than three times as likely as White women to be incarcerated, and Latina women were 69 percent more likely to be incarcerated.

The unique experiences of Black women in the criminal justice system also exist in incidences of police brutality. While the first in-person national Black Lives Matter protest occurred after the shooting of Michael Brown in August 2014, Crenshaw and Ritchie (2015) point out that 2014 marked the year of a number of unjust killings of Black women as well; the lack of accountability for the deaths of unarmed Black men extends to unarmed Black women and girls too. Yet, the deaths of unarmed Black women and girls have not been the focal point of mass protests and policy reform efforts (Crenshaw and Ritchie 2015). Thus, the Say Her Name movement aims to support "a gender-inclusive approach to a racial justice that centers all Black lives equally (Crenshaw and Ritchie 2015:2)."

Additionally, individuals who display symptoms of serious psychiatric illness are more likely to be arrested by the police (Corrigan 2004). Those with mental illness typically spend more time incarcerated than those without psychiatric illness (Corrigan 2004). Almost three-quarters of women in state prison in 2005 had a mental health problem, compared to 55% of men in prison, which indicates a gendered component as well. This is further supported by Bronson and Berzofsky (2017) finding that female

prison and jail inmates were more likely to have met the threshold for serious

psychological distress (SPD) than males.

Not only are those with mental illness jailed and imprisoned at disproportionate

rates, but they are disproportionately impacted by police brutality as well. This is

illustrated by the fact that the risk of being killed during a police incident is 16 times

greater for those with untreated mental illness than that for others approached by the

police (Fuller et al. 2015). Of the shooting deaths by police in 2016, approximately 25%

of the victims had a mental illness (The Washington Post 2017)

However, there was once a time when "madness" was considered a normal part of

everyday life (Foucault 1965), as opposed to an aberration. This changed when those

with mental illness became seen as a threat to society. In the United States during the

colonial era, individuals with mental illness often had to be cared for by family members

(United States Public Health Service et al. 1999). It was not until 19th century

urbanization that there was a concerted effort to treat mental illness.

In response to urbanization, social policy in the form of isolated asylums was

created. However, at the end of the 1980s when hospitalizing the mentally ill in asylums

was abandoned, the families were once again relegated the responsibility of being the

main support for their mentally ill loved ones, which resulted in the stigmatization of

whole families (Falk 2001). Many of the mentally ill were also homeless following the

closing of various hospitals.

Deinstitutionalization also led to the criminalization of mental illness, which

"occurs when police, rather than the mental health system, responds to mental health

crises, thereby contributing to the increasing prevalence of people with serious mental illness in jail (Corrigan 2004:616)". Many individuals with mental illness who are deprived of adequate treatment end up in the criminal justice system instead of being directed to the proper mental health resources (Perez, Leifman, and Estrada 2003). The chances are high that they will return again, which begins a detrimental cycle of recidivism.

Therefore, at the intersection of race, gender, and disability lies a unique experience for both Black men and Black women with police brutality and the criminal justice system as a whole. While state-sanctioned violence against Black men is well deserving of the attention it has gotten, we also have to make room for the discussion of the policing of Black women and Black women's bodies, and intersectionality allows us a lens with which to do so. As Ritchie (2017:235-236) so well articulates, "Attending to police violence against women of color, in all its forms, thus opens possibilities for genuine and deeper solidarity among men and women, among cisgender and transgender and gender non-conforming people, among women of color, among movements against police and gender-based violence."

Intersectionality

There is growing awareness among sociologists and criminologists that race and gender work in tandem, shaping the realities of each those impacted by the criminal justice system. Race and gender also impact disability passing. Thus, in this section, I interrogate how race and gender, both collectively and individually, have historically framed our social world. I also introduce a discussion focused on how race and gender

shape how those with disability, specifically mental illness, pass, potentially creating a life or death situation.

Gender has consequences at the individual, interactional, and institutional levels (Risman and Davis 2013). It is also a primary framing device for social relations (Ridgeway 2011). Status expectations attached to gender recreate inequality and create cognitive bias (Risman and Davis 2013). Sex categorization indirectly primes in the individual's mind shared cultural stereotypes about males and females (Ridgeway, 2011). Thus, making these stereotypes accessible to shape individuals' judgments and behaviors toward one another. The criminal justice system and those who interact with it, both alleged perpetrators and police officers, are no exception to this process.

Likewise, Bonilla-Silva (1997) presents a structural theory of racism as a racialized social system. Race, like gender, is also a categorical distinction which frames our social world, and like gender, has implications at the individual, interactional, and institutional levels. Reskin (2000:320) asserts that "[t]he visibility and cultural importance of sex and race and their role as core bases for stratification make them almost automatic bases for categorization… Importantly, categorization is accompanied by stereotyping, attribution bias, and evaluation bias." This resulting categorization results in the introduction of biases into our perceptions and evaluation of other individuals. The expected outcome is discrimination.

Within this context, gender and race stereotypes manifest both individually and collectively (Ghavami and Peplau 2013; Devine and Baker 1991; Donovan 2011). For example, Ghavami and Peplau (2013) found that the most frequent attribute for Blacks

was "ghetto/unrefined." The most frequently selected attribute for Black men was "athletic" while "have an attitude" was the top attribute for Black women. Blacks were characterized as lazy and criminal, and Black women were seen as aggressive and dominant. Of the 119 total attributes for Black women in this study, 56% were unique to them, while Black men had 27% of their total attributes be exclusive to them, with "quick to anger" being one of such attributes. These findings suggest that racial stereotypes are deeply gendered. Race and gender operate as powerful cultural schema determining the assignment of cultural attributes and status. Consider that the top attribute for whites was "high status," with the most frequent attribute for white man being "rich" and White women being "arrogant." Men were viewed as assertive and leaders, and women were viewed as emotional and caring as a whole, this varied based on race and the intersections of race and gender (Ghavami and Peplau 2013).

Other studies also demonstrate this distinction of stereotypes and attributes (Donovan 2011; Devine and Baker 1991). Donovan (2011) found the six traits used to describe Black women were loud, religious, talkative, tough, strong, and loyal to family ties. Emotional, intelligent, sensitive, educated, family-oriented, and independent were the attributes most commonly associated with white women. While the traits that were similarly attributed to Black and white women across both statistical analyses were talkative, emotional, family-centered, and independent; Black women were viewed as being louder and tougher, and less sensitive and educated and religious when compared to white women (Donovan 2011).

However, the experiences at the intersection of gender and race are not without

historical context. Gender and racial ideologies and stereotypes have persisted over hundreds of years. Black womanhood has been largely ignored (hooks 2014; White 1985).This, too, has been the issue post-slavery and in contemporary struggles for rights and recognition. hooks (2014) explains that "[c]ontemporary Black women could not join together to fight for women's rights because they did not see "womanhood" as an important aspect of our identity (1)."

Also, while Black women and Black men equally struggled during slavery and the Reconstruction era, patriarchal values were still upheld by Black male political leaders. Kimberlé Crenshaw (1991) also addresses the failure of antiracist and feminist politics to address the intersections of racism and patriarchy, thus resulting in feminism perpetuating the subordination of people of color and an antiracism perpetuating the subordination of women.

Intersectionality, however, highlights that women of color are positioned between at least two subordinated positions (Crenshaw 1991). According to Collins and Bilge (2016:2), "Intersectionality is a way of understanding and analyzing the complexities of the world… people's lives and the organization of power in a given society are better understood as being shaped not by a single axis of social division, be it race or gender or class, but by many axes that work together to influence each other."

More recent work has incorporated disability, an often-overlooked axis, into the intersectionality framework. Disability is a variety of ideological categories (e.g. sick, deformed, crazy, mad, abnormal) (Garland-Thomson 2002). Garland-Thomson (2002) emphasizes how integrating disability as a category of analysis and a system of

representation both expand and challenges feminist theory: "… disability is a culturally fabricated narrative of the body, similar to what we understand as the fictions of race and gender (4). The ability/disability system produces subjects by differentiating and marking bodies (5)." Disability, like gender and race, permeates all aspects of culture and has implications at a variety of levels.

Not all disabilities share the same level of visibility. "Invisible" disabilities can result in disability passing, presenting oneself as "normal" by concealing social markers of impairment (Brune and Wilson 2013). This can also refer to other ways that people manage their identities, and the way a disability or non-disability identity is imposed on an individual. Most disabled people are confronted with the choice of hiding their disability or bringing it to attention. Passing goes beyond the individual. Its importance has implications in the larger social, cultural, and political sphere (Brune and Wilson 2013).

Mental illness can be conceptualized as an invisible disability in that there is not necessarily a physical marker and thus individuals are able to "pass" as able-bodied and able-minded. According to Cox (2013:100), "'Passing' therefore occurs when others do not perceive the person as distressed. Passing is particularly important for people diagnosed with a mental illness, because the costs of not passing can be quite high— including, in some instances, nonconsensual treatment and involuntary hospitalization." As we have seen with police encounters, the consequence can also be their life.

Passing, usually seen as negative, is done to avoid the social stigma of disability. It is a result of social stigma and shame (Cox 2013). This builds upon Goffman's *Stigma*

(1963). While his work has been foundational, Goffman has also been critiqued for his failure to address the larger structural forces that influence how disability is conceptualized (Gleeson 1998), and for approaching disability from the position of normality, with himself and readers being positioned as "normals (Brune and Wilson 2013)." Goffman's work on stigma was also rooted in the 1950s and could not address the changes that took place after the disability rights movement (Frank 1988). However, Goffman's work is still a groundbreaking piece often cited in disability studies (Brune and Wilson, 2013). (For additional critiques of Goffman, see Mest 1988; Titchkosky 2000).

Goffman defines stigma as "an attribute that is deeply discrediting," which reduces a whole and usual person to one that is tainted and discounted (Goffman 1963:3). Three types of stigma are designated by Goffman (1963:4). The first of these are abnormalities of the body, such as physical abnormalities. The second are blemishes of individual character perceived as weak will, which includes "… for example, mental disorder, imprisonment, addiction, alcoholism, homosexuality, unemployment, suicidal attempts, and radical political behavior (Goffman 1963:4)." The final stigma is that of tribal stigma, such as race, nation, and religion—stigmas that can be transmitted through lineages.

Stigma establishes a discrepancy between one's virtual social identity—the character we impute to the individual—and the actual social identity—the category and attributes that they actually possess. The stigmatized lack full social acceptance, and, resultantly, often strive to adjust their social identities. For a discreditable individual, the

issue becomes the management of information: to display or not to display, to tell or not

to tell, to lie or not to lie, to let on or not to let on. Goffman (1965:42) presents an

example:

> …while the mental patient is in the hospital, and when he is with adult members
> of his own family, he is faced with being treated tactfully as if he were sane when
> there is known to be some doubt, even though he may not have any; he is treated
> as insane, when he knows this is not just. But for the ex-mental patient, the
> problem can be quite different; it is not that he must face prejudice against
> himself, but rather that be must face unwitting acceptance of himself by
> individuals who are prejudiced against persons of the kind he can be revealed to
> be.

According to Goffman's stigma typology, mental illness would fall under stigmas that

are believed to be blemishes of individual character perceived as weak will. Goffman

(1963) also refers mental illness as an invisible stigma, one that can be concealed. Those

with mental illness feel the need to pass for fear of being discredited. Stigmatized

individuals are often seen as not quite human (Goffman 1963). The reduction of life

chances and rationalization of feelings of superiority and animosity against the

stigmatized is what is at stake if one cannot pass.

However, disability does not operate independent of gender and race. Passing has

a different meaning depending on specific contexts of gender, race, class, and sexuality

(Brune and Wilson 2013). Disability can destabilize race and gender, and race and gender

can in turn destabilize disability. Cox (2013:105) elaborates on this point, "Expectations

of sane behavior vary across communities and identities… one's sanity falls into question

if one does not act appropriately for one's gender, race, class, sexuality, religion, and so

on." Erevelles and Minear (2010) also argue that the omission of disability in discussions

of intersectionality has disastrous and potentially deadly consequences for disabled

people of color. Historical examples of these egregious consequences are the association of race and disability being used to justify slavery, colonialism, and neo-colonialism (Erevelles and Minear 2010).

Because race, gender, and disability operate in tandem in our social world, they too have the ability to impact encounters with police. As presented earlier in the chapter, experiences with police brutality and incarceration are patterned by both race and gender, and race and gender shape disability passing. Race and gender have been used to stratify social groups (Crenshaw 1999), particularly in carceral and justice systems (Gilbert and Ray 2016). Similarly, individuals who display symptoms of serious psychiatric illness are more likely to be arrested by the police (Corrigan 2004), and the risk of being killed during a police incident is 16 times greater for those with untreated mental illness than that for others approached by the police (Fuller et al. 2015).

Therefore, race, gender, and disability each have the potential to impact police encounters and individual experiences within the criminal justice system, and intersectionality is an analytical tool that allows better access to and understanding of these complexities. As such, it can be utilized to better understand the experiences of Black women and Black men in the criminal justice system and in incidences of police brutality.

Neighborhood Disadvantage

While an understanding of intersectionality at the interactional level is paramount, so is the understanding of neighborhood-level factors and how they, too, can facilitate police brutality. For that reason, theories of neighborhood effects offer several

explanations for why neighborhoods matter. Theories of neighborhood effects include neighborhood socialization and social organization models (Jencks and Mayer 1990; Levy 2019).

According to collective socialization models, neighborhood adults serve as role models and evidence of life chances. Children and youth are more likely to work hard and have belief in success as more adults model this behavior and achieve success (Jencks and Mayer 1990). In his pivotal work on disadvantaged neighborhoods, Wilson (1987:49) articulates how the inverse of collective socialization models also holds true:

> Inner-city neighborhoods have undergone a profound social transformation in the last several years as reflected not only in their increasing rates of social dislocation (including crime, joblessness, out-of-wedlock births, female-headed families, and welfare dependency) but also in the changing economic class structure of ghetto neighborhoods... The movement of middle-class black professionals from the inner city, followed in increasing numbers by working-class blacks, has left behind a much higher concentration of the most disadvantaged segments of the black urban population, the population to which I refer when I speak of the ghetto underclass.

Thus, the exodus of Black working and middle-class professionals that occurred in the late 1960s and 1970s, along with declining job opportunities, resulted in communities isolated with little opportunities for success.

Additionally, collective efficacy is paramount to neighborhood social organization (Sampson, Raudenbush, and Earls 1997). High collective efficacy demonstrates residents' willingness to intervene and enforce community norms. Social cohesion is required, and paramount to organization residential turnover and racial integration. The inverse was one again evidenced by Wilson's (1987) observation of

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increasing social disorganization along with scare resources and opportunities in impoverished inner-city areas.

Poverty

A key factor when discussing neighborhood disadvantage and economic opportunity is poverty and its impact on life chances. In the 1980s, 58 percent of Blacks and 10 percent of whites lived in a poor neighborhood with a poverty rate of 20 percent or higher (Li et al. 2019). Ten years later, 72 percent of Blacks and 38 percent of whites were still in poor metropolitan neighborhoods (Quillian 2003; Li et al. 2019). Even those who exited poor neighborhoods were likely to re-enter within a few years, particularly Blacks.

However, ghetto poverty, which typically utilizes a 40 percent poverty criteria to distinguish mixed-income areas and nonpoor areas from ghettos (Jargowsky and Bane 1990), is experienced by the most disadvantaged neighborhoods. As such, poverty is a critical social problem characteristic of the ghetto and the ghetto underclass. Jargowsky and Bane (1990:16) point out that there are several different concepts that get discussed simultaneously when discussing ghetto poverty:

> Persistent poverty—individuals and families that remain poor for long periods of time and, perhaps, pass poverty on to their descendants.
>
> Neighborhood poverty—spatially defined areas of high poverty, usually characterized by dilapidated housing stock or public housing and high levels of unemployment.
>
> Underclass poverty—defined in terms of attitudes and behavior, especially behavior that indicates deviance from social norms, such as low attachment to the labor force, drug use and habitual criminal behavior, bearing children out of wedlock, and receiving public assistance.

Ghetto poverty, when defined spatially, has been on the rise in many large metropolitan areas (National Urban Policy Committee et al. 1990). By the early 1980s, it became evident that poverty had shift from being a rural to primarily an urban phenomenon (National Urban Policy Committee et al. 1990). In 1980, 2.4 million poor people were living in ghettos. This was also strongly patterned by race: 2 percent of U.S. non-Latinx white, 21.1 percent Black, and 15.9 percent Latinx. As Wilson (1987:20) asserts, "[t]he social problems of urban life in the United States are, in large measure, the problems of racial inequality."

The causes of poverty, however, are complex and also extend beyond neighborhood effects (Sanbonmatsu et al. 2011). As such, Wilson (1987) found in his examination of the social dislocations associated with the rise of the ghetto underclass the proliferation of family dissolution, an increase in female-headed households, and welfare dependency. According to Wilson (1987), the number of female-headed households grew dramatically in the 1970s and early 1980s, with the number of female-headed households with one or more children increasing by 51 percent from 1970 to 1984. While this change in family structure was evident across race, the change was most notable for Black and Latinx families. Where the increase in white female-headed houses grew by 63 percent, it grew for Black and Latinx families by 108 and 164 percent. The majority (73%) of all female-headed householders lived in metropolitan areas (Wilson 1987).

Being in a female-headed house was also often linked to poverty Wilson (1987). Female workers earned substantially less than male workers and were less likely to have supplemental income. According to Wilson (1987), sex and marital status are the most

important determinants for poverty, particularly in urban areas. This is even more pronounced when looking at the level of family income and family structure in Black families. Consequently, "[e]conomic hardship has become almost synonymous with Black female-headed households… (Wilson 1987:27)".

With the increase of single-parent household also came the increase in children being born to unmarried mothers, as well as teenage childbirth. This subsequently had implications for the issue of welfare dependency, with more than half of all Aid to Family with Dependent Children (AFDC) assistance being paid to women who were teenage mothers in 1975 (Wilson 1987). Thus, female-headed household, unmarried childbirths, and teenage pregnancy were all intricately connected to poverty and dependency.

In addition to the above social dislocations, unemployment was also very much connected to poverty and family dissolution. While the labor force participation of white men remained rather stable, the labor force participation of Black men declined from 84 percent in 1940 to 67 percent in 1980, with the economic trend for Black men being unfavorable since the end of World War II. Wilson (1987:82-83) posits that, "…the weight of the evidence on the relationship between the employment status of men, and family life and married life suggest that the increasing joblessness among Black men merits serious consideration as a major underlying factor in the rise of Black single mothers and female-headed households." When taking into consideration the high Black-male mortality and incarceration rates as well, the proportion of Black men in stable economic situation is even lower than unemployment figures.

Thus, social dislocations are inextricably associated with poverty and neighborhood disadvantage. Although shifts in societal norms have since taken place since the 1970s and women are much more present in the labor force, the poverty gap still exists today, and it is still very much gendered and racialized (Elmelech and Lu 2004); there is still a disparity in the unemployment rate (Wilson 2019); and taken together, they often result in a reliance upon welfare by the most disadvantaged. Unfortunately, the most disadvantaged are also subject to police brutality as well. Income inequlity in an area where fatal interactions with police occurs is related to the increased relative odds of fatal injury for males of color (Johnson et al. 2019). Similarly, racial disparities in police shootings are more pronouced in in counties with low median incomes and a sizable portion of Black residents, especially when there is high financial inequality (Ross 2015), further demonstrating that neighborhood disadvantage can have long-lasting effects on residents and the policing they are subject to.

Segregation

While neighborhood effects models do well to address the importance of neighborhoods and its impact on life chances, the "missing link" to the construction and proliferation of the "ghetto underclass" as described by Wilson (1987) however, is segregation. Although Massey and Denton (1993) agree with Wilson (1987) that the economic supports for the Black community were undermined by the structural transformation of the urban economy during the 1970s and 1980s, they contend that without segregation, these changes would not have resulted in the disastrous social and economic changes in the inner cities during those decades. While the rates of Black

poverty were increased by the economic dislocations that Wilson (1987) identifies, it was

segregation that confined it to a select number of densely populated and geographically

isolated areas (Massey and Denton 1993).

Thus, it is the interplay between segregation and intense poverty that results in the

vulnerability of Black neighborhoods to change in the urban economy (Massey and

Denton 1993). Any dislocations that result in an upward shift in Black poverty rates will

also result in rapid change in the concentration of poverty. Consequently, a huge shift in

the economic and social composition of Black neighborhoods will follow.

Additionally, neighborhoods are dynamic and ever-changing. Individual decisions

impact the decisions of other, which ultimately impact the stability and well-being of the

community. According to Massey and Denton (1993:12):

> Because of this feedback between individual and collective behavior,
> neighborhood stability is characterized by a series of thresholds, beyond which
> self-perpetuating processes of decay take hold…each property owner who decides
> not to invest in upkeep and maintenance, for example, lowers the incentive for
> others to maintain their property. Likewise, new crime promotes psychological
> and physical withdrawal from public life, which reduces vigilance within the
> neighborhood and undermines the capacity for collective organization, making
> additional criminal activities.

Consequently, segregation builds decay, dissocial order, and crime into Black

communities, all the while creating a disadvantaged environment in which Blacks living

in the ghetto have to adapt to. It also concentrates poverty and joblessness among other

deleterious characteristics and impacts. Thus, Massey and Denton (1993) assert that

"…residential segregation is the institutional apparatus that supports other racially

discriminatory processes and binds them together… [and] until the black ghetto is

dismantled as a basic institution of American urban life, progress ameliorating racial inequality in other arenas will be slow, fitful, and incomplete (8)."

Fast forward to today, and the deleterious effects of living in the inner city can still be seen. Today, one in four Americans live in a poor neighborhood with a poverty rate of at least 20 percent (Li et al. 2019). The concentration of poverty and segregation is still evident as well, and it is very clear that neighborhoods matter, especially as it relates to policing. According to Johnson et al. (2019:227), "[a] frequently considered residential feature with relevance to the subject of deadly force is racial/ethnic segregation, since it functions socially to gather individuals of a common background into areas that allows them to be more efficiently targeted by the carceral apparatuses that maintain social stratification." Johnson et al. (2019) also found that low levels of segregation reduced the odds of a fatal interaction with police, and higher levels of segregation increased the odds for Latinx males. Similarly, disparities in police shootings are more pronouced in in counties with low median incomes and a sizable portion of Black residents (Ross 2015). Whether it be in the impoverished, predominately Black neighborhoods of Baltimore where Freddie Gray resided, or the home of "zero-tolerance policing," New York City, where Eric Garner took his last breath, we see that the intersection of race and gender has to be situated within these neighborhoods to fully understand incidences of police brutality.

The Police Agency Context

Also important to understanding police brutality is the organization of police agencies themselves. Organization theory has long held that the organizational property

of agencies influence police behavior, and holds the greatest potential as a guide for police reform (Worden 1995). By shaping the regulations guiding officer discretion, organizational characteristics influence officer behavior (Nowacki 2015). As such, concerns about police brutality also often consider the characteristics of the officers committing the homicide, the policies in place, and the institutional practices that enable lethal use of force to occur (Johnson et al. 2019) it has long been argued that "elements of formal organization structure the incidence with which force is used" (Wilson 1968:60). This can be evidenced, for example, in that agencies requiring supervisors and other personnel to fill out use of force forms lowers the rates of force as compared to agencies that allow officers to fill out their own forms (Alpert and MacDonald 2001).

Similarly, characteristics of the police officers themselves are important in the organization of agencies. Male officers are more likely to have excessive force complaints, and are eight times as likely to have an excessive force complaint sustained against them (Lonsway et al. 2002). Race is also paramount to lethal force encounters as white officers are more likely than non-white officers to view Blacks as violent (LeCount 2017). Therefore, the organizational property of agencies, along with the individual characteristics of police officers within police agencies can impact the how policies officers engage with the communities they serve.

Police Unions

Also paramount to the formal organization of police agencies are police unions. Police unions are organized to protect their members' interest (Alpert and MacDonald 2001). According to Kelling and Kliesmet (1995:193), "[Historically], police unions in

place focused their attention on rectifying the abused that often typified reform

management... They did this by getting the rules and regulations into the bargaining arena

and then bargaining, politicking, mediating, arbitrating, and pressuring." However, their

interests narrowed as police management and unions agreed by the late 1960s and early

1970s on issues of reform the unions brought forth, and "although police unions have a

strong impact on police use of force, formally they maintain a narrow interest in use of

force: defending officers who are accused of abuse and avioding officer liability (Kelling

and Kliesmet 1995:187)". Consequently, the police unions' function to protect officers

also strongly impacts whether officers will be held accountable and punished for

misconduct (Kelling and Kliesmet 1995; Alpert and MacDonald 2001).

Thus, not only do individual and neighborhood factors matter when examining

police brutality, but agencies matter as well. The characteristics, polices, and practices of

an agency can either be an impediment or a facilitator to police brutality. Similarly,

police unions can greatly impact whether or not there will be accountability for

misconduct, which can considerably affect officers' discretion as well.

Hypotheses

Police brutality is shaped by both non-lethal and lethal use of force. For this analysis, the focus surrounds lethal police force. Lethal police encounters were investigated through the group analysis of female and male victims. The research question used to investigate lethal police encounter is how do individual characteristics, neighborhood-level factors, and between policy agency factors shape lethal police force encounters. This was investigated through a multivariate analysis and a case study that evolved from the findings of the multivariate analysis. The outcome of the multivariate analysis the race of the victims of lethal police encounters (white, Black, and Latinx), with the reference category being white victims. The key associations were compared across the group analyses at each level of the multivariate analysis. Thus, from the literature in this chapter, I develop several hypotheses and sub-hypotheses based on lethal police encounters.

Since incidences of police brutality, non-lethal and lethal, are not only influenced by the individual level, but by the neighborhood and police agency level factors as well, I will model each of the levels and their impact on lethal police force encounters with people of color relative to whites. At the individual-level, experiences with police brutality and incarceration are patterned by both race and gender. Race and gender frame our social world (Reskin 2000) and have been used to stratify social groups (Crenshaw 1999), particularly in carceral and justice systems (Gilbert and Ray 2016). Therefore, I hypothesize that there is a greater likelihood that fatal police encounters will include people of color (Black or Latinx) relative to whites.

H1: There is a greater likelihood that fatal police encounters will include people of color (Black or Latinx) relative to whites.

Also, as mentioned in the sections of above, disability is an important often neglected component of intersectionality as well, and race and gender affect disability passing. Individuals who display symptoms of serious psychiatric illness are more likely to be arrested by the police (Corrigan 2004), and the risk of being killed during a police incident is 16 times greater for those with untreated mental illness than that for others approached by the police (Fuller et al. 2015). Thus, I hypothesize that lethal police encounters will be more likely to involve a person of color than whites if the victim has a disability.

H1a: Lethal police encounters will be more likely to involve a person of color than whites if the victim has a disability.

Since Black women are seen as more aggressive and dominant, (Ghavami and Peplau 2013), and that can impact their ability to pass when they have a disability, I hypothesize that lethal police encounters will be more likely to involve a Black woman than a white woman if the victim has a disability.

H1b: Lethal police encounters will be more likely to involve a Black woman than a white woman if the victim has a disability.

Also important is whether or not an officer may feel threatened by the alleged perpetrator having a weapon. Since gender and race stereotypes manifest both individually and collectively (Ghavami and Peplau 2013; Devine and Baker 1991; Donovan 2011), and Ghavami and Peplau (2013) found Blacks were characterized as lazy and criminal, and Black women were seen as aggressive and dominant, I

hypothesize that lethal force victims will be more likely to be a person of color if the alleged perpetrator was armed.

> *H$_{1c}$: Lethal force victims will be more likely to be a person of color if the alleged perpetrator was armed.*

Next, as is also shown in this chapter, neighborhoods matter and neighborhood adults serve as role models and evidence of life chances. As such, neighborhood disadvantage can have long-lasting effects on residents, as well as the policing they are subjected to. Thus, I hypothesize that neighborhood disadvantage will increase the likelihood that lethal police force was used on an alleged perpetrator who was a person of color than on an alleged perpetrator who was white.

> *H$_2$: Neighborhood disadvantage will increase the likelihood that lethal police force was used on an alleged perpetrator who was a person of color than on an alleged perpetrator who was white.*

Also, Johnson et al. (2019) found that income inequlity in an area where fatal interactions with police have occurred was related to the increased relative odds of fatal injury for males of color. Similarly, Ross (2015) found racial disparities in police shootings were more pronouced in in counties with low median incomes and a sizable portion of Black residents, especially when there is high financial inequality. Therefore, I hyothesize that lethal police encounters in impoverished neighborhoods will have a greater likelihood of being with a person of color than a white person, and lethal police encounters in impoverished neighborhoods will have a greater likelihood of being with a male of color than a white male.

> *H$_{2a}$: Lethal police encounters in impoverished neighborhoods will have a greater likelihood of being with a person of color than a white person.*

H2b: Lethal police encounters in impoverished neighborhoods will have a greater likelihood of being with a male of color than a white male.

Wilson (1987) also found the proliferation of family dissolution, an increase in female-headed households, and welfare dependency to be associated with the rise of the ghetto, with sex and marital status being key determinants of poverty. Thus, I hypothesize that lethal police encounters in neighborhoods with higher rates of poverty will more likely include a person of color than a white person, and lethal police encounters in neighborhoods with higher rates of poverty will more likely include a woman of color than a white woman.

H2c: Lethal police encounters in neighborhoods with higher rates of poverty will more likely include a person of color than a white person.

H2d: Lethal police encounters in neighborhoods with higher rates of poverty will more likely include a woman of color than a white woman.

Also, an important determinant of poverty is unemployment (Wilson 1987). According to Wilson (1987:82-83) "…the weight of the evidence on the relationship between the employment status of men, and family life and married life suggest that the increasing joblessness among Black men merits serious consideration as a major underlying factor in the rise of Black single mothers and female-headed households." Thus, I hypothesize that neighborhood with high unemployment rates will have a significantly greater likelihood of lethal police encounters with people of color, and lethal police encounters in neighborhoods with higher unemployment rates will more likely include a male of color than a white male.

H2e: Lethal police encounters in neighborhoods with higher unemployment rates will more likely include a person of color than a white person.

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H$_{2f}$: Lethal police encounters in neighborhoods with higher unemployment rates will more likely include a male of color than a white male.

As Massey and Denton (1993) posit, segregation is paramount to the creation and perpetuation of the urban ghetto; it is disruptive to neighborhood social organization, thus hindering collective efficacy. Consequently, segregation also has implications for police brutality. According to Johnson et al. (2019:227), "[a] frequently considered residential feature with relevance to the subject of deadly force is racial/ethnic segregation, since it functions socially to gather individuals of a common background into areas that allows them to be more efficiently targeted by the carceral apparatuses that maintain social stratification." Johnson et al. (2019) also found that low levels of segregation reduced the odds of a fatal interaction with police, and higher levels of segregation increased the odds for Latinx males. Therefore, I hypothesize that lethal police encounters in neighborhoods with higher levels of segregation will more likely include a person of color than a white person, and lethal police encounters in neighborhoods with higher levels of segregation will more likely include a male of color than a white male.

H$_{2g}$: Lethal police encounters in neighborhoods with higher levels of segregation will more likely include a person of color than a white person.

H$_{2h}$: Lethal police encounters in neighborhoods with higher levels of segregation will more likely include a male of color than a white male.

Lastly, the structure of police agencies is paramount in understanding the incidences with which force is used. As mentioned previously, concerns about racial disparities in the use of lethal force takes into account the characteristics of the officers using fatal force, as well as the polices and institutional practices that allow them to

occur. Thus, I hypothesize that the lethal police encounters will differ based upon the agency in which the encounter occurred.

> *H₃: Lethal police encounters will differ based upon the agency in which the encounter occurred.*

Also important is the race and gender of the police officers at the agency-level. Male officers are more likely to have excessive force complaints, and are eight times as likely to have an excessive force complaint sustained against them (Lonsway et al. 2002). Thus, I hypothesize that lethal police encounters with police officers in agencies with a higher proportion of male officers will more likely include a person of color than a white person.

> *H₃ₐ: Lethal police encounters with police officers in agencies with a higher proportion of male officers will more likely include a person of color than a white person.*

Similarly, since white officers are more likely than non-white officers to view Blacks as violent (LeCount 2017), I also hypothesize that lethal police encounters with police officers in agencies with a higher proportion of white officers will more likely include a person of color than a white person, and lethal police encounters with police officers in agencies with a higher proportion of white officers will more likely include a woman of color than a white woman.

> *H₃ᵦ: Lethal police encounters with police officers in agencies with a higher proportion of white officers will more likely include a person of color than a white person*

> *H₃꜀: Lethal police encounters with police officers in agencies with a higher proportion of white officers will more likely include a woman of color than a white woman*

Lastly, because the formal organization structure of police agencies affect the incidence of use of force, several studies have speculated that police unions serve to protect the interests of officers, and thus strongly impact the likelihood of an officer being found liable and punished for their misconduct (Kelling and Kliesmet 1995; Alpert and MacDonald 2001). Therefore, I hypothesize that lethal police encounters with police officers whose agency has a union will more likely include a person of color than a white person.

> H_{3d}: *Lethal police encounters with police officers whose agency has a union will more likely include a person of color than a white person.*

The hypotheses and sub-hypotheses above examined the incidences of police lethal encounters with people of color relative to whites at the individual-, neighborhood-, and agency-levels. Each level of hypotheses took into consideration the intersection of race and gender, along with other factors, to help establish a better understanding of lethal incidences of police brutality on a variety of levels. In the next chapter, I provide detailed explanation of the data and analytic procedure for the multivariate analysis used to test these hypotheses.

CHAPTER THREE

As is seen in Chapters 2, individual-, neighborhood-, and agency-level

characteristics are each important as it relates to police lethal encounters with people of

color. Individuals' interactions with one another are influenced by the social context. In

this chapter I will present the overall research design and analytic strategy for the

multivariate analysis based on the literature and theories presented in previous chapters.

First, I introduce the sources of data that were used. Then, I identify the dependent,

independent, and control variables that were used in the analysis. Last, I present the

analytic strategy, detailing each model that was used in the hierarchical multinomial

logistic modeling, and how they were structured, analyzed, and interpreted.

Quantitative Research Design

The research question was addressed using secondary data analysis with data

from the Mapping Police Violence database (Mappingpoliceviolence.org) (MPV), the

2017 American Community Survey (ACS) 5-year sample, and the 2013 Law

Enforcement Management and Administrative Statistics (LEMAS). The MPV database

has recorded fatal police encounters from 2013-2018. Police killing is defined 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-duty or off-duty,

intentional or accidental. It includes the deceased individual's characteristics, the details

of their death, the police agencies involved in their death, as well as the address-level information of where their death occurred. MPV has sourced from the three largest, most comprehensive and impartial crowdsourced databases on police killings in the country: FatalEncounters.org, the U.S. Police Shootings Database and KilledbyPolice.net. They have also done extensive original research to further improve the quality and completeness of the data. Thus, the MPV database (2003-2018) serves as the source for individual-level data.

The United States does not have a national database that systematically collects incidents of the use of lethal force by police (Fyfe 2002). Consequently, researchers have relied upon official databases to estimate incidents of lethal force, such as the Supplemental Homicide Reports (SHR), National Vital Statistics System (NVSS), and the Death in Custody Reporting System. However, official sources have been widely criticized as inaccurate, as well as limited by the classifications used and underreporting (Fyfe 2002; Ross 2015 Nix et al. 2017;Williams, Bowman, and Jung 2019), particularly by race when compared to "unofficial" sources (Gray and Parker 2019). However, new unofficial databases, such as MPV, have been created in response to the several high-profile media reports of lethal force, and they offer great potential in the reporting of unbiased incidents of lethal force that move beyond the limitations of official data.

The ACS is also a national survey of housing units and group quarters in the United States. It is an ongoing survey that regularly gathers information previously contained only in the long form of the decennial census, such as ancestry, citizenship, educational attainment, income, language proficiency, migration, disability, employment,

and housing characteristics. It is implemented through a series of monthly samples that produce annual estimates for the same small areas (census tracts and block groups) formerly surveyed by the decennial census long-form sample. When compared to ACS 1-year samples, 5-year samples provide the largest sample size, has data for all areas, is the most reliable, and has more precision which allows for examining smaller geographies (United States Census Bureau 2019b). The data from this sample was used to link neighborhood-level characteristics to the individual-level characteristics of the MPV dataset.

The LEMAS collects data from a nationally representative sample of state and local law enforcement agencies in the United States. The 2013 LEMAS design consists of a survey questionnaire that was sent to 3,336 general purpose state and local law enforcement agencies including 2,353 local police departments, 933 sheriffs' offices, and the 50 primary state law enforcement agencies. All agencies employing 100 or more sworn personnel were to be included with certainty (self-representing) and smaller agencies were sampled from strata based on the number of officers employed. The data obtained include agency responsibilities, job functions of sworn and civilian employees, officer salaries and special pay, demographic characteristics of officers, weapons and armor policies, education and training requirements, computers and information systems, use of video technology, community policing activities, etc. Because it provides information about the personnel at each agency, and neighborhoods are nested in agencies, this data was used to provide and link the agency-level data to the neighborhood and individual data.

To aid in linking the files, the Law Enforcement Agency Identifiers Crosswalk, United States, 2012 was used. Although it is older relative to the other data, it does not provide any data that will be used to predict lethal encounters. The LEAIC file only facilitates linking reported crime data with socio-economic data. It does this by having a record for each law enforcement agency, law enforcement reporting entity, and access identifier for the National Crime Information Center (NCIC). The LEAIC records contain common match keys for merging reported crime data and Census Bureau data. These linkage variables include the Originating Agency Identifier (ORI) code, Federal Information Processing Standards (FIPS) state, county and place codes, and Governments Integrated Directory government identifier codes. For the LEMAS and UCR files, the ORI code was used to merge the three sources of data.

Dependent Variable

The Fatal Encounter data was separated by gender to create a subsample of lethal force encounters for female and male victims. From there, the dependent variable is the race of the victim in the lethal force encounter. This was be a polytomous variable, (0) White (1) Black (2) Latinx, that indicates whether or not the female/male lethal force victim was a white, Black, or Latinx, with white as the reference category for all analyses.

Independent Variables

The MPV data provided the individual-level predictors of Mentally Ill/Under the Influence and Armed. This variable was recoded as a binary variable, (0) No (1) Yes, and represents whether the alleged perpetrator was thought to be mentally ill or under the

influence at the time of the incident. Although these are very distinct concepts, they cannot be separated as they are reported as a single variable in the source data.

Similarly, the Armed variable was recoded as a binary variable (0) No (1) Yes and represents whether the alleged perpetrator was armed. A person was coded as Armed if there were alleged to have possessed objects or weapons, including having and using a vehicle as a weapon.

The neighborhood-level predictors were provided by the 5-year 2017 ACS data. Since past studies on neighborhood effects have focused on some combination of poverty rate, unemployment, female-headed households, welfare receipts, and racial composition (Levy, Owens, and Sampson 2019), the measures that were used for the neighborhood-level are: segregation, poverty rate, unemployment rate, welfare recipiency rate, and unmarried rate. The data was measured at the tract-level, which is often used for neighborhood effects analysis (Jargowsky and Bane 1990; Massey and Denton 1993).

For poverty rate, I used the percentage of the population in each tract that is below the poverty level as defined by the U.S. Census Bureau. According to the US Census Bureau (2019a:para 1), "…the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty." I used the 49 percent and below threshold, or what is considered "severe poverty," which means that the income is less than half the poverty threshold. This aligns most closely with the criteria for ghetto poverty, which typically utilizes a 40

percent poverty criteria to distinguish mixed-income areas and nonpoor areas from ghettos (Jargowsky and Bane 1990).

Similarly, the unemployment rate was the percentage of the population in each tract that is unemployed. To calculate the welfare recipiency rate of the population in each tract, I used the percentage of households receiving Food Stamps/SNAP. The unmarried rate included in the analysis was the percentage of the population in that tract that was unmarried. Individual race was used to create the percentage of Black individuals within each tract to help model segregation within the tract.

Lastly, the LEMAS data was utilized for the agency-level predictors. The following variables were used: Number of Full-Time Sworn Personnel by Race, Number of Male Sworn Personnel Full-Time, Number of Male Sworn Personnel Part-Time, Number of Female Sworn Personnel Full-Time, Number of Female Sworn Personnel Part-Time, and Officers Represented by a Union.

The Full-Time Sworn Personnel by Race Variable was measured with the following question: "As of January 1, 2013, how many Full-Time Sworn personnel were there in each of the following racial / ethnic categories?" A variable was created to account for the proportion of white officers in an agency.

Next, the proportion of male officers was calculated from the Number of Male Sworn Personnel Full-Time Variable and Male Sworn Personnel Part-Time variable to create a variable representing the total number of male sworn personnel, both full-time and part-time. The total number of personnel was taken from the sum of the total number of male personnel (Number of Male Sworn Personnel Full-Time and Number or Male

Sworn Personnel Part-Time) and the total number of female personnel (Number of Female Sworn Personnel Full-Time and Number of Female Personnel Part-Time) in order to find the proportion. The variable was measured with the following question: "As of January 1, 2013, how many PAID SWORN personnel worked in your agency?"

Lastly, Officers represented by a Union was measured with the following question: "As of January 1, 2013, were the interests of sworn personnel represented by a collective bargaining organization?" It is coded as (1) Yes (2) No and was recoded as (0) No (1) Yes.

Control Variables

The officers' education level within an agency served as a control variable. It was measured with the following question: "As of January 1, 2013, what was your agency's minimum education requirement for sworn new hires?"

Multivariate Analytic Strategy

Prior to performing an analysis of the data, ArcGIS was used to geocode the MPV data and to then assign a tract to each incident. Then, it was used to join the ACS tract-level data to the tract of each of the incidents. Lastly, a spatial join was performed in ArcGIS to assign the closest police agency in the LEMAS data to each neighborhood that one of the MPV incidents took place. Then, the descriptive statistics were calculated to obtain demographic measures for the sample for the police and alleged perpetrators, including the mean and standard deviation the characteristics of alleged perpetrators alleged perpetrators. Of the neighborhood-level factors, descriptive statistics were also calculated for the unemployment rate, poverty rate, welfare receipt rate, unmarried rate,

and proportion of Black residents. Descriptive statistics for the agency-level data are included as well.

Because there are three level of analysis, individual-, neighborhood-, and agency-level, nested by tract, multilevel modeling was utilized to account for the violation of the assumption of independence of cases in standard regression. Since the outcome variables are nominal and unordered, multinomial logistic regression is the appropriate method of multilevel modeling for analyzing these data. Thus, hierarchical multinomial logistic regression modeling was employed with the level-1 unit of analysis being the individual level, the level-2 unit of analysis being the neighborhood-level, and the level-3 being the agency-level. Hierarchical multinomial logistic modeling is suggested for studying data with a group structure and a polytomous response variable (Liao 1994).

For my explanation of multilevel modeling, I rely heavily upon Raudenbush and Bryk (2002), as well as the work of Johnson et al. (2019). The descriptions of statistical interpretations of multilevel modeling are extracted from these sources.

Individual-Level Model

To consider the first hypothesis, (H$_1$) that there is a greater likelihood that fatal police encounters will include people of color (Black or Latinx) relative to whites, and the subsequent sub-hypotheses, the first model accounted for individual characteristics of race, mental illness and possession of weapon. As a reminder, the sample was separated by sex, therefore the analytic models will be the same for both women and men. In these models, the dependent variable was the race of the alleged perpetrator and the reference category was white; There were *M* possible categories of outcomes. The response, *R*,

takes on the value of *m* with the probability $Prob(R = m) = \varphi_m$, for $m = 1$ (Black), $m = 2$ (Latinx), and $m = 3$ (white). Therefore, $M = 3$ and:

<div align="right">**Equation 1: Outcome Categories**</div>

$$Prob(R_{ijk} = 1) = \varphi_{1ijk},$$

$$Prob(R_{ijk} = 2) = \varphi_{2ijk},$$

$$Prob(R_{ijk} = 3) = \varphi_{3ijk} = 1 - \varphi_{1ijk} - \varphi_{2ijk}$$

The outcome of at level 1 was the odds-log of falling into category *m* relative to category *M*. Category *M* is the reference category of white. For each of the race categories:

<div align="right">**Equation 2: Level 1 Link Function**</div>

$$n_{ijk} = \log\left(\frac{\varphi_{mijk}}{\varphi_{Mijk}}\right) = \log\left(\frac{Prob(R_{ijk} = m)}{Prob(R_{ijk} = M)}\right)$$

The odds of a lethal police force encounter with a person of color relative to whites, n_{ijk}, were conditioned on whether the deceased was thought to be mentally ill or armed. The measures for whether the deceased was thought to be mentally ill or armed were defined as 1 indicating yes and 0 indicating no.

The fully unconditional model allows estimation of the variability in the absence of covariates: n_{1ijk}, the log-odds of a Black lethal police force encounter (relative to a white lethal police force encounter) and n_{2ijk}, the log-odds of a Latinx fatality lethal police force encounter (relative to a white lethal police force encounter). Thus, there were two equations at level 1:

$$n_{1ijk} = \pi_{0jk\,(1)},$$
$$n_{2ijk} = \pi_{0jk\,(2)}.$$

According to this model, each pair of log-odds were equal to a fatality-specific intercept.

Then, the full level 1 model was expressed as:

Equation 4: Full Model 1

$$n_{mijk} = \pi_{0jk\,(m)} + \pi_{1jk(m)} * \left(Mentally\ ill_{ijk}\right) + \pi_{2jk(m)} * \left(Armed_{ijk}\right)$$

where:

m	= 1 (Black), 2 (Latinx);
n_{mijk}	= the likelihood of POC lethal police force encounters relative to white lethal police force encounters i in neighborhood j and agency k;
$\pi_{0jk(m)}$	= the mean likelihood of a POC police lethal force encounters relative to white lethal police force encounters in neighborhood j in agency k;
Mentally ill$_{ijk}$	= whether the alleged perpetrator was thought to be mentally ill or under the influence;
Armed$_{ijk}$	= whether the alleged perpetrator was armed.

The indices i, j, and k denote alleged perpetrators, neighborhoods, and agencies where there are:

i	= 1, 2, …, n$_{jk}$ alleged perpetrators within neighborhood j in agency k;
j	= 1, 2, …, J$_k$ neighborhoods within agency k; and

k = 1, 2, …, K agencies.

Neighborhood-Level Model

The second hypothesis (H2) of how neighborhood disadvantage will increase the likelihood that lethal police force used on an alleged perpetrator who was a person of color relative to an alleged perpetrator who was white, and the subsequent sub-hypotheses were addressed, model 2 (Equation 6) presented these relationships. At level two, each parameter represented the adjustment in the average person of color lethal police force encounters slope, $\beta_{00k(m)}$. In this model, I associated the neighborhood disadvantage measures of unemployment rate, poverty rate, welfare receipt rate, residential segregation, and unmarried rate. Each neighborhood mean, π_{0jk}, is viewed as an outcome varying randomly around the neighborhood mean.

At level 2, the fatality-specific intercepts varied randomly over neighborhoods, with the fully unconditional model expressed as:

Equation 5: Fully Unconditional Model 2

$$\pi_{0ijk(1)} = \beta_{00k(1)} + r_{0jk(1)},$$

$$\pi_{0ijk(2)} = \beta_{00k(2)} + r_{0jk(2)},$$

$$\begin{pmatrix} r_{0jk(1)} \\ r_{0jk(2)} \end{pmatrix} \sim N\left[\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} \tau_{00(1)00(1)} & \tau_{00(1)00(2)} \\ \tau_{00(2)00(1)} & \tau_{00(2)00(2)} \end{pmatrix}\right].$$

The full level 2 model is expressed as:

Equation 6: Full Model 2

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$$\pi_{0ijk(m)} = \beta_{00k(m)} + \beta_{01jk(m)}\left(Unemployment_{jk}\right) + \beta_{02jk(m)}\left(Poverty_{jk}\right)$$

$$+ \beta_{01jk(m)}\left(Welfare_{jk}\right) + \beta_{03jk(m)}\left(Segregation_{jk}\right)$$

$$+ \beta_{03jk(m)}\left(Marriage_{jk}\right) + r_{0jk(m)}$$

where:

$\beta_{00k(m)}$ = the mean lethal police force encounters in agency *k;*

$Unemployment_{jk}$ = the unemployment rate;

$Poverty_{jk}$ = the severe poverty rate;

$Welfare_{jk}$ = the SNAP recipiency rate;

$Segregation_{jk}$ = proportion of Blacks;

$Unmarried_{jk}$ = the proportion of single individuals;

$r_{0jk(m)}$ = a random neighborhood effect, the deviation of neighborhood

                                  *jk'*s mean from the agency mean. These effects are normally

                                  distributed with a mean of 0 and a variance τ_π. Within each of the

                                  K agencies, the variability among neighborhoods is assumed to be

                                  the same.

Agency-Level Model

Lastly, to consider the third hypothesis (H$_3$) that lethal police encounters will differ based upon the agency in which the encounter occurred and the subsequent sub-hypotheses, model 3 will represent the variability among agencies. A police lethal force encounter with a person of color was viewed as a function of the agencies' proportion of all male officers, proportion of white officers, educational level of the officers, and

officers represented by a union. Because there was a lack of variability in the distribution

for of the educational attainment of officers in the sample of female fatal encounters as

evidenced by 88 percent of agencies having the requirement of a high school

diploma/GED and the remaining 12 percent distributed among the other four categories,

it was not be used as a control for that model. Elsewise, the agency-level models for male

and female fatal encounters were the same. The first three measures (y_{001}-y_{003}) were

grand mean centered and indicate the estimated deviation from the agency's mean

associated with a point increase among those measures. Officers represented by a union

was uncentered, coded (0) no (1) yes, and represent the average change in probability that

a lethal police force encounter had occurred given the agency's indication of have those

characteristics.

The agency means, $\beta_{00k(m)}$, was viewed as varying randomly around a grand

mean, with the level 3 fully unconditional model is expressed as:

Equation 7: Fully Unconditional Model 3

$$\beta 00k_{(1)} = y000_{(1)} + u00k_{(1),}$$

$$\beta 00k_{(2)} = y000_{(2)} + u00k_{(2),}$$

$$\begin{pmatrix} u00k_{(1)} \\ u00k_{(2)} \end{pmatrix} \sim N \left[\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} \tau_{00(1)00(1)} & \tau_{00(1)00(2)} \\ \tau_{00(2)00(1)} & \tau_{00(2)00(2)} \end{pmatrix} \right].$$

Then, the full level-3 model is expressed as:

Equation 8: Full Model 3

$$\beta 00k_{(m)} = y000_{(m)} + y001_{(m)}(Prop. Male\ Officersk)$$

$$+ y002_{(m)}(Prop. White\ Officersk)$$

$$+ y003_{(m)}(Educ. Level\ of\ Officersk)$$

$$+ y004_{(m)}(Officers\ Rep. by\ Unionk) + u00k_{(m)}$$

where:

$y000_{(m)}$	= the grand mean of the agency;
Prop. Male Officers$_{sk}$	= proportion of male officers in an agency;
Prop. White Officers$_{sk}$	= proportion of white officers in an agency;
Educ. Level of Officers$_{sk}$	= education level of officers in an agency;
Officers Rep. by Union	= officers represented by a union in an agency;
$u00k_{(m)}$	= a random agency effect, that is, the deviation of agency of agency k's mean from the grand mean. These effects are assumed normally distributed with a mean of 0 and variance τ_π.

Model Estimates

A multilevel analysis results in the estimates of all parameters, such as standard errors, and their statistical significance. It also yields estimates of the variance components of random effects. The intercept variance and the meaning of the intercept depends on the location of the X variable (Snijders and Bosker 1999). Thus, in order to best interpret the maximum number of calculated parameter estimates of the cumulative log-odds, I employed centering.

Whether or not to center the level-1 predictors have implications for the meanings of the intercept and slope, the variance in the intercept and the slope, and the covariance between the intercept and the slope (Park 2008; Raudenbush and Bryk 2002). Raudenbush and Bryk (2002) and Park (2008) point out that If an $\overline{X}_{ijk}$ value of zero is not meaningful, it would call for the transformation of X_{ijk} to render the β_{0jk} more meaningful. In the case of the level-1 variables, *mental ill and armed*, a zero value would be meaningful; thus, these variables were not centered. In its raw metric, the level 1 predictors (X_{ijk}) indicate whether or not an individual in a fatality was thought to be mentally ill and whether or not an individual in a fatality was allegedly armed, regardless of their own group ratio.

Similarly, there was no centering done at the level-2 with the neighborhood variables. The choice of location of the Ws is not as critical as for level-1 predictors (Raudenbush and Bryk 2002). Numerical instability is less likely, unless cross-product terms are introduced at level 2. Each level-2 parameter represented the adjustment in the average person of color lethal police force encounters slope, $\beta_{00k(m)}$.

I did, however, center the level-3 continuous variables around the grand mean for that variable $(\overline{X}_k - \overline{X}_{...})$. Centering around the grand mean allows for each variable to be understood as expected changes in that variable relative to the overall mean score. For example, for proportion of male officers, each calculated coefficient will be explained as holding constant the variability of neighborhoods across all fatalities, and the intercept will be the expected value when all variables are at their mean.

Generally, grand-mean centering is more appropriate than group-mean centering if individual characteristics have little to do with group membership (Park 2008). As Park (2008:254) asserts, "[b]ecause group-mean centering involves transforming individual scores into deviation scores from their corresponding group mean, if individual deviation scores do not have any practical or theoretical meaning, it is prudent to use raw scores or grand mean centered ones." Generally, group-mean centered random slope models should be only be used when there is a clear theory or empirical indication that relative score, as opposed to the absolute score, is related to dependent variable (Snijders and Bosker 1999).

Therefore, the research design and analytic strategy presented in this chapter guides my analysis of the MPV, LEMAS, and ACS data. In the next chapter, I will go further into the data by presenting the descriptive statistics for the full population of fatal police encounters, as well as the descriptive statistics for each sample by gender. Then, I detail correlations between variable pairs at each level. Lastly, the results of the analysis based on the analytic strategy presented here will be detailed.

CHAPTER FOUR

As described in the previous chapter detailing the analytic strategy, in this chapter

I provide the descriptive statistics for fatal encounter victims, the correlations between

variables at each level, and the results of the multivariate analysis. I begin by providing

descriptive statistics for the entire sample of fatal encounter victims. Then, I separate the

descriptive statistics by gender and identify the differences in male and female fatalities

that are statistically significant. Next, I provide the correlations between each variable at

the individual-, neighborhood-, and agency-level, first for the population and then by

gender. Lastly, I detail the results of the multivariate analysis and present the key

findings.

Descriptive Statistics

The descriptive statistics for the sample of fatal encounter victims *(N= 6,838)*, the

neighborhoods that the incidents occur *(N= 3,685)*, and the surrounding police agencies

(N= 1,001) are presented in Table 1. The results at the individual-level indicate that about

half of individuals killed by police are white ($\bar{x} = 0.51, SD = 0.50$), just over one-

quarter are Black ($\bar{x} = 0.29, SD = 0.46$), and one-fifth of the fatalities are Latinx ($\bar{x} =$

$0.20, SD = 0.40$). Additionally, the majority of the population consists of male fatalities

($\bar{x} = 0.94, SD = 0.23$). About a quarter were thought to be mentally ill or under the

influence ($\bar{x} = 0.27, SD = 0.45$), and most of the population were armed ($\bar{x} = 0.83, SD = 0.38$).

Table 1: Descriptive Statistics Full Sample

	Mean	SD	Minimum	Maximum
Race of victim				
White	0.51	0.50	0	1
Black	0.29	0.46	0	1
Latinx	0.20	0.40	0	1
Individual-Level Variables				
Male	0.94	0.23	0	1
Female	0.06	0.23	0	1
Mental Illness	0.27	0.45	0	1
Armed	0.83	0.38	0	1
Neighborhood-Level Variables				
% Severe Poverty	0.09	0.07	0	0.74
% Unmarried	0.37	0.13	0	1
% Welfare Receipt	0.18	0.13	0	0.80
% Unemployed	0.39	0.10	0	1
% Black	0.18	0.26	0	1
Agency-Level Variables				
% Male Officers	0.91	0.07	0.43	1
% White Officers	0.77	0.23	0	1
Officer Education				
No Minimum	0.004	0.06	0	1
H.S./GED	0.86	0.34	0	1
Some College	0.05	0.22	0	1
Associates	0.06	0.24	0	1
Bachelors	0.02	0.14	0	1
Union	0.82	0.38	0	1
N = 6828				

At the neighborhood level, the average neighborhood poverty rate for the location of a police killing is 20 percent ($\bar{x} = 0.20, SD = 0.13$), with about 9 percent being in severe poverty ($\bar{x} = 0.09, SD = 0.07$). Just under one-fifth of households in the neighborhoods in locations where fatalities occurred received SNAP in the last 12 months ($\bar{x} = 0.18, SD = 0.13$), and the average unemployment rate was about 39 percent ($\bar{x} = 0.39, SD = 0.10$). Also, for locations where fatalities occurred, Blacks make up almost one-fifth of the population in the neighborhoods ($\bar{x} = 0.18, SD = 0.26$), and unmarried individuals make up about 37 percent ($\bar{x} = 0.37, SD = 0.13$).

When looking at the agency level, male officers make up the greatest proportion in agencies near where the fatalities occurred ($\bar{x} = 0.91, SD = 0.07$), as well as white officers ($\bar{x} = 0.77, SD = 0.23$). For the reported education requirement of sworn officers, very few of the agencies had no minimum requirement ($\bar{x} = 0.004, SD = 0.06$), 86 percent of the agencies required a high school diploma or GED ($\bar{x} = 0.86, SD = 0.34$), 5 percent of the agencies required some college ($\bar{x} = 0.05, SD = 0.22$), 6 percent of the agencies required an associate's degree ($\bar{x} = 0.06, SD = 0.24$), and 2 percent of the agencies required a bachelor's degree ($\bar{x} = 0.02, SD = 0.14$). Lastly, most of the agencies were a part of a union ($\bar{x} = 0.82, SD = 0.38$).

Next, Table 2 breaks out the descriptive statistics by gender *(male N = 6,428, female N = 400)*. The results of male fatalities at the individual-level reveal that half of the male fatalities are white men ($\bar{x} = 0.50, SD = 0.50$), thirty percent are Black ($\bar{x} = 0.30, SD = 0.46$), and one-fifth are Latinx ($\bar{x} = 0.20, SD = 0.40$). Also, just over one

quarter of the male fatalities were thought be mentally ill or under the influence ($\bar{x} = 0.27\ SD = 0.44$), and the majority of men were armed ($\bar{x} = 0.84, SD = 0.37$).

For male fatalities, at the neighborhood level the average neighborhood poverty rate for the location of a police killing is 20% ($\bar{x} = 0.20, SD = 0.13$), with about 9 percent being in severe poverty ($\bar{x} = 0.09, SD = 0.07$). Just under one-fifth of households in the neighborhoods where fatalities occurred received SNAP in the last 12 months ($\bar{x} = 0.18, SD = 0.12$), and the average unemployment rate was about 39 percent ($\bar{x} = 0.39, SD = 0.10$). Also, Blacks make up almost one-fifth of the population in the neighborhoods where fatalities occurred ($\bar{x} = 0.18, SD = 0.26$), and unmarried individuals make up about 37 percent ($\bar{x} = 0.37, SD = 0.13$).

Table 2: Descriptive Statistics by Gender

	Male		Female	
	Mean	*SD*	*Mean*	*SD*
Outcome variable				
White	**0.50**	0.50	**0.66**	0.48
Black	**0.30**	0.46	**0.21**	0.40
Latinx	**0.20**	0.40	**0.14**	0.34
Individual-Level Variables				
Mental Illness	0.27	0.44	0.31	0.46
Armed	**0.84**	0.37	**0.72**	0.45
Neighborhood-Level Variables				
% Severe Poverty	**0.09**	0.07	**0.08**	0.07
% Unmarried	**0.37**	0.13	**0.35**	0.13
% Welfare Receipt	**0.18**	0.12	**0.16**	0.12
% Unemployed	0.39	0.10	0.38	0.10
% Black	0.18	0.26	0.17	0.23
Agency-Level Variables				
% Male Officers	0.91	0.07	0.90	0.06
% White Officers	0.77	0.23	0.77	0.23
Officer Education				
No Minimum	0.004	0.06	0.003	0.05
H.S./GED	0.86	0.34	0.88	0.33
Some College	0.05	0.22	0.06	0.23
Associates	0.06	0.24	0.05	0.22
Bachelors	0.02	0.14	0.01	0.10
Union	0.82	0.38	0.86	0.35
	N = 6428		*N = 400*	

p < .05, two tailed differences between male and female fatalities

At the agency level, male officers make up the greatest proportion in agencies

near where the male fatalities occurred ($\bar{x} = 0.91, SD = 0.07$). Similarly, white officers

make up the greatest proportion of officers in agencies nearest where male fatalities

occurred ($\bar{x} = 0.77, SD = 0.23$). For the reported education requirement of sworn

officers, very few of the agencies had no minimum requirement ($\bar{x} = 0.004, SD = 0.06$),

86 percent of the agencies required a high school diploma or GED ($\bar{x} = 0.86, SD =$

0.34), 5 percent of the agencies required some college ($\bar{x} = 0.05, SD = 0.22$), 6

percent of the agencies required an associate's degree ($\bar{x} = 0.06, SD = 0.24$), and 2

percent of the agencies required a bachelor's degree ($\bar{x} = 0.02, SD = 0.14$). Lastly, most

of the agencies were a part of a union ($\bar{x} = 0.82, SD = 0.38$).

Moving on to the sample of female fatalities, at the individual-level about two-

thirds are white women $\bar{x} = 0.66, \ SD = 0.48$), just over one-fifth are Black women ($\bar{x} =$

$0.21, \ SD = 0.40$), and fourteen percent are Latinx women ($\bar{x} = 0.14, \ SD = 0.34$).

Additionally, 31 percent of female fatalities were thought to be mentally ill or under the

influence ($\bar{x} = 0.31, \ SD = 0.46$), and in most of the female fatality incidents, the

women were armed ($\bar{x} = .72, SD = 0.45$).

At the neighborhood level for female fatalities, the average neighborhood poverty

rate for the location of a police killing is just under one-fifth ($\bar{x} = 0.18, SD = 0.12$), with

about 8 percent being in severe poverty ($\bar{x} = 0.08, \ SD = 0.07$). Sixteen percent of

households in the neighborhoods where fatalities occurred received SNAP in the last 12

months ($\bar{x} = 0.16, SD = 0.12$), and the average unemployment rate was about 38 percent

($\bar{x} = 0.38, SD = 0.10$). Also, Blacks make up almost one-fifth of the population in the

neighborhoods where a fatalities occurred ($\bar{x} = 0.17, SD = 0.23$), and unmarried individuals make up about 35 percent ($\bar{x} = 0.35, SD = 0.13$).

For female fatalities at the agency level, male officers make up the greatest proportion in agencies near where the fatalities occurred ($\bar{x} = 0.90, SD = 0.06$). Similarly, white officers make up the greatest proportion of officers in agencies nearest where female fatalities occurred ($\bar{x} = 0.77, SD = 0.23$). For the reported education requirement of sworn officers, very few of the agencies had no minimum requirement ($\bar{x} = 0.003, SD = 0.05$), 88 percent of the agencies required a high school diploma or GED ($\bar{x} = 0.88, SD = 0.33$), 6 percent of the agencies required some college ($\bar{x} = 0.06, SD = 0.23$), 6 percent of the agencies required an associate's degree ($\bar{x} = 0.05, SD = 0.22$), and 2 percent of the agencies required a bachelor's degree ($\bar{x} = 0.01, SD = 0.10$). Lastly, most of the agencies were a part of a union ($\bar{x} = 0.86, SD = 0.35$).

Although many of the differences between male and female fatalities are small, some are statistically significant, as is also denoted in Table 2. At the individual level, there are significant differences in the racial composition of each sample by gender. Whereas white men make up half of the sample of male fatalities ($\bar{x} = 0.50, SD = 0.50$), white women make up about two-thirds of the sample of female fatalities ($\bar{x} = 0.66, SD = 0.48$). Similarly, Black men compose about thirty percent of the sample of male fatalities ($\bar{x} = 0.30, SD = 0.46$) and Latinx men make up about one-fifth ($\bar{x} = 0.20, SD = 0.40$) compared to Black women constituting just over one-fifth ($\bar{x} =$

$0.21, SD = 0.41$) and Latinx females making up fourteen percent of female fatalities ($\bar{x} = 0.14, SD = 0.34$).

Also, there is a significant difference in the rate of being armed among male and female fatalities. Whereas seventy-two percent of the female victims were armed ($\bar{x} = 0.72, SD = 0.45$), about eighty-four percent of male victims were armed ($\bar{x} = 0.84, SD = 0.37$).

Moving on to neighborhood characteristics, there are significant, albeit small, differences among male and female fatalities as well. There is a higher rate of SNAP household recipiency in neighborhoods with male fatalities ($\bar{x} = 0.18, SD = 0.13$) as compared to neighborhoods with female fatalities ($\bar{x} = 0.16, SD = 0.12$). Similarly, there is a higher mean rate of severe poverty in neighborhoods with male fatalities ($\bar{x} = 0.09, SD = 0.07$) compared to the poverty rate in neighborhoods with female fatalities ($\bar{x} = 0.08, SD = 0.07$). Lastly, there is a higher rate of unmarried individuals in the neighborhoods with male fatalities ($\bar{x} = 0.37, SD = 0.13$) than in neighborhoods with female fatalities ($\bar{x} = 0.35, SD = 0.13$). There are no agency level characteristics that significantly differ based upon whether the fatality was male or female.

Correlations

The Pearson's r correlation was calculated for each pair of continuous independent variables by level in the full sample and by gender to help identify where there may have been patterns among the data, as presented in Table 3. The sign of the correlation coefficients provided indicate the relationship of the variables. Positive coefficients indicate that when the value of one variable increases, the value of the other

variable also tends to increase. Conversely, a negative coefficient indicates that as the

value of one variable increases, the value of the other variable tends to decrease.

Coefficient values closest to -1 or +1 indicate a stronger relationship.

To begin, the variables at the individual level include the variables armed and

mentally ill. Because these variables are not continuous, a Chi-Square Test was

performed to determine whether there is a statistically significant difference between the

expected frequencies and the observed frequencies. Results of this Chi-Square Test

indicated a weak significant association between armed and mentally ill $\mathcal{X}^2(1, N = 5357) = 7.99, p < .01$.

At the neighborhood level, the independent variables include the unemployment

rate, the poverty rate, the welfare recipiency rate, the proportion of Blacks, and the

proportion of single individuals. Of these variables, results of the bivariate analysis

indicated that there was a significant positive association between the unemployment rate

and the SNAP recipiency rate. As the rate of unemployment increases, so does the rate of

SNAP recipiency. Similarly, there was a significant positive association between the

employment rate and the proportion of Blacks and the unemployment rate and the

poverty rate. However, there was a modest significant negative association between

unemployment rate and the proportion of single individuals, with an increase in the

unemployment rate resulting in a decrease in the rate of single individuals.

Table 3: Zero-order Correlations Among All Continuous Independent Variables: Full Sample

	1	2	3	4	5	6	7
1. % Welfare Recipiency	--						
2. % Black	.515*	--					
3. % Single	.476*	.489*	--				
4. % Unemployed	.339*	.112*	-.024*	--			
5. % Severe Poverty	.651*	.397*	.605*	.341*	--		
6. % Male Officers						--	
7. % White Officers						.268*	--

There was a strong significant positive association between the poverty rate and the SNAP recipiency rate, and the poverty rate and the proportion of single individuals. There was also a moderate degree of significant positive association between the poverty rate and the proportion of Blacks. Similarly, there was also a strong significant positive association between the SNAP recipiency rate and proportion of Blacks, and there were moderate significant positive associations found between the SNAP recipiency rate and the proportion of single individuals. Thus, increases in each measure correlates with an increase in the other associated measure, such as an increase in the poverty rate resulting in an increase in the SNAP recipiency rate.

At the agency level, the independent variables include the proportion of male officers, the proportion of white officers, education level of officers in an agency, and whether the officers in an agency are represented by a union. Results of the bivariate analysis indicated that there was a small significant positive association between the proportion of male officers and the proportion of white officers. In other words, increases

in the proportion of male officers was associated with increases in the proportion of white

officers.

There was also a modest positive association between the proportion of white

officers and officer education and a modest negative association between the proportion

of white officers and union representation. Lastly, a small positive association existed

between union representation and officer education with increases in the education

requirement of officers correlated with the union representation of an agency.

When separating the samples by gender, many of the same correlations still

existed. Table 4 presents the correlations for variables in the male fatalities sample. For

the sample of male fatalities, results of the Chi-Square Test indicated a weak significant

association between armed and mentally ill $X^2(1, N = 5027) = 15.71 \ p < .001$.

Table 4: Zero-order Correlations Among All Continuous Independent Variables: Male Fatalities

	1	2	3	4	5	6	7
1. % Welfare Receipt	--						
2. % Black	.518[*]	--					
3. % Unmarried	.482[*]	.493[*]	--				
4. % Unemployed	.338[*]	.113[*]	-.019	--			
5. % Severe Poverty	.657[*]	.402[*]	.609[*]	.343[*]	--		
6. % Male Officers						--	
7. % White Officers						.265[*]	--

At the neighborhood level, results of the zero-order correlation analysis of the

male sample of fatalities indicated that there were strong positive significant associations

between the unemployment rate and the SNAP recipiency rate and unemployment rate and the poverty rate, with a smaller positive association between the employment rate and the proportion of Blacks.

Next, there was a strong significant positive association between poverty rate and the SNAP recipiency rate, poverty rate and the proportion of Blacks, and poverty rate and the proportion of single individuals for the sample of fatalities who were men. There was also a strong significant positive association between the SNAP recipiency rate and the proportion of Blacks and SNAP recipiency the proportion of single individuals. Lastly, a strong positive significant association was found between the proportion of Blacks and the proportion of single individuals.

At the agency level, results of the bivariate analysis indicated that there was a significant positive association between the proportion of male officers and the proportion of white officers for the sample of fatalities who were men. However, there was a significant negative association between the proportion of male officers and officer education and the proportion of male officers and union representation.

Next, Table 5 presents the corrections for variables at each level in the female fatalities sample. The variables at the individual level include the variables armed and mentally ill. Results of the Chi-Square Test indicated a weak significant association between armed and mentally ill $\mathcal{X}^2(1, N = 330) = 11.47 \ p < .01$.

At the neighborhood level, however, results of the zero-order correlation analysis indicated that there was a significant positive association between the unemployment rate and the SNAP recipiency rate, the employment rate and the proportion of Blacks, and the

unemployment rate and the poverty rate for the sample of fatalities who were women.

Lastly, there was a significant negative relationship between the unemployment rate and

the proportion of single individuals indicating that an increase in the unemployment rate

is associated with a decrease in the proportion of single individuals.

Table 5: Zero-order Correlations Among All Continuous Independent Variables: Female Fatalities

	1	2	3	4	5	6	7
1. % Welfare Receipt	--						
2. % Black	.461*	--					
3. % Unmarried	.375*	.435*	--				
4. % Unemployed	.338*	.100*	-.123*	--			
5. % Severe Poverty	.556*	.293*	.529*	.305*	--		
6. % Male Officers						--	
7. % White Officers						.298*	--

Next, there was a strong significant positive association between the poverty rate

and the SNAP recipiency rate, the poverty rate and the proportion of single individuals,

and the SNAP recipiency rate and the proportion of Blacks. Also, there was a moderate

significant positive association between the poverty rate and the proportion of Blacks, the

SNAP recipiency and the proportion of single individuals, and the proportion of Blacks

and the proportion of single individuals.

At the agency level, results of the bivariate analysis indicated that there was a

significant positive association between the proportion of male officers and the

proportion of white officers with a modest significant negative association between the proportion of male officers and officer education.

Therefore, bivariate analysis was performed on the independent variables present in the full population of individuals killed by police, as well as by each gender sample. Although there were correlations at each level, the strength of those correlations was not concerning and indicative of the possibility of multicollinearity in the multivariate models or of the need to pare down the models in any way. As a result, all of the predictors were included in the model.

Multilevel Regression Analysis Results

With the conclusion of the discussion of descriptive statistics and the bivariate analysis, this section addresses the model building of the multilevel regression analysis and the corresponding results. This section will end with a summary of the findings, highlighting the key findings as well as evaluating the hypotheses presented in Chapter 2.

Model Building

The model building process began with the examination of the fully unconditional model or null model for each sample, which has no predictor variables specified at any level. The fully unconditional individual-level (Equation 3.1), neighborhood-level (Equation 3.5) and agency-level models (Equation 3.7) represent how variation in the race of the victim in the lethal force encounter is allocated across the three different levels (individual, neighborhood, and agency). Thus, the unconditional models allow for estimation of variability associated with the three levels.

However, after examination of the fully unconditional models, it was found that the anticipated random effects at level 2 and level 3 were not statistically significant. The random effects model was processed in SPSS, HLM, and SAS to determine if a particular statistical package's estimation processes could better analyze the data. However, the fully unconditional model would not converge in any of the three statistical packages. Thus, the data suggested that a fixed effects model was the best approach for performing data analysis rather than a model with random effects allowed at each level. Below I explain the process I used to make this decision.

Neither SPSS nor SAS were able to estimate variance parameters for both samples. HLM was able to have the null models converge when estimated as separate models by level of analysis. The results of the fully unconditional model for women indicated that the estimation of neither level-1, and level-2, nor level-3 variance components was significant ($p > .500$). Similarly, the results of the fully unconditional model for men indicated that the estimation of level-1 and level-2 variance components was not significant ($p > .500$), while the estimation of level-3 variance components was significant ($p < .001$). Subsequent analysis determined that the full unconditional models for both samples were not able to converge in HLM as well.

To determine if there were any file errors that could be causing difficulty in the estimations, the data was reviewed at all three levels along with all of the syntax used to recode the variables. Frequencies and descriptive statistics were re-calculated of the independent and dependent variables and matched against all three original files prior to the merges that took place. Missing values were also checked to ensure that they were

consistent with the original files' missing values and to make sure that no values were

unintentionally altered during the import or recoding of the data. There were no mistakes

found in the data file.

Additionally, because centering has implications for the meanings of the intercept

and slope, the variance in the intercept and the slope, and the covariance between the

intercept and the slope variable, different centering techniques throughout the different

levels were tested to determine if they would have any effect on the variance. However,

the centering was not found to have a significant effect on the parameters.

Therefore, the data suggest that a fixed effects model more accurately fit the data,

in which there will be no random varying of group means by level. Instead, the variance

will not be estimated from the data, but will be the model determined quantity.

As a result, the decision was made to move forward with the multinomial logistic

fixed effects model with the categorial outcomes of (1) Black and (2) Latinx, and the

reference category of white. Model 1 will consist of the individual characteristics, Model

2 will add on the neighborhood characteristics, and Model 3 will add on the agency

characteristics.

The full model, Model 3, for men will be expressed as:

Equation 9: Modified Full Model 3 for Men

$$
\begin{aligned}
n_m = \; & b_{0\,(m)} + b_{1(m)} * (Mentally\ ill_1) + b_{2(m)} * (Armed_2) \\
& + b_{3(m)}(Unemployment_3) + b_{4(m)}(Poverty_4) + b_{5(m)}(Welfare_5) \\
& + b_{6(m)}(Segregation_6) + b_{7(m)}(Marriage_7) \\
& + b_{8(m)}(Prop.\ Male\ Officer_8) + b_{9(m)}(Prop.\ White\ Officer_9) \\
& + b_{10(m)}(Educ.\ Level\ of\ Officer_{10}) \\
& + b_{11(m)}(Officers\ Rep.\ by\ Union_{11}) + \varepsilon_{(m)}
\end{aligned}
$$

where:

m	= 1 (Black), 2 (Latinx);
n_m	= the likelihood of POC lethal police force encounters relative to white lethal police force encounters (log odds);
$b_{0\,(m)}$	= the intercept term that reflects the log odds when the predictors are at zero.
Mentally ill	= whether the alleged perpetrator was thought to be mentally ill;
Armed	= whether the alleged perpetrator was armed.
Unemployment	= the unemployment rate;
Poverty	= the severe poverty rate;
Welfare	= the SNAP recipiency rate;
Segregation	= proportion of Blacks;
Unmarried	= the proportion of single individuals;
Prop. Male Officers	= proportion of male officers in an agency;
Prop. White Officers	= proportion of white officers in an agency;
Educ. Level of Officers	= education level of officers in an agency;
Officers Rep. by Union	= officers represented by a union in an agency;
$\varepsilon_{(m)}$	= the error term

Then, the full model, Model 3, for women will be expressed as:

Equation 10: Modified Full Model 3 for Women

$$n_m = b_{0\,(m)} + b_{1(m)} * (Mentally\ ill_1) + b_{2(m)} * (Armed_2) +$$

$$b_{3(m)}(Unemployment_3) + b_{4(m)}(Poverty_4) + b_{5(m)}(Welfare_5) +$$

$$b_{6(m)}(Segregation_6) + b_{7(m)}(Marriage_7) + b_{8(m)}(Prop.Male\ Officer_8) +$$

$$b_{9(m)}(Prop.White\ Officer_9) + b_{10(m)}(Officers\ Rep.by\ Union_{10}) + \varepsilon_{(m)}$$

where:

m	= 1 (Black), 2 (Latinx);
n_m	= the likelihood of POC lethal police force encounters relative to white lethal police force encounters (log odds);
$b_{0\,(m)}$	= the intercept term that reflects the log odds when the predictors are at zero.
Mentally ill	= whether the alleged perpetrator was thought to be mentally ill;
Armed	= whether the alleged perpetrator was armed.
Unemployment	= the unemployment rate;
Poverty	= the severe poverty rate;
Welfare	= the SNAP recipiency rate;
Segregation	= proportion of Blacks;
Unmarried	= the proportion of single individuals;
Prop. Male Officers	= proportion of male officers in an agency;
Prop. White Officers	= proportion of white officers in an agency;
Officers Rep. by Union	= officers represented by a union in an agency;

$\varepsilon_{(m)}$ = the error term

The results of the fixed effects models discussed above are presented in the following section.

Results

Tables 6-9 present the results of the fixed effects statistical analysis of individual, neighborhood and agency characteristics related to the dependent variable, the race of the victim in the lethal force encounter with white as a reference category, as separated by gender. In other words, the tables report a comparison of the lethal force encounters of people of color and the factors associated with those lethal force encounters. The tables also contain the Nagelkerke pseudo R-squared as a model fit statistic. Similar to the R-squared statistic in ordinary least squares (OLS) regression, a pseudo R-squared, such as Nagelkerke's, is used as a goodness-of-fit measure to determine whether there is an improvement from the null model to the fitted model. When comparing two models, the model with the higher Nagelkerke pseudo R-squared (maximum of 1) indicates the model with the better fit to the data.

First, Table 6 reports a comparison of the lethal force encounters of Black and white men. Model 1 includes the individual-level variables of unarmed and no presumed mental illness. Both variables are significant predictors. Among those killed by police, unarmed Black men are 1.9 times more likely to be victims of fatal encounters than white men (OR = 1.983). Also, among those killed by police, Black men with no presumed mental illness are 2.7 times more likely to victims than white men (OR = 2.706).

In Model 2 of Table 6, the neighborhood-level characteristics of the proportion in poverty, proportion single, proportion of welfare recipiency, proportion of unemployed, and the proportion of Black residents were added. All variables except welfare recipiency are significant predictors. Men killed by police in neighborhoods where 100% of individuals are in severe poverty are 20 percent as likely to be Black (versus white) (OR = .205) compared to those killed in neighborhoods where 0 percent of individuals are in severe poverty. Men killed by police in neighborhoods where 100 percent of individuals are single are 74.9 times more likely to be Black (versus white) (OR = 74.876) compared to those killed in neighborhoods where 0% of individuals are single. Males killed by police in neighborhoods where 100 percent of individuals are unemployed are 20 percent as likely to be Black (versus white) (OR = .207) compared to those killed in neighborhoods where 0 percent of individuals are unemployed. Lastly, men killed by police in neighborhoods where 100% of individuals are Black are 90.2 times more likely to be Black (versus white) (OR = 90.202) compared to those neighborhoods where 0 percent of the individuals are Black.

With the addition of the neighborhood-level data, there is an increase in Nagelkerke pseudo R squared from .051 to .407. This is indicative of an increase in the model fit, and thus a more optimal fit for the data. Also, it demonstrates that a majority of the explanation of male fatalities is explained by the neighborhood level variables.

Table 6: Hierarchical generalized linear mixed models of fatal police encounter, Black men

	Model 1			Model 2			Model 3		
	B	*SE*	*OR*	*B*	*SE*	*OR*	*B*	*SE*	*OR*
Intercept	-1.348*	.078	.260	-3.069*	.257	.0465	-2.268	.684	.
Individual-Level									
No Mental Illness	.996*	.085	2.706	.869*	.101	2.384	.897*	.103	2.452
Unarmed	.685*	.094	1.983	.632*	.111	1.881	609*	.113	1.838
Neighborhood-Level									
% Severe Poverty				-1.586+	.908	.205	-1.711+	.917	.181
% Unmarried				4.316*	.479	74.876	4.042*	.485	56.956
% Welfare Receipt				.147	.481	1.159	.212	.483	1.237
% Unemployed				-1.574*	.488	.207	-1.622*	.493	.198
% Black				4.502*	.239	90.202	4.582*	.248	97.747
Agency-Level									
% Male Officers							-.296	.674	.744
% White Officers							-.806*	.226	.447
Officer Education									
No Minimum							.232	.718	1.261
H.S./GED							.195	.287	1.216
Some College							.462	.335	1.588
Associates							.327	.329	1.387
Bachelors							--	--	--
No Union							-.060	.112	.941
Pseudo R^2 Nagelkerke		.051			.407			.439	

B is estimated logit, SE is standard error of the logit and OR is the exponentiated logit (odds ratio).
-- indicates reference category, +p < .10, * p < .05

In Model 3 of Table 6, the agency-level characteristics of proportion of male

officers, proportion of white officers, officer education requirements, and whether or not

an agency participated in a union were added to predict Black male fatalities. The only

significant agency-level predictor was the proportion of white officers. Men killed by

police in locations where police agencies have an all-white police force are 45% as likely

to be Black versus white compared to the likelihood in locations where police agencies have an all-nonwhite police force (OR = .447).

With the addition of the agency-level data, there is an increase in Nagelkerke pseudo R squared from .407 to .439, a .032 increase. This is indicative of an increase in the model fit, and thus a more optimal fit for the data. However, it was a small increase relative to the increase of .356 when the neighborhood level variables were added and the Nagelkerke pseudo R squared of .051 at the individual level.

There were also changes to the individual-level and neighborhood-level variable coefficients when the agency-level variables are added and accounted for in the model, indicating a correlation among the agency-level variables and the individual- and neighborhood-level variables. Most notably, however, were the changes to the neighborhood characteristics. The odds of men killed by police in neighborhoods where 100 percent of individuals are single compared to those killed in neighborhoods where 0% of individuals are single being Black decreased from 74.9 times to 57 times when taking into account the agency-level characteristics. Similarly, the change in odds of a person of color being victim to fatal encounters relative to whites in in neighborhoods where 100% of individuals are Black compared to those neighborhoods where 0 percent of the individuals are Black. The likelihood of being Black increased from 90.2 times to 97.7 times.

Table 7 reports a comparison of the lethal force encounters of Latinx and white men. Model 1 includes the individual-level variables of unarmed and no presumed mental illness. Both variables are significant predictors. Among those killed by police, unarmed

Latinx men are 1.5 times more likely to be victims of fatal encounters than white men

(OR = 1.486). Also, among those killed by police, Latinx men with no presumed mental

illness are 1.9 times more likely to victims than white men (OR = 1.907).

In Model 2 of the Table 7, the neighborhood-level characteristics of the

proportion in poverty, proportion single, proportion of welfare recipiency, proportion of

unemployed, and the proportion of Black residents were added. All variables except the

employment rate are significant predictors. Men killed by police in neighborhoods where

100% of individuals are in severe poverty are 1 percent as likely to be Latinx (versus

white) (OR = .011) compared to those killed in neighborhoods where 0 percent of

individuals are in severe poverty. Men killed by police in neighborhoods where 100

percent of individuals are single are 606.7 times more likely to be Latinx men (versus

white) (OR = 606.7) compared to those killed in neighborhoods where 0% of individuals

are single. Men killed by police in neighborhoods where 100% of individuals use welfare

are 21.6 likely to be Latinx (OR = 21.628) (versus white) compared to those killed in

neighborhoods where 0% of individuals use welfare. Lastly, men killed by police in

neighborhoods where 100% of individuals are Black are 5 percent as likely to be Latinx

(versus white) (OR = .052) compared to those killed in neighborhoods where 0% of

individuals are Black.

With the addition of the agency-level data, there is an increase in Nagelkerke

pseudo R squared from .407 to .439, a .032 increase. This is indicative of an increase in

the model fit, and thus a more optimal fit for the data. However, it was a small increase

relative to the increase of .356 when the neighborhood level variables were added and the

Nagelkerke pseudo R squared of .051 at the individual level.

Table 7:Hierarchical generalized linear mixed models of fatal police encounter, Latinx men

	Model 1			Model 2			Model 3		
	B	*SE*	*OR*	*B*	*SE*	*OR*	*B*	*SE*	*OR*
Intercept	*-1.422**	*.082*	*.241*	*-3.418**	*.259*	*.0328*	*-2.689**	*.761*	*.2598*
Individual-Level									
No Mental Illness	*.646**	*.092*	*1.907*	*.638**	*.096*	*1.893*	*-.663**	*.100*	*1.941*
Unarmed	*.396**	*.110*	*1.486*	*.352**	*.115*	*1.421*	*-.317**	*.120*	*1.373*
Neighborhood-Level									
% Severe Poverty				*-4.501**	*.939*	*.011*	*-4.431**	*.972*	*.012*
% Unmarried				*6.408**	*.473*	*606.696*	*5.981**	*.490*	*395.804*
% SNAP				*3.074**	*.455*	*21.628*	*2.930**	*.472*	*18.730*
% Unemployed				*-.252*	*.489*	*.777*	*-.822*	*.513*	*.440*
% Black				*-2.959**	*.367*	*.052*	*-2.487**	*.370*	*.083*
Agency-Level									
% Male Officers							*.764*	*.691*	*2.146*
% White Officers							*-2.295**	*.188*	*.101*
Officer Education									
No Minimum							*.198*	*.896*	*1.219*
H.S./GED							*.669*	*.403*	*1.953*
Some College							*.196*	*.460*	*1.217*
Associates							*.589*	*.436*	*1.802*
Bachelors							*--*	*--*	*--*
Union							*.081*	*.119*	*1.084*
Pseudo R^2 Nagelkerke		.051			.407			.439	

B is estimated logit, SE is standard error of the logit and OR is the exponentiated logit (odds ratio).
-- indicates reference category, + p < .10, * p < .05

Also, there were slight changes to the coefficients of the individual level characteristics with the addition of the neighborhood-level variables, most notably was the decrease in the odds of unarmed Latinx men being involved in a fatal encounter 1.5 times to 1.4 times.

In Model 3 of the Table 7, the agency-level characteristics of proportion of male officers, proportion of white officers, officer education requirements, and whether or not an agency participated in a union were added to predict Latinx male fatalities. The only significant agency-level predictor was the proportion of white officers. Men killed by police in locations where police agencies have an all-white police force are 10 percent as likely to be Latinx versus white compared to the likelihood in locations where police agencies have an all-nonwhite police force (OR = .101).

With the addition of the agency-level data, there is an increase in Nagelkerke pseudo R squared from .407 to .439, a .032 increase. This was a small increase relative to the increase of .356 when the neighborhood level variables were added and the Nagelkerke pseudo R squared of .051 at the individual level.

There were also changes to the individual-level and neighborhood-level variable coefficients when the agency-level variables are added and accounted for in the model, indicating a correlation among the agency-level variables and the individual- and neighborhood-level variables. Most notably, however, were the changes to the neighborhood characteristics. The odds of Latinx men compared to white men being victim to fatal encounters in neighborhoods where 100 percent of individuals are single compared to those killed in neighborhoods where 0% of individuals are single decreased

from 606.7 times to 395.8 times when taking into account the agency-level

characteristics. Lastly, there was a change in the odds of Latinx men compared to white

men being victim to fatal encounters in neighborhoods that have a higher proportion of

welfare receipt. Model 2 estimates that men killed by police in neighborhoods where

100% of individuals use welfare are 21.6 percent likely to be Latinx (OR = 21.628)

(versus white) compared to those killed in neighborhoods where 0% of individuals use

welfare, whereas Model 3 estimates they are only 18.7 times as likely.

Next, Table 8 reports a comparison of lethal force encounters of Black women

and white women. Model 1 includes the individual level variables of unarmed and no

presumed mental illness. Neither of the two variables are significant predictors.

Table 8: Hierarchical generalized linear mixed models of fatal police encounter, Black women

	Model 1			Model 2			Model 3		
	B	*SE*	*OR*	*B*	*SE*	*OR*	*B*	*SE*	*OR*
Intercept	*-1.468*	*.293*	*.230*	*-3.840*	*.939*	*.0215*	*-1.813*	*2.671*	*.163*
Individual-Level									
No Mental Illness	*.311*	*.344*	*.820*	*-.034*	*.384*	*.967*	*.019*	*.385*	*.981*
Unarmed	*.007*	*.331*	*1.007*	*.264*	*.379*	*1.302*	*.225*	*.381*	*1.253*
Neighborhood-Level									
% Severe Poverty				*-10.462*	*3.705*	*.00002859*	*-10.272*	*3.719*	*.00003457*
% Unmarried				*7.141**	*1.833*	*1262.208*	*7.074*	*1.850*	*1180.789*
% SNAP				*3.166*⁺	*1.906*	*23.723*	*3.024*	*1.927*	*20.577*
% Unemployed				*-.685*	*1.739*	*.504*	*-.671*	*1.748*	*.511*
% Black				*2.374*	*.866*	*10.745*	*2.344*	*.886*	*10.424*
Agency-Level									
% Male Officers							*-1.925*	*2.994*	*.146*
% White Officers							*-.363*	*.867*	*.696*
Union							*.354*	*.457*	*1.425*
Pseudo R² Nagelkerke		.015			.284			.319	

B is estimated logit, SE is standard error of the logit and OR is the exponentiated logit (odds ratio).
-- indicates reference category, + p < .10, * p < .05

In Model 2 of Table 8, the neighborhood-level characteristics of the proportion in poverty, proportion single, proportion of welfare recipiency, proportion of unemployed, and the proportion of Black residents were added. All variables except the unemployment rate are significant predictors. Women killed by police in neighborhoods where 100% of individuals are in severe poverty less than 1 percent as likely to be Black women (versus white) (OR = .00002859) compared to those killed in neighborhoods where 0 percent of individuals are in severe poverty. Women killed by police in neighborhoods where 100 percent of individuals are single are 1262.2 times more likely to be Black (versus white) (OR = 1262.208) compared to those killed in neighborhoods where 0% of individuals are

single. Women killed by police in neighborhoods where 100% of individuals use welfare are 23.7 times more likely to be Black (OR = 23.723) (versus white) compared to those killed in neighborhoods where 0 percent of individuals use welfare. Lastly, women killed by police in neighborhoods where 100% of individuals are Black are 10.7 times more likely to be Black (versus white) (OR = 10.745) compared to those killed in neighborhoods where 0 percent of individuals are Black.

With the addition of the neighborhood-level data, there is an increase in Nagelkerke pseudo R squared from .015 to .284, an increase of .269. This is indicative of an increase in the model fit, and thus a more optimal fit for the data. Also, it demonstrates that a majority of the explanation of female fatalities is explained by the neighborhood level variables. However, it is not as pronounced of an increase as was seen with Black men and Latinx men, who had a Nagelkerke pseudo R squared increase of .356 with the additional of the neighborhood level predictors.

In Model 3 of the Table 8, the agency-level characteristics of proportion of male officers, proportion of white officers, and whether or not an agency participated in a union were added to predict Black female fatalities. None of the agency-level variables were significant predictors.

However, with the addition of the agency-level data, there is an increase in Nagelkerke pseudo R squared from .284 to .319. This is indicative of an increase in the model fit, and thus a more optimal fit for the data. While it did not account for as much of the explanation of female fatalities as the neighborhood-level variables' Nagelkerke

pseudo R squared increase of .269, the agency level variables increased the Nagelkerke pseudo R squared by .035, thus contributing minimally.

There were also changes to the coefficients of the neighborhood-level variables when agency-level characteristics were accounted for. The odds of Black women relative to white women being victim to fatal where 100% of individuals use welfare compared to those killed in neighborhoods where 0 percent of individuals use welfare decreased from 1262.2 times to 1180.8 times. Also, there was a change in the odds of Black women being victim to fatal encounters relative to white women in areas that have a higher proportion of welfare receipt. Model 2 estimates that women killed by police in neighborhoods where 100% of individuals use welfare are 23.7 times likely to be Black (versus white) compared to those killed in neighborhoods where 0 percent of individuals use welfare, whereas Model 3 estimates only 20.6 times as likely.

Lastly, Table 9 reports a comparison of lethal force encounters of Latinx women and white women. Model 1 includes the individual level variables of unarmed and no presumed mental illness. Among those killed by police, Latinx women with no presumed mental illness are 2.1 times more likely to victims than white women (OR = 2.092).

In Model 2 of Table 9, the neighborhood-level characteristics of the proportion in poverty, proportion single, proportion of welfare recipiency, proportion of unemployed, and the proportion of Black residents were added. All variables except the poverty rate and the employment rate are significant predictors. Women killed by police in neighborhoods where 100 percent of individuals are single are 440.9 times more likely to be Latinx (versus white) (OR = 440.894) compared to those killed in neighborhoods

where 0% of individuals are single. Women killed by police in neighborhoods where 100 percent of individuals use welfare are 85.4 times more likely to be Latinx (versus white) (OR = 85.436) compared to those killed in neighborhoods where 0 percent of individuals use welfare. Lastly, women killed by police in neighborhoods where 100% of individuals are Black are 9 percent as likely to be Latinx (versus white) (OR = .094) compared to those killed in neighborhoods where 0 percent of individuals are Black.

With the addition of the neighborhood-level data, there is an increase in Nagelkerke pseudo R squared from .015 to .284, an increase of .269. This is indicative of an increase in the model fit, and thus a more optimal fit for the data. Also, it demonstrates that a majority of the explanation of female fatalities is explained by the neighborhood level variables. However, it is not as pronounced of an increase as was seen with Black men and Latinx men, who had a Nagelkerke pseudo R squared increase of .356 with the additional of the neighborhood level predictors.

Also, there were slight changes to the coefficients of the individual-level characteristics with the addition of the neighborhood-level variables, most notably was the increase in the odds of Latinx women among those killed by police with no presumed mental illness being involved in a fatal encounter 2.1 times to 2.4 times when neighborhood-level characteristics are accounted for.

In Model 3 of Table 9, the agency-level characteristics of proportion of male officers, proportion of white officers, and whether or not an agency participated in a union were added to predict Latinx female fatalities. The only significant agency-level predictor was the proportion of white officers. Women killed by police in locations where

police agencies have an all-white police force are 10 percent as likely to be Latinx versus

white compared to the likelihood in locations where police agencies have an all-nonwhite

police force (OR = .098).

Table 9: Hierarchical generalized linear mixed models of fatal police encounter, Latinx women

	Model 1			Model 2			Model 3		
	B	SE	OR	B	SE	OR	B	SE	OR
Intercept	-2.081*	.380	.1248	-4.293*	1.079	.0137	-3.357	2.980	.0348
Individual-Level									
No Mental Illness	.738+	.428	2.092	.857+	.451	2.356	.990*	.470	1.072
Unarmed	-.077	.376	.926	-.022	.398	.978	-.105	.418	.900
Neighborhood-Level									
% Severe Poverty				-3.342	3.501	.035	-2.879	3.670	.056
% Unmarried				6.089*	1.962	440.894	5.491*	2.036	242.600
% Welfare Receipt				4.448*	1.752	85.436	3.292+	1.878	26.906
% Unemployed				-.499	1.951	.607	-.754	2.056	.470
% Black				-2.362*	1.171	.094	-1.570	1.233	.208
Agency-Level									
% Male Officers							1.055	3.202	2.871
% White Officers							-2.324*	.721	.098
No Union							.419	.522	1.520
Pseudo R² Nagelkerke		.015			.284			.319	

B is estimated logit, SE is standard error of the logit and OR is the exponentiated logit (odds ratio).
-- indicates reference category, + p < .10, * p < .05

With the addition of the agency-level data, there is an increase in Nagelkerke

pseudo R squared from .284 to .319, an increase of .015. This is indicative of an increase

in the model fit, and thus a more optimal fit for the data. While it did not account for as

much of the explanation of female fatalities as the neighborhood-level variables'

Nagelkerke pseudo R squared increase of .269, the agency level variables increased the

Nagelkerke pseudo R squared by .035, thus contributing minimally.

There were also changes to the individual-level and neighborhood-level variable

coefficients when the agency-level variables are added and accounted for in the model,

indicating a correlation among the agency-level variables and the individual- and

neighborhood-level variables. Most notably, however, were the changes to the

neighborhood characteristics. The odds of Latinx women (versus white) being victim to

fatal encounters in neighborhoods police in neighborhoods where 100 percent of

individuals are single compared to those killed in neighborhoods where 0% of individuals

are single decreased from 440.9 times to 242.6 times when agency-level characteristics

were accounted for. There was a change in the odds of Latinx women being victim to

fatal encounters relative to white women in areas that have a higher proportion of welfare

receipt. Model 2 estimates that women killed by police in neighborhoods where 100

percent of individuals use welfare are 85.4 likely times more likely to be Latinx (versus

white) compared to those killed in neighborhoods where 0 percent of individuals use

welfare; whereas Model 3 estimates they are only 26.9 times as likely. Lastly, the odds

women killed by police in neighborhoods where 100% of individuals are Black compared

to those killed in neighborhoods where 0 percent of individuals are increased from 9

percent as likely to 21 percent as likely.

Extended Analysis

To further examine the role of police bias, an extension of this analysis was performed with modeling based on Nix et al. (2017) for predicting the likelihood that a person killed was unarmed. The primary predictor of whether the person was unarmed was the race/ethnicity of the individual killed. The binary logistic regression was performed for both men and women, incorporating the independent variables at the individual-, neighborhood-, and agency-level utilized in the above multivariate analysis; whether the individual was unarmed was the dependent variable. The only variable excluded from these sets of analyses is whether or not the agency has membership in a union, as this could be a mechanism for police bias.

Table 10 shows the results for the sample of men. The initial race-based model included only the race of the victim as predictors. Race alone was a significant predictor with Black men who were murdered by police being about 1.8 times more likely to be unarmed (OR = 1.813) than non-Black men, and Latinx men who were killed by police being about 1.4 times more likely to be unarmed (OR = 1.398) than non-Latinx men.

Next, the full model contained all predictors at each level. At the individual level, race was a significant predictor of whether the man killed by police was unarmed. Black men who were murdered by police were about 1.9 times more likely to be unarmed (OR = 1.880) than non-Black men, and Latinx men who were killed by police were about 1.4 times more likely to be unarmed (OR = 1.376) than non-Latinx men. Mental illness was also a significant predictor. Men who were killed by police who were thought to be

mentally ill or under the influence were 1.6 times percent more likely to be unarmed (OR = 1.579).

At the neighborhood-level, there were no significant predictors. However, there were significant predictors at the agency-level. Men killed by police in locations where police agencies have an all-white police force are 63 percent as likely to be unarmed versus white compared to the likelihood in locations where police agencies have an all-nonwhite police force (OR = .630). Additionally, officer education was also significant. Men killed in locations where police agencies had an education level qualification of a high school diploma or GED were about 48 percent as liked to be unarmed as compared to those with a qualification of a bachelor's degree (OR = .477). Similarly, men killed in locations where police agencies had an education level qualification of some college were about 32 percent as likely (OR = .316) and men killed in locations where police agencies had an education level qualification of an associate's degree was about 51 percent as likely (OR = .512) to be unarmed compared to locations where police agencies had an education level qualification of a bachelor's degree.

Table 10: Logistic Regression Model Predicting Whether Killed Male Civilian Was Unarmed

	Race Only Model			Full Model		
	B	*SE*	*OR*	*B*	*SE*	*OR*
Individual-Level						
Race						
Black	*.595**	*.093*	*1.813*	*.631**	*.113*	*1.880*
Latinx	*.355**	*.110*	*1.398*	*.319**	*.118*	*1.376*
Mental Illness				*.457**	*.092*	*1.579*
Neighborhood-Level						
% Severe Poverty				*1.009*	*.832*	*2.742*
% Unmarried				*.363*	*.457*	*1.438*
% Welfare Receipt				*-.596*	*.454*	*.551*
% Unemployed				*-.144*	*.474*	*.866*
% Black				*.032*	*.216*	*1.033*
Agency-Level						
% Male Officers				*.235*	*.663*	*1.265*
% White Officers				*-.461**	*.186*	*.630*
Officer Education						
No Minimum				*-.435*	*.690*	*.647*
H.S./GED				*-.740**	*.242*	*.477*
Some College				*-1.151**	*.309*	*.316*
Associates				*-.670**	*.284*	*.512*
Bachelors				*--*	*--*	*--*
Constant				*-1.254+*	*.645*	*.285*
Pseudo R^2 Nagelkerke		.007			.035	

B is estimated logit, SE is standard error of the logit and OR is the exponentiated logit (odds ratio).
-- indicates reference category, +p < .10, * p < .05

Table 11 shows the results of the multivariate analysis for the sample of women. The initial race-based model included only the race of the victim as predictors. Race alone was not a significant predictor. With the inclusion of all the variables in the full model, race was still not a significant predictor of whether fatally killed women were unarmed. However, women who were killed by police who showed signs of mental illness or being under the influence were about 37 percent as likely to be unarmed (OR = .365). This is in contrast to killed men who were 1.6 times more likely to be unarmed if they showed signs of mental illness or being under the influence, and it was also the only significant finding, as there were no significant predictors at the neighborhood or agency levels.

Therefore, whereas the previous analysis examined how individual characteristics impact the likelihood of lethal police force encounters with people of color relative to whites, to what extent neighborhood-level factors influence lethal police encounters is prevalent in a neighborhood, and how between-agency factors impact the likelihood of lethal police encounters with people of color relative to whites, this analysis further explored the potential for police bias by examining how the race of the victim, along with other characteristics at the individual-, neighborhood-, and agency-level impact if the victim killed was unarmed.

Table 11: Logistic Regression Model Predicting Whether Killed Female Civilian Was Unarmed

	Race Only Model			Full Model		
	B	SE	OR	B	SE	OR
Individual-Level						
Race						
Black	.058	.326	1.060	.163	.382	1.177
Latinx	.112	.374	1.119	.075	.419	1.078
Mental Illness				-1.007*	.322	.365
Neighborhood-Level						
% Severe Poverty				2.534	2.930	12.603
% Unmarried				-2.057	1.495	.874
% Welfare Receipt				-.763	1.527	.466
% Unemployed				-.135	1.421	.874
% Black				.248	.786	1.281
Agency-Level						
% Male Officers				1.210	2.257	3.352
% White Officers				-.337	.610	.714
Officer Education						
No Minimum				-22.403	40192.970	.000
H.S./GED				-1.591	1.284	.204
Some College				-1.442	1.400	.237
Associates				.837	1.418	.433
Bachelors				--	--	--
Constant						
Pseudo R² Nagelkerke		.001			.082	

B is estimated logit, SE is standard error of the logit and OR is the exponentiated logit (odds ratio).
-- indicates reference category, +p < .10, * p < .05

The results of this extended analysis provide further evidence to support implicit police bias based on the race of the victims of fatal encounters, with Black and Latinx men killed by police more likely to be unarmed. They also further highlight the role of mental illness in police encounters. Perceived mental illness intersects with gender, as men who were killed by police who were thought to be mentally ill or under the influence were more likely to be unarmed while women who were killed by police who showed signs of mental illness or being under the influence were less likely to be unarmed.

Hypothesis Evaluation

In transitioning from interpretations of the individual models, this section will evaluate the hypotheses discussed in Chapter 2. Hypothesis 1 stated that there would be a greater likelihood that fatal police encounters will include people of color (Black or Latinx) relative to whites. Model 1 as presented in Table 6 indicate that among those killed by police, Black men are about 74 percent less likely than white men to be involved in fatal force encounters (OR = .260), while Model 1 in Table 7 shows that among those killed by police, Latinx men are 75.9 percent less likely than white men to be involved in fatal force encounters (OR = .241). Similarly, among those killed by police, Black women are about 74 percent less likely than white women to be involved in fatal force encounters (OR = .260), and Latinx women are 84.5 percent less likely than white women (OR = .125). It is also important to note that, as shown in the descriptive statistics, whites make up a majority of each sample of individuals involved in fatal police encounters; these odds determined by these analyses do not take into account the proportion of the larger population that people of color comprise, with Blacks only being

about 13 percent of the United States population and about 18 percent being Latinx (U.S. Census Bureau 2018).

Next, to address Hypothesis 1a that lethal police encounters will be more likely to involve a person of color than whites if the victim has a disability, the results indicate that, in fact, among those killed by police, Black men with no presumed mental illness are 2.7 times more likely to be a victim of a fatal encounter than white men (OR = 2.706). Similarly, as shown in Table 7, the results indicate that among those killed by police, Latinx men with no presumed mental illness are 1.9 times more likely to be a victim of a fatal encounter (OR = 1.907) as compared to white men. Latinx women who were not thought to be mentally ill or under the influence also are twice as likely to be a victim as compared to white women (OR = 2.092). Lastly, the results of the extended analysis also found that men who were killed by police who showed signs of mental illness or being under the influence are about 1.6 times likely to be unarmed (OR = 1.579)

There is no significant difference between Black and white women with disabilities and their being involved in a fatal police encounter. However, the results of the extended analysis indicated that women who were killed by police who showed signs of mental illness or being under the influence were about 36 percent as likely to be unarmed (OR = .365).

Lastly, to address Hypothesis 1c that lethal force victims will be more likely to be a person of color if the alleged perpetrator was armed, the results indicate that among those killed by police, unarmed Black men are nearly twice as likely to be victims (OR = 1.983) as compared to white men. Similarly, among those killed by police, unarmed

Latinx men are about 1.5 times as likely to be a victim (OR = 1.486) as relative to white men. Whether or not a victim was armed was not a significant predictor for women, as shown in Table 8. Additionally, the extended analysis indicated that Black men who were killed by police are about 1.9 times more likely to be unarmed (OR = 1.880) than non-Black men, and Latinx men who were killed by police are about 1.4 times more likely to be unarmed (OR = 1.376) than non-Latinx men.

To consider Hypothesis 2 that neighborhood disadvantage will increase the likelihood that lethal police force used on an alleged perpetrator who was a person of color relative to an alleged perpetrator who was white, the results indicated that men killed by police in neighborhoods where 100 percent of individuals are single are 74.9 times more likely to be Black (versus white) (OR = 74.876) and are 606.7 times more likely to be Latinx men (versus white) (OR = 606.7) compared to those killed in neighborhoods where 0% of individuals are single. While women killed by police in neighborhoods where 100 percent of individuals are single are 1262.2 times more likely to be Black (versus white) (OR = 1262.208) and 440.9 times more likely to be Latinx (versus white) (OR = 440.894) compared to those killed in neighborhoods where 0% of individuals are single.

Additionally, men killed by police in neighborhoods where 100% of individuals use welfare are 21.6 likely to be Latinx (OR = 21.628) (versus white) and women killed by police in neighborhoods where 100% of individuals use welfare are 23.7 times more likely to be Black (OR = 23.723) (versus white) and are 85.4 times more likely to be

Latinx (versus white) (OR = 21.628) compared to those killed in neighborhoods where 0 percent of individuals use welfare.

Several sub-hypotheses indicative of neighborhood disadvantage were tested in this model: whether lethal police encounters in impoverished neighborhoods will have a greater likelihood of being with a person of color than a white person (Hypothesis 2a), lethal police encounters in impoverished neighborhoods will have a greater likelihood of being with a male of color than a white male (Hypothesis 2b), lethal police encounters in neighborhoods with higher rates of poverty will more likely include a person of color than a white person (Hypothesis 2c), and lethal police encounters in neighborhoods with higher rates of poverty will more likely include a woman of color than a white woman (Hypothesis 2d). Conversely, it was found that men killed by police in neighborhoods where 100% of individuals are in severe poverty are 20 percent as likely to be Black (versus white) (OR = .205) and are 1 percent as likely to be Latinx (versus white) (OR = .011) compared to those killed in neighborhoods where 0 percent of individuals are in severe poverty. Similarly, women killed by police in neighborhoods where 100% of individuals are in severe poverty less than 1 percent as likely to be Black women (versus white) (OR = .00002859) compared to those killed in neighborhoods where 0 percent of individuals are in severe poverty.

Next, when taking into account the next sub-hypotheses that lethal police encounters in neighborhoods with higher unemployment rates will more likely include a person of color than a white person (Hypothesis 2e) and that lethal police encounters in neighborhoods with higher unemployment rates will more likely include a male of color

than a white male (Hypothesis 2f), it was, instead, found that men killed by police in neighborhoods where 100 percent of individuals are unemployed are 20 percent as likely to be Black (versus white) (OR = .207) compared to those killed in neighborhoods where 0 percent of individuals are unemployed.

Lastly, when taking into consideration Hypothesis 2g, lethal police encounters in neighborhoods with higher levels of segregation will more likely include a person of color than a white person, it was found that men killed by police in neighborhoods where 100% of individuals are Black are 90.2 times more likely to be Black (versus white) (OR = 90.202) compared to those neighborhoods where 0 percent of the individuals are Black, and women killed by police in neighborhoods where 100% of individuals are Black are 10.7 times more likely to be Black (versus white) (OR = 10.745) compared to those killed in neighborhoods where 0 percent of individuals are Black. Conversely, men killed by police in neighborhoods where 100% of individuals are Black are 5 percent as likely to be Latinx (versus white) (OR = .052) compared to those killed in neighborhoods where 0% of individuals are Black and women killed by police in neighborhoods where 100% of individuals are Black are 9 percent as likely to be Latinx (versus white) (OR = .094) compared to those killed in neighborhoods where 0 percent of individuals are Black. To consider Hypothesis 3 that lethal police encounters will differ based upon the agency in which the encounter occurred and the subsequent sub-hypotheses, Model 3 represented the variability among agencies. When taking into consideration the first sub-hypothesis that lethal police encounters with police officers in agencies with a higher proportion of male officers will more likely include a person of color than a white person (Hypothesis

3a), there was no significance found. However, when taking into consideration the two subsequent hypotheses that lethal police encounters with police officers in agencies with a higher proportion of white officers will more likely include a person of color than a white person (Hypothesis 3b) and that lethal police encounters with police officers in agencies with a higher proportion of white officers will more likely include a woman of color than a white woman (Hypothesis 3c), the converse was found. Men killed by police in locations where police agencies have an all-white police force are 45% as likely to be Black and 10 percent as likely to be Latinx versus white (OR = .101) compared to the likelihood in locations where police agencies have an all-nonwhite police force. Also, Women killed by police in locations where police agencies have an all-white police force are 10 percent as likely to be Latinx versus white compared to the likelihood in locations where police agencies have an all-nonwhite police force (OR = .098).

For the final sub-hypothesis (Hypothesis 3d) that lethal police encounters with police officers whose agency participated in a union will more likely involve a person of color as victim than a white person, no statistically significant relationship was found.

Summary

This chapter presents the descriptive statistics, correlations, and inferential statistics at the individual-, neighborhood-, and agency-level for the full sample and by gender regarding fatal police encounters in the United States. The key findings from the multilevel analysis are highlighted below.

Key findings

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- Among those who are killed, unarmed Black men are nearly twice as likely to be victims (OR = 1.983) as compared to white men. Similarly, unarmed Latinx men are about 1.5 times as likely to be a victim (OR = 1.486) as relative to white men.

- Lethal police encounters in neighborhoods with 100 percent Black residents were 90.2 times more likely to involve Black men (OR = 90.202) relative to white men, and lethal police encounters in neighborhoods with 100 percent Black residents were 10.7 times more likely to involve Black women (OR = 10.745) relative to white women.

- Lethal police encounters in impoverished neighborhoods had a 79.5 percent decrease in the odds of involving Black men (OR = .205) and a 98.9 percent decrease in the odds of involving Latinx men (OR = .011) relative to white men. Similarly, lethal police encounters in impoverished neighborhoods had a nearly 100 percent decrease in the likelihood of involving Black women (OR = .00002859) relative to white women.

- Lethal police encounters in neighborhoods with higher unemployment reduced the odds of a Black male victim by 79.3 percent (OR = .207) relative to white men.

- Men killed by police in locations where police agencies have an all-white police force are 45 percent as likely to be Black versus white compared to the likelihood in locations where police agencies have an all-nonwhite police force (OR = .477), and for Latinx men by 10 percent (OR = .101) as likely. Women killed by police in locations where police agencies have an all-white police force are 10 percent as

likely to be Latinx versus white compared to the likelihood in locations where

police agencies have an all-nonwhite police force (OR = .098).

- A majority of the explanation of male and female fatalities is explained by the

  neighborhood-level variables. The Nagelkerke pseudo R squared increased by

  .356 for male fatalities and .269 for female fatalities when the neighborhood-level

  variables were added to predict fatalities. Meanwhile, the Nagelkerke pseudo R

  squared only increased by .032 for male fatalities and .035 for female fatalities

  when the agency-level variables were added to predict fatalities.

- The extended analysis indicated that Black men who were killed by police are

  about 1.9 times more likely to be unarmed (OR = 1.880) than unarmed white men,

  and Latinx men who were killed by police are about 1.4 times more likely to be

  unarmed (OR = 1.376) than unarmed white men. However, race was not a

  significant predictor of whether women who were killed by police were unarmed

  as compared to unarmed white women.

- The extended analysis also indicated that men who were killed by police who

  showed signs of mental illness or being under the influence increased the odds

  about 1.6 times that they were unarmed (OR = 1.579) compared to men with no

  presumed mental illness.

In the next chapter, I extend this analysis to take a closer look at fatalities in six cities

that were in the top quartile of fatal incidents according to the Mapping Police Violence

database: Baltimore, Maryland; San Antonio, Texas; Philadelphia, Pennsylvania;

Houston, Texas; Oklahoma City, Oklahoma; and Bakersfield, California.

CHAPTER FIVE

In this chapter, I will illustrate the importance of context by performing a case study on six cities that were in the top quartile of fatal incidents according to the Mapping Police Violence database (2013-2018): Baltimore, Maryland; San Antonio, Texas; Philadelphia, Pennsylvania; Houston, Texas; Oklahoma City, Oklahoma; and Bakersfield, California. While the previous chapter highlighted the importance of local context nationally, this case study examines context at the city level, allowing for further insight into how police brutality manifests both similarly and differently in varying contexts. I begin with a description of the methods and analysis used in this case study approach. Then, I provide an analysis of each city, first presenting the social indicators, then describing the police and community engagement. Lastly, I conclude with a cross-city summary documenting my key findings.

Case Study Research Design

Following the results of the multivariate analysis in Chapter 4, this study evolved into a mixed methods study by including a case study. This case study, examining six cities, provided an in-depth analysis of the observed national trends (from Chapter 4) at the city level. Specifically, the case study served to demonstrate how and why context mattered regarding policing brutality. According to Yin (2013) a case study design should be considered when: (a) the aim is to answer "how" and "why" questions; (b) you

cannot manipulate the behavior of those involved in the study; and (c) the focus is on a contemporary event. It should be utilized to understand a real-world case and assume that such an understanding is likely to involve important contextual conditions crucial to your case (Yin 2013). Therefore, a case study was the best approach to further explore patterns seen in Chapter 4.

Resultantly, the case study examined the following cities: Baltimore, Maryland; San Antonio, Texas; Philadelphia, Pennsylvania; Houston, Texas; Oklahoma City, Oklahoma; and Bakersfield, California. The cities were chosen because they were among the cities in the top quartile of murders in the Mapping Police Violence database (2013-2018). Additionally, the cities chosen also have complete data of a similar time frame within the Stanford Open Policing Project, which has standardized police traffic stop data for cities throughout the United States. This allows for linking with other databases for further analysis extending beyond this dissertation, as a comprehensive database of police-public interaction is not yet in existence.

The cities were each individually analyzed using the American Community Survey (ACS) 5-Year 2018 sample to examine the social indicators of poverty, education, and racial/ethnic composition. It followed the multivariate study in examining neighborhood disadvantage and segregation, but it extended the previous measures to also include education, which is a traditional means to achieving upward mobility. In doing so, it allowed for the examination at the intersection of poverty, education, race/ethnicity, and policing.

Also, the police and community engagement were analyzed for each city utilizing publicly available information in internal affairs reports, court records, newspaper reports, and data available on the agencies' webpages about complaints, officer involved shootings, and use of force incidents. In triangulating the different sources of data, a better narrative and understanding of how the organizational structure of these agencies either inhibit or allow for police brutality can be better comprehended. Lastly, cross-city conclusions were drawn based on the social indicator and police and community engagement patterns seen in each city.

Therefore, the case study allowed for in-depth examination of six cities in the top quartile of fatal incidents according to the Mapping Police Violence database. In addition to exploring how the neighborhood disadvantage and segregation analyzed nationally in Chapter 4 manifested locally in each of the cities, it also incorporated how education and police engagement for each of the six cities influenced incidences of police brutality. While although case studies cannot be generalizable to outside cases, extending this to several cases could allow for generalization to broader theory (Yin 2013). As Yin (2013:24) articulates, "[g]ood theoretical propositions also lay the groundwork for generalizing the findings from the case study to other situations, by making analytic rather than statistical generalizations".

Baltimore

As the findings in Chapter 4 indicate, neighborhoods matter. Nowhere can this better be exemplified than in Baltimore, the city where this dissertation began. The geography of Korryn Gaines and Freddie Gray's murders, Baltimore, is very important to

framing the subsequent cities in this case study. As shown in Table 12, Baltimore city's

population is just over sixty percent Black with over 90 percent Black residents in

Sandtown-Winchester/Harlem Park and about 80 percent Black residents in

Randallstown, where Freddie Gray and Korryn Gaines lived.

Table 12: Race and Ethnicity in Baltimore

	Sandtown-Winchester/Harlem Park	Randallstown	Baltimore City
Black or African American	96.9%	80.7%	63.6%
White	1.2%	13.5%	29.7%
Asian	0.3%	2.0%	2.4%
Some Other Race[1]	0.3%	1.5%	2.2%
Two or More Races	1.2%	2.3%	2.1%
Hispanic or Latino[2]	0.7%	2.7%	4.2%

[1]Hispanic or Latino ethnicity overlaps with other race categories.
[2]Some other race includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and choosing other races as an option on the census.
Source: Baltimore City Health Department (2011); 2010 US Census

Resultantly, the presence of segregation in Baltimore is still evident today. In

areas with a higher percentage of Black residents, there are more vacant buildings and

lots, with the violence that erupted the Monday following Freddie Gray's arrest being

primarily in those areas (Scheller 2017). Officer involved shootings are concentrated in

areas that have predominately Black residents as well. Between 2011 and 2014 alone, the

city of Baltimore paid $5.7 million in court settlements for victims of police brutality

(Scheller 2017).

Additionally, a large portion of Baltimore's residents struggle financially (U.S.

Department of Justice 2016), and, as posited in the literature and exemplified in the

analyses in the previous chapter, a core component of neighborhood disadvantage is

poverty. Table 13 shows that just over 20 percent of Baltimore's residents live below the

poverty line (U.S. Census Bureau 2018), almost double the nationwide rate of 13.1%.

Additionally, Baltimore's residents have an employment rate and a median household

income lower than the national rates.

Table 13: Poverty in Baltimore

	Poverty Rate	Employment Rate	Median Household Income	Population Size
United States	13.1%	59.8%	$61,937	327,167,439
Baltimore	21.8%	55.9%	$48,840	614,700
Source: 2018 ACS 5-Year Estimates (US Census Bureau)				
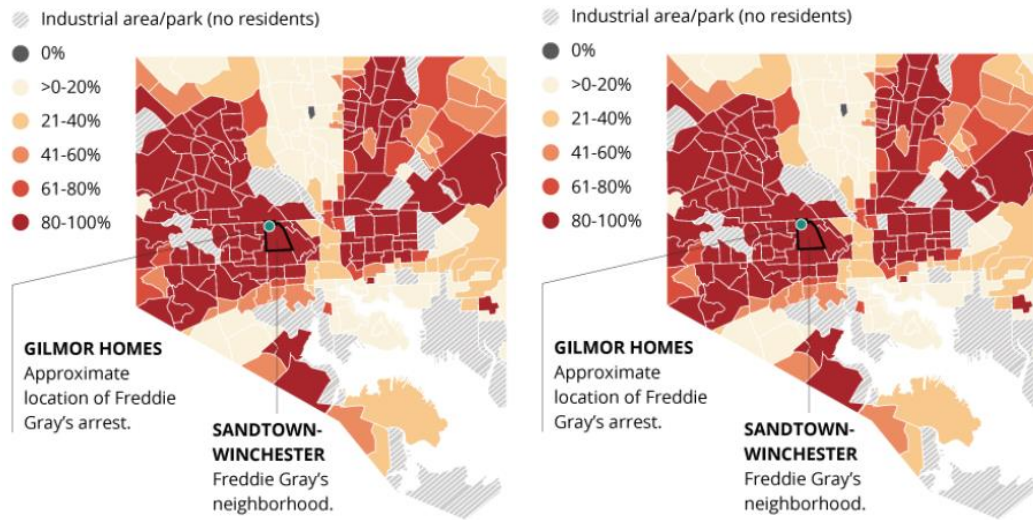
Figure 1: Percent of Residents Who Are Black, 2010 and Percent of the Population That Is Unemployed and Looking for Work, 2009-2013

These challenges, however, disproportionately impact Baltimore's Black population, as seen Figure 1. Table 13 shows that over a quarter of the Black residents in Baltimore live below the poverty line. This is due in part to the city's history of government-sponsored discrimination (U.S. Department of Justice 2016).

Table 14: Percent Below the Poverty Level by Race in Baltimore

	Percent Below Poverty Level
	Baltimore
White	13.2%
Black or African American	26.1%
American Indian and Alaska Native	43%
Asian alone	18.7%
Native Hawaiian and Other Pacific Islander	35.8%
Some other race	21.7%
Two or more races	18.8%
Hispanic or Latino origin (of any race)[1]	22.5%

[1]Hispanic or Latino ethnicity overlaps with other race categories.
Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Because poverty and racial segregation are factors that are correlated with police brutally, as was seen in the previous chapter, educational attainment is paramount in examining each of the six cities as well. Consistent with the prior social indicators, the educational attainment of Baltimore residents follows similar patterns indicative of the presence of disadvantage. Table 15 shows the percentage of high school graduates in Baltimore, 84.9 percent, which falls below the national rate of 87.7 percent.

Table 15: Percent of High School Graduates or Higher

	High School Graduate or Higher
United States	87.7%
Baltimore	84.9%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Table 16 further presents the educational attainment of Baltimore residents. About 20 percent have a high school diploma and 15.1 percent have less than a high school diploma. Only 31.2 percent of residents have a bachelor's degree or higher.

Table 16: Education Attainment in Baltimore

	Baltimore
Less than 9th grade	4.6%
9th to 12th grade, no diploma	10.5%
High school graduate (includes equivalency)	29.9%
Some college, no degree	19.1%
Associate's degree	4.8%
Bachelor's degree	16.3%
Graduate or professional degree	14.9%
High school graduate or higher	84.9%
Bachelor's degree or higher	31.2%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

However, educational attainment also varies by race and is indicative of disadvantage. The proportion of Black residents with a high school graduation or higher is 82.6 percent, lower than the rate for Baltimore as a whole. Yet, of the non- Latinx white residents, who only make up about 30 percent of the residents, about 90 percent with a high school diploma or higher, which exceeds both the city and national rate. Also, Black residents with a bachelor's degree or higher is only 16 percent, the lowest of any other race or ethnicity in Baltimore.

Table 17: Education Attainment by Race in Baltimore

	Baltimore
White	
High school graduate or higher	89%
Bachelor's degree or higher	55.1%
White, not Hispanic or Latino	
High school graduate or higher	90.4%
Bachelor's degree or higher	56.7%
Black	
High school graduate or higher	82.6%
Bachelor's degree or higher	16%
American Indian or Alaska Native	
High school graduate or higher	78.3%
Bachelor's degree or higher	25.3%
Asian	
High school graduate or higher	91.5%
Bachelor's degree or higher	73.2%
Native Hawaiian and Other Pacific Islander	
High school graduate or higher	93.6%
Bachelor's degree or higher	30.8%
Some other race	
High school graduate or higher	69.1%
Bachelor's degree or higher	19.7%
Two or more races	
High school graduate or higher	90.2%
Bachelor's degree or higher	44.5%
Hispanic or Latino Origin	
High school graduate or higher	70.2%
Bachelor's degree or higher	26.8%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

The educational attainment racial disparity in Baltimore is particularly concerning

regarding the struggle with poverty many of its residents' experience. Education is

traditionally seen as a means to achieving upward mobility. There is evidence of this here

with 23.4 percent of residents with a high school diploma being below the poverty level and 33.4 percent of those with less that a high school diploma being below the poverty level. Yet, less than 7 percent of residents with a bachelor's degree fall below the poverty level. With only 16 percent of Black residents having a bachelor's degree or higher, this further demonstrates the intersection of race, poverty, and education in Baltimore, and how Black resident lie at the center.

Table 18: Percent Below the Poverty Level by Educational Attainment in Baltimore

	Percent Below Poverty Level
	Baltimore
Less than high school graduate	33.4%
High school graduate (includes equivalency)	23.4%
Some college, associate's degree	16.5%
Bachelor's degree or higher	6.7%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

In addition to poverty, crime has also plagued Baltimore for decades. In 2014 Baltimore, had the sixth highest rate of violent crimes out of the country's 76 cities with at least 250,000 residents (United States Department of Justice 2016). For these various reasons, along with the "legacy of government-sanctioned discrimination" (United States Department of Justice 2016), Baltimore presents a very unique opportunity to see just how complex police brutality can be, and how socioeconomic contexts can influence and/or exacerbate an already volatile situation.

Baltimore's "Toxic Legacy"

The impact of the segregation and economic inequality experienced by Black

residents of Baltimore can also be seen in the patterns of lead poisoning (U.S.

Department of Justice 2016). Prior to their deaths at police hands, both Korryn Gaines

and Freddie Gray and his siblings had filed a lawsuit for lead poisoning, and they were

not alone (McCoy 2015). The Coalition to End Childhood Lead Poisoning found 13,000

children in Baltimore that had been poisoned with lead in 1993. Using the current level

standards to test, they would have found 30,000 poisoned children (McCoy 2015). Over

the last 20 years, over 93,000 children have been added to the Department of the

Environment lead registries.

Lead poisoning most affects poor communities and has especially impacted Black

communities. The worst of these is the neighborhood of Sandtown. According to the

2010 Census, this area had an unemployment (21%) and family poverty rate (30.9%)

almost double that of Baltimore City (11.1% and 15.2%). The residents are over 90%

Black, and, unsurprisingly, Sandtown-Winchester/Harlem Park had more than triple

(39.8) the lead violations of Baltimore City (11.8) per year per 10,000 household from

2000-2008 (Baltimore City Health Department 2011). Figure 2 displays the lead levels in

Baltimore from 1993-2013.

PERCENT ELEVATED LEAD LEVELS

Coldstream/Midway

Belair-Edison

Greenmount East
Madison/East End

Southwest Baltimore

Sandtown-Winchester/
Harlem Park

5.6%
3%
1.5%

PERCENT VACANT/ABANDONED
RESIDENTIAL PROPERTY

PERCENT CHILDREN
IN POVERTY

20%
10%
2%

51%
25%
13%
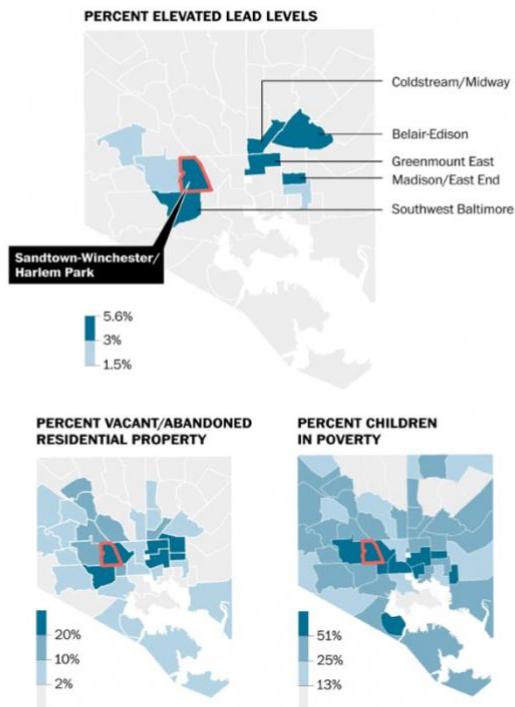
Harmful lead levels in Baltimore, 1993 to 2013

More than 456,000 child tests for lead poisoning have been given in
Baltimore over the past 20 years. Fewer are turning up harmful levels.
But that may change this year as testing is expanded to more homes
and neighborhoods.

40%
34%
12,908 children
of 38,030 tested

30

20

10

1%
218 children
of 18,535 tested

0
1993   2013
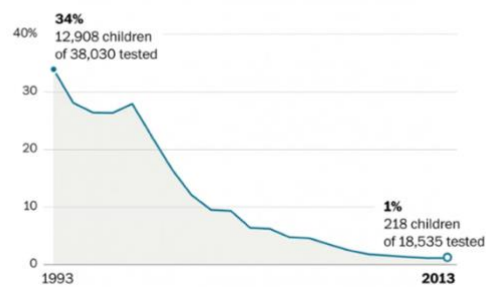
Elevated lead level is at least 0.1 part per million.

Figure 2: Lead Levels in Baltimore, 1993-2013

The poor and Black communities that are disproportionately impacted also have to unfairly experience the harmful consequences of lead exposure. According to the World Health Organization (2017: para 9):

> Lead can have serious consequences for the health of children. At high levels of exposure, lead attacks the brain and central nervous system to cause coma, convulsions and even death. Children who survive severe lead poisoning may be left with mental retardation and behavioural disorders... In particular lead can affect children's brain development resulting in reduced intelligence quotient (IQ), behavioural changes such as reduced attention span and increased antisocial behaviour, and reduced educational attainment. Lead exposure also causes anaemia, hypertension, renal impairment, immunotoxicity and toxicity to the reproductive organs. The neurological and behavioural effects of lead are believed to be irreversible.

The impact of lead exposure also expands beyond health and into the criminal justice system. Children poisoned with lead are seven times more likely to drop out of school. They are six times more likely to be in the juvenile justice system as well (McCoy 2015). Thus, Baltimore's "toxic legacy" also portrays the intersecting nuanced nature of the criminal justice system.

Police and Community Engagement

Historically, questions have also been raised regarding the misconduct of police in Baltimore. Despite the fact that the force is comprised of just over 40 percent Black officers (City of Baltimore Open Data Catalog 2019), the most diverse in the region, their policing still greatly falls short of equitable. After the death of Freddie Gray, the Baltimore Police Department was investigated by the Department of Justice. Following their investigation, the U.S. Department of Justice (2016) announced that:

> [they] found reasonable cause to believe that the Baltimore City Police Department (BPD) engages in a pattern or practice of conduct that violates the First and Fourth Amendments of the Constitution as well as federal anti-

discrimination laws. BPD makes stops, searches and arrests without the required justification; uses enforcement strategies that unlawfully subject African Americans to disproportionate rates of stops, searches and arrests; uses excessive force; and retaliates against individuals for their constitutionally-protected expression. The pattern or practice results from systemic deficiencies that have persisted within BPD for many years and has exacerbated community distrust of the police, particularly in the African-American community…

Additionally, the report found that "BPD uses unreasonable force against individuals with a mental health disability and those in crisis and fails to make reasonable modifications when interacting with individuals with mental health disabilities," violating the Fourth Amendment (U.S. Department of Justice 2016:80).

Also, the U.S. Department of Justice (2016) report cited concerns of gender-biased policing. This claim was made based on how the Baltimore Police Department handles sexual assault cases. They found that officers failed to "meaningfully investigate" reports of sexual assaults, especially if the women assaulted had additional vulnerabilities, such as those who were involved in the sex trade. Additionally, "[d]etectives fail[ed] to develop and resolve preliminary investigations; fail[ed] to identify and collect evidence to corroborate victims' accounts; inadequately document[ed] their investigative steps; fail[ed] to collect and assess data, and report and classify reports of sexual assault… (U.S. Department of Justice 2016:10)".

Resultantly, there is a distrust of police among many in Baltimore, much of which is a consequence of the "zero tolerance" policing strategy during the 1990s and 2000s that was implemented as a response to increasing violent crime rates (U.S. Department of Justice 2016). For many years, this strategy overwhelmingly impacted Black communities, which in turn fueled distrust by Black residents. In 2014, Mayor Rawlins-

Blake's administration noted that this strategy "ignited a rift between the citizens and the police, which still exists today" and that there is a "broken relationship" between police and the Baltimore community (U.S. Department of Justice 2016:18).

The relationship between the community and the police, as well as policing practices, had been a topic of interest even before the murders of Freddie Grey and Korryn Gaines. The history and culture of Baltimore exemplifies just how much social, historical, and economic context matters in regard to policing. The disadvantage of Black residents and the systematic discrimination, however, are not exclusive to Baltimore. It will be demonstrated how they uniquely manifests throughout the five remaining cities.

Houston

Houston is a large metropolis in Texas, and the largest of the six cities with a population size of 2,295,982. Although Houston is a large city, the median income is about almost $10,000 less than the national median income, as shown in Table 19, and although Houston has an employment rate higher than the national rate, 63.3, they have a poverty rate 7.5 percent above the national rate of 13.1 percent.

Table 19: Poverty in Houston

	Poverty Rate	Employment Rate	Median Household Income	Population Size
United States	13.1%	59.8%	$61,937	327,167,439
Houston	20.6%	63.3%	$51,140	2,295,982
Source: 2018 ACS 5-Year Estimates (US Census Bureau)				

Houston also stands out in the racial and ethnic composition of its residents, as shown in Table 20. Although over 50 percent of its resident are white and 22.5 percent are Black, 44.8 percent of its residents identify as Latinx, making it one of the most diverse cities in the case study.

Table 20: Racial and Ethnic Composition of Houston

	Houston
White	57.6%
Black or African American	22.5%
American Indian and Native American	0.3%
Asian	6.9%
Native Hawaiian and Other Pacific Islander	0.1%
Some Other Race[1]	10.5%
Two or More Races	2.1%
Hispanic or Latino[2]	44.8%

[1]Hispanic or Latino ethnicity overlaps with other race categories.
Source: 2018 ACS 5-Year Estimates (US Census Bureau)

However, that diversity is also connected to disparities. Table 21 shoes that approximately 26 percent of Houston's Latinx residents are below the poverty level, the highest proportion of all other racial and ethnic categories, and Black residents follow with 25.1 percent living below the poverty level.

Table 21: Percent Below the Poverty Level by Race in Houston

	Percent Below Poverty Level
	Houston
White	18.3%
Black or African American	25.1%
American Indian and Alaska Native	23.3%
Asian alone	13.9%
Native Hawaiian and Other Pacific Islander	18%
Some other race	28%
Two or more races	18.2%
Hispanic or Latino origin (of any race)	26%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Because poverty and racial segregation are factors that are correlated with police brutally, as was seen in the previous chapter, educational attainment is paramount in examining Houston as well. Table 22 shows the percentage of high school graduates or higher in Houston. Houston has a rate of almost 10 percent below the national average, the lowest rate of all the six cities.

Table 22: Percent of High School Graduates or Higher

	High School Graduate or Higher
United States	87.7%
Houston	78.3%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Table 23 further presents the educational attainment of each city. Houston continues to stand out with almost 13 percent of residents having less than a high school

education, yet they have the highest proportion of residents with a bachelor's degree or

higher among all the five cities, 32.1 percent.

Table 23: Education Attainment in Houston

	Houston
Less than 9th grade	12.8%
9th to 12th grade, no diploma	8.9%
High school graduate (includes equivalency)	22.7%
Some college, no degree	18.2%
Associate's degree	5.3%
Bachelor's degree	19.5%
Graduate or professional degree	12.6%
High school graduate or higher	78.3%
Bachelor's degree or higher	32.1%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Long regarded as a means of reducing poverty, education is often seen as a way of

achieving of upper mobility. Traditionally, the nation's higher education system, has had

two primary goals: economic efficiency and social equity (Haveman and Smeeding

2006). Yet, it is well documented that growing up in a disadvantaged neighborhood is

associated with increased odds of dropping out of high school (Aaronson 1998; Brooks-

Gunn et al. 1993; Crane 1991; Ensminger, Lamkin, and Jacobson 1996; Foster and

McLanahan 1996; Ginther, Itaveman, and Wolfe 2000; Harding 2003;Owens 2010;

Wodtke, Harding, and Elwert 2011), and in addition to the socioeconomic disparities in

education are the racial disparities in education (Reardon et al. 2013). This is particularly

of concern in cities, like Houston, which have a history of concerns about Black youth

and the need to control their behavior:

> Almost immediately after World War II, when the "teenager" emerged as a
> formidable political and cultural category, state and local governments began to
> enact delinquency policies that expanded surveillance of black urban youth.
> Urban police departments from New York to Houston started to increase patrol in
> targeted low-income neighborhoods as a means to control unruly teens. Juvenile
> delinquency programs in Oakland, for instance, brought police officers into public
> schools to monitor and arrest youth identified as "troublemakers" by school and
> social service staff. The Oakland Police Department aggressively enforced
> misdemeanors— both on and off school grounds—just as it began to offer
> recreational programs for this same group of "troublesome" young residents. As a
> result of such antidelinquency measures in Oakland, Houston, New York City,
> and other urban centers with concentrations of African American youth, the
> number of young people who were under some form of criminal justice
> supervision nationwide grew 2.5 times between 1949 and 1957 (Hinton 2016:33-
> 34).

Table 24 shows the education attainment by race in Houston, and evidence of

disparities can further be seen here. Non-Latinx whites with a high school graduation or

higher not far under100 percent, and over half have a bachelor's degree or higher. This is

a stark comparison to Latinx residents with 57.3 percent having a high school diploma or

higher and only 12.5 percent with a bachelor's degree or higher.

Table 24: Education Attainment by Race in Houston

	Houston
White	
High school graduate or higher	77.3%
Bachelor's degree or higher	36.3%
White, not Hispanic or Latino	
High school graduate or higher	96.1%
Bachelor's degree or higher	58.5%
Black	
High school graduate or higher	88.0%
Bachelor's degree or higher	22.2%
American Indian or Alaska Native	
High school graduate or higher	72.5%
Bachelor's degree or higher	21.0%
Asian	
High school graduate or higher	86.5%
Bachelor's degree or higher	58.2%
Native Hawaiian and Other Pacific Islander	
High school graduate or higher	81.6%
Bachelor's degree or higher	31.0%
Some other race	
High school graduate or higher	53.9%
Bachelor's degree or higher	8.7%
Two or more races	
High school graduate or higher	84.3%
Bachelor's degree or higher	37.9%
Hispanic or Latino Origin	
High school graduate or higher	57.3%
Bachelor's degree or higher	12.5%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

The disparity in education also impacts the financial status of Houston residents.

Table 25 shows that about 19 percent of high school graduates are below the poverty

level, and 28.3 percent of residents with less than a high school diploma are below the poverty level**.**

Table 25: Percent Below the Poverty Level by Educational Attainment in Houston

	Percent Below Poverty Level
	Houston
Less than high school graduate	28.3%
High school graduate (includes equivalency)	19.4%
Some college, associate's degree	13.3%
Bachelor's degree or higher	5.9%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)
Population 25 years and over

Therefore, Houston is a large city with a diverse resident population. However, with that diversity is racial and ethnic disparities when it comes to poverty and education, further hindering the social mobility of those impoverished. This, too, intersects with the policing of neighborhoods, which is explored further in the section below.

Police and Community Engagement

The socioeconomic context of Houston is not the only area of contention when examining police brutality. As conversations swirl about defunding police departments throughout the country as a result of the revival of the Black Lives Matter movement that was catalyzed by the brutal murder of George Floyd, the relationship between police departments and communities of color has come under a newfound scrutiny. What has been revealed is an historically tumultuous relationship between residents and police officers, as was seen in Baltimore.

Table 26 shows the number of police killings by city according to the Mapping

Police Violence Database (2013-2018). Houston stands out with the greatest number of

killings, 85, almost doubling the number of murders in most of the other five cities.

Houston Police Department (HPD), with 5,400 sworn officers, is the largest law

enforcement-agency in Texas and the fifth largest in the nation. However, they also have

a large history of complaints. In a two-part investigation by the Texas Observer, it was

found from the Houston Police Department disciplinary records that HPD received, on

average, 1,200 complaints per year from 2007 to 2012 (DePrang 2013a). Less than one

third of the complaints resulted in any disciplinary actions, and only 7 percent resulted in

serious disciplinary action, meaning a three-day suspension or more.

Table 26: Police Killings* by City

	Police Murders	Per 100,000 Resident
Baltimore	32	5.21
San Antonio	50	3.36
Philadelphia	37	2.35
Houston	85	3.70
Oklahoma City	46	7.22
Bakersfield	31	8.25

*A police killing is defined as a case where a person dies as a result of being shot, beaten, restrained, intentionally hit by a police

vehicle, pepper sprayed, tasered, or otherwise harmed by police officers, whether on-duty or off-duty.

Source: 2013-2018 Mapping Police Violence database, 2018 ACS 5-Year Estimates (US Census Bureau)

Additionally, between 2007 and 2012, HPD officers were involved in 550

incidents in which either a citizen or animal was injured or killed by a police officer's

bullet (DePrang 2013b). However, each shooting was determined to be justified. The lack

of accountability led DePrang (2013b: para 24) to conclude that "[e]ither Houston police almost never abuse their power, or they abuse it with impunity."

The Houston Police Department publishes their officer-involved shooting (OIS) incidents online, but it's scope is limited to incidents where "a HPD officer discharged his or her weapon in the performance of his or her duties. It does NOT reflect accidental discharges where no injury occurred or the intentional shooting of vicious animals (Houston Police Department 2020)". Figure 3 presents the number of reported shooting incidents per year. Of those 585 resident involved in the HPD shooting, about 25 percent were killed. In 2020, as of the writing of this dissertation, of the 16 suspects killed and wounded reported, 11 were Black men and 5 were Latinx men.
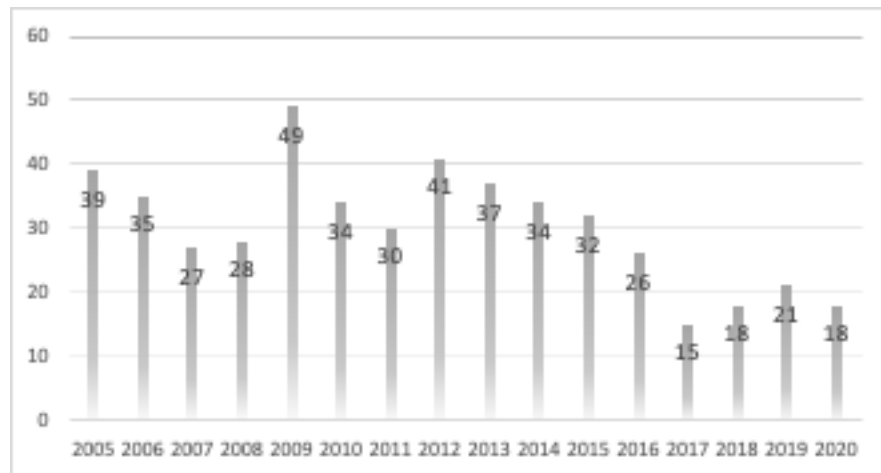

Source: Houston Police Department 2020

Figure 3: Houston Police Department Officer-Involved Shootings, 2005-2020

Resultingly, after the death of George Floyd, accountability came back into the activists forefront in Houston as they demanded police reform in the form of an independent police oversight (Scherer and Barned-Smith 2020). Although the Houston's Independent Police Oversight Board already exists, it is viewed as "window dressing" and inadequate. The Independent Police Oversight Board reviews investigations completed by the Houston Police Department's Internal Affairs division. However, it cannot launch its own inquiries or accept complaints directly from civilians. Also, members are not allowed to discuss any of the cases they review — even with the mayor or other public officials. It lacks the power to subpoena documents or compel officer testimony, once again pointing to the lack of transparency that exists within agencies across the five cities. It is merely a volunteer body appointed by the mayor and has no professional staff.

Philadelphia

Philadelphia is Pennsylvania's largest city with 1,575,522 residents. It is also the most impoverished of the six cities with a poverty rate of 24.9 percent, as shown in Table 27. Philadelphia also has the lowest employment rate and the lowest median household income of each of the five cities, and as Wilson (1987) asserts, unemployment is connected to poverty and family dissolution:

> …the weight of the evidence on the relationship between the employment status of men, and family life and married life suggest that the increasing joblessness among Black men merits serious consideration as a major underlying factor in the rise of Black single mothers and female-headed households (Wilson 1987:82-83).

Table 27: Poverty in Philadelphia

	Poverty Rate	Employment Rate	Median Household Income	Population Size
United States	13.1%	59.8%	$61,937	327,167,439
Philadelphia	24.9%	54.4%	$43,744	1,575,522
Source: 2018 ACS 5-Year Estimates (US Census Bureau)				

Philadelphia with its predominately Black population, as shown in Table 28, also has the highest poverty rate of each of the six cities. The cities that follow will have a similar pattern, with the cities that have a smaller proportion of Black residents also having a lower rate of poverty. Philadelphia is unique among the six cities in their racial composition of its residents in that there are almost the same proportion of white and Black residents.

Table 28: Racial and Ethnic Composition of Philadelphia

	Philadelphia
White	41.2%
Black or African American	42.3%
American Indian and Native American	0.4%
Asian	7.2%
Native Hawaiian and Other Pacific Islander	0%
Some Other Race[1]	5.9%
Two or More Races	3.0%
Hispanic or Latino[2]	14.5%

[1]Hispanic or Latino ethnicity overlaps with other race categories.
Source: 2018 ACS 5-Year Estimates (US Census Bureau)

However, white and Black residents are not equal in socioeconomic status in Philadelphia. Approximately 30 percent of Black residents live below the poverty level as

comparted to 17.4 percent of whites. Massey and Denton (1993) assert that it is the

interplay between segregation and intense poverty that results in the vulnerability of

Black neighborhoods to change in the urban economy (Massey and Denton 1993). Any

dislocations that result in an upward shift in Black poverty rates will also result in rapid

change in the concentration of poverty. Consequently, a huge shift in the economic and

social composition of Black neighborhoods will follow, and as the previous analysis

demonstrated, lethal police encounters in neighborhoods with 100 percent of Blacks were

90.2 times more likely to involve Black men relative to white men, and lethal police

encounters in neighborhoods with 100 percent of Blacks were 10.7 times more likely to

involve Black women relative to white women.

Table 29: Percent Below the Poverty Level by Race in Philadelphia

	Percent Below the Poverty Level
	Philadelphia
White	17.4%
Black or African American	30%
American Indian and Alaska Native	28.8%
Asian alone	23.5%
Native Hawaiian and Other Pacific Islander	38.4%
Some other race	40.1%
Two or more races	25.2%
Hispanic or Latino origin (of any race)	38.1%
Source: 2018 ACS 5-Year Estimates (US Census Bureau)	

Consistent with the prior social indicators, the educational attainment of

Philadelphia residents follows similar patterns indicative of the presence of disadvantage.

Table 30 shows the percentage of high school graduates or higher in Philadelphia, 83.7

percent, falling below the national rate of 87.7 percent.

Table 30: Percent of High School Graduates or Higher in Philadelphia

	High School Graduate or Higher
United States	87.7%
Philadelphia	83.9%

Table 31 further presents the educational attainment of Philadelphia. About one third of residents have a high school diploma and 16 percent have less than a high school diploma. About 28 percent of residents have a bachelor's degree or higher.

Table 31: Education Attainment in Philadelphia

	Philadelphia
Less than 9th grade	5.7%
9th to 12th grade, no diploma	10.3%
High school graduate (includes equivalency)	33%
Some college, no degree	16.6%
Associate's degree	5.7%
Bachelor's degree	16.7%
Graduate or professional degree	11.9%
High school graduate or higher	83.9%
Bachelor's degree or higher	28.6%

However, educational attainment in Philadelphia also varies by race, as shown in Table 32. Non-Latinx whites with a high school diploma or higher are 91.1 percent, and 42.7 percent have a bachelor's degree or higher. Only 65.8 percent of Latinx resident have a high school diploma or higher and 14 percent have a bachelor's degree or higher. Similarly, only 16.6 percent of Black residents have a bachelor's degree or higher. Both

rates are low in comparison to the 28.6 percent of all residents in Philadelphia with a

bachelor's degree or higher.

Table 32: Education Attainment by Race in Philadelphia

	Philadelphia
White	
High school graduate or higher	88.2%
Bachelor's degree or higher	39.7%
White, not Hispanic or Latino	
High school graduate or higher	91.1%
Bachelor's degree or higher	42.7%
Black	
High school graduate or higher	84.0%
Bachelor's degree or higher	16.6%
American Indian or Alaska Native	
High school graduate or higher	75.9%
Bachelor's degree or higher	17.5%
Asian	
High school graduate or higher	71.3%
Bachelor's degree or higher	38.7%
Native Hawaiian and Other Pacific Islander	
High school graduate or higher	86.5%
Bachelor's degree or higher	26.3%
Some other race	
High school graduate or higher	63.7%
Bachelor's degree or higher	9.1%
Two or more races	
High school graduate or higher	85.4%
Bachelor's degree or higher	31.7%
Hispanic or Latino Origin	
High school graduate or higher	65.8%
Bachelor's degree or higher	14.0%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

As seen in other cities, education attainment and poverty are very much connected. This is especially seen in Philadelphia where 37.1 percent of residents with less than a high school diploma living in poverty, and almost 24 percent of high school graduates living in poverty. Out of the six cities, Philadelphia has the highest proportion of those with a high school diploma or less below the poverty level.

Table 33: Percent Below the Poverty Level by Educational Attainment

	Percent Below Poverty Level
	Philadelphia
Less than high school graduate	37.1%
High school graduate (includes equivalency)	23.7%
Some college, associate's degree	17%
Bachelor's degree or higher	8.7%
Source: 2018 ACS 5-Year Estimates (US Census Bureau)	
Population 25 years and over	

Therefore, Philadelphia, like Baltimore has indicators neighborhood disadvantage and segregation, and, also like Baltimore, they impact Black residents the most. Lastly, like Baltimore, it has implication for how the police engage with the resident of Philadelphia. The next section will further explore police and community engagement.

Police and Community Engagement

Philadelphia, like Houston and many other areas of the country, has also had its fair share of policing concerns. According to a leading public media organization in Philadelphia, in the last five years, the Philadelphia Police Department's (PPD) 6,500-member force drew 188 different civilian complaints (Briggs and Marin 2020). Among the 6,500 police officers, 16 have gotten ten or more complaints, causing Briggs and

Martin (2020:para 12) to assert that "Philadelphia stands apart from other major cities in terms of the sheer number of complaints its most troubled police receive — and the lack of transparency around these records."

Although the number of complaints in Philadelphia should spur disciplinary action, accountability is rare (Briggs and Marin 2020). The Philadelphia Police Department has rejected almost 85% of more than 10,000 civilian complaints filed since April 2013 (Briggs and Marin 2020). Most of the rest of the complaints resulted in retraining or counseling. A minority of the formal investigations, only 219, resulted in guilty findings. For the most serious charges leveled at officers, such as physical or sexual abuse, only 1.7% were found guilty, and although about two-thirds of complaints were filed by Black residents, the Internal Affairs Bureau was 21% more likely to recommend disciplinary action when a white person filed a complaint.

This is not a new phenomenon, however. It has been known for decades that the Philadelphia Police Department is slow to react to complaints of police brutality. In 1996, the National Association of for the Advancement of Colored People (NAACP), American Civil Liberties Union (ACLU), and the Police-Barrio Relations Project alleged systemic misconduct within the Philadelphia Police Department (NAACP v. City of Philadelphia 2005). A review of the PPD data found that Black residents were being stopped and detained by police disproportionately, as many as 10 times more than expected. To settle the case the then mayor, Mayor Ed Rendell, authorized monitoring that included the implementation of an "early warning" system with the goal of allowing supervisors to intervene before misconduct led to on-duty violence.

However, the Integrity and Accountability Office, an oversight entity also created during the NAACP settlement, found the disciplinary system "ineffective, inadequate and unpredictable (Green-Ceisler 2003)." The system was viewed by commanders with "resentment, cynicism and suspicion" and "did not seem to understand the goal or purpose." The oversight office was dissolved shortly before 2006, a year that would break records for fatal police shootings in Philadelphia. The Department of Justice would later intervene, reprimanding the PPD over its use-of-force policies with their report. Among their findings included that between 2007 and 2014, there were 394 officer-involved shootings, with an average of 49 annually (Fachner and Carter 2015). The vast majority (94 percent) of officers involved in shootings were men, and most were white (59 percent). They also found that PPD officers do not receive regular, consistent training on the department's deadly force policy, and that although the PPD has begun posting a significant amount of data and case information on its website, still, more transparency is needed for properly keeping the community informed. The report yielded 48 finding and 91 recommendations in total for the department to reform its deadly force practices, and ultimately lead to the establishing the Officer-Involved Shooting Investigation Unit within the Philadelphia Police Department (Farr and Nadolny 2017).

San Antonio

San Antonio is a major city in south-central Texas, 197 miles west of Houston. There are about 1,486,521 resident who live in San Antonio, 18.6 percent of which live in poverty, as shown in Table 34. Despite have a poverty rate above the national rate and lower median income, residents have an employment rate equal to that of the nation.

Table 34: Poverty in San Antonio

	Poverty Rate	Employment Rate	Median Household Income	Population Size
United States	13.1%	59.8%	$61,937	327,167,439
San Antonio	18.6%	59.8%	$50,980	1,486,521
Source: 2018 ACS 5-Year Estimates (US Census Bureau)				

Like Houston, San Antonio stands out demographically. About 80 percent of residents are White and just under 7 percent of residents are Black. However, 64.2 percent identify as Latinx, the largest proportion of Latinx residents out of the six cities.

Table 35: Racial and Ethnic Composition of San Antonio

	San Antonio
White	80.5%
Black or African American	6.9%
American Indian and Native American	0.8%
Asian	2.8%
Native Hawaiian and Other Pacific Islander	0.1%
Some Other Race[1]	6.0%
Two or More Races	2.8%
Hispanic or Latino[2]	64.2%

[1]Hispanic or Latino ethnicity overlaps with other race categories.
Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Unlike the other cities, however, San Antonio has the lowest rate of poverty for its Latinx residents than in any other city, 21.3 percent, as shown in Table 36. Black and Native American residents have the highest rates of poverty, 22.5 percent and 29.2 percent, despite only accounting for 6.9 percent and 0.8 percent of the population.

Table 36: Percent Below the Poverty Level by Race in San Antonio

| | Percent Below Poverty Level |
	San Antonio
White	18.2%
Black or African American	22.5%
American Indian and Alaska Native	29.2%
Asian alone	15.6%
Native Hawaiian and Other Pacific Islander	6.5%
Some other race	19.6%
Two or more races	17.9%
Hispanic or Latino origin (of any race)	21.3%

[1]Hispanic or Latino ethnicity overlaps with other race categories.
Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Consistent with the prior social indicators, the educational attainment of the San Antonio's residents follows similar patterns indicative of the presence of disadvantage. Table 16 shows the percentage of high school graduates or higher in San Antonio. Residents of the city falls below the national rate of 87.7 percent, with a rate of 82 percent.

Table 37: Percent of High School Graduates or Higher in San Antonio

	High School Graduate or Higher
United States	87.7%
San Antonio	82.0%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Table 38 further presents the educational attainment of San Antonio residents. About 23 percent of residents are high school graduates, and just under 20 percent have less than a high school diploma. About 26 percent have a bachelor's degree or higher.

Table 38: Education Attainment in San Antonio

	San Antonio
Less than 9th grade	8.5%
9th to 12th grade, no diploma	9.5%
High school graduate (includes equivalency)	26%
Some college, no degree	22.5%
Associate's degree	7.6%
Bachelor's degree	16.6%
Graduate or professional degree	9.3%
High school graduate or higher	82%
Bachelor's degree or higher	25.9%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Table 39 further examines educational attainment by race. About 95 percent of non-Latinx whites are high school graduates or higher and 43.4 percent have a bachelor's degree or higher. Although Black resident have a comparable proportion of high school graduates or higher, 90.4 percent, only 24.1 percent have bachelor's degree or higher, nearly have the proportion of white students. While Latinx residents have a lower proportion of residents with who are high school graduates or higher and have bachelor's degree or higher, 74.3 percent and 16.2 percent, Latinx residents have the highest high school graduation rate here than in any of the other six cities.

Table 39: Education Attainment by Race in San Antonio

	San Antonio
White	
High school graduate or higher	82.1%
Bachelor's degree or higher	26.0%
White, not Hispanic or Latino	
High school graduate or higher	95.2%
Bachelor's degree or higher	43.4%
Black	
High school graduate or higher	90.4%
Bachelor's degree or higher	24.1%
American Indian or Alaska Native	
High school graduate or higher	74.5%
Bachelor's degree or higher	20.8%
Asian	
High school graduate or higher	86.4%
Bachelor's degree or higher	52.4%
Native Hawaiian and Other Pacific Islander	
High school graduate or higher	97.1%
Bachelor's degree or higher	32.0%
Some other race	
High school graduate or higher	68.5%
Bachelor's degree or higher	13.4%
Two or more races	
High school graduate or higher	86.9%
Bachelor's degree or higher	27.5%
Hispanic or Latino Origin	
High school graduate or higher	74.3%
Bachelor's degree or higher	16.2%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Educational attainment is linked to poverty in San Antonio as well. Residents

with less than a high school diploma have the highest proportion of residents in poverty,

27.8 percent. Next, about 17 percent of high school graduates live below the poverty

level, and about 12 percent of residents live below the poverty level. Lastly, only 5.6

percent of residents with a bachelor's degree or higher are living in poverty.

Table 40: Percent Below the Poverty Level by Educational Attainment in San Antonio

	San Antonio
Less than high school graduate	27.8%
High school graduate (includes equivalency)	16.5%
Some college, associate's degree	11.6%
Bachelor's degree or higher	5.6%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)
Population 25 years and over

Therefore, although San Antonio shares a state home with Houston, there are

distinct differences. Although indicators of neighborhood disadvantage are evident, the

way in which it manifests slightly differs than in the other six cities. However, some

factors still remain the same, such as the disadvantage faced by Black residents, even

though they make up the smallest proportion of here than in any other city in this case

study. The next section will into police and community engagement in San Antonio, and

if this, too, differs here than in any of the other cities.

Police and Community Engagement

The San Antonio Police Department (SAPD) is smaller than aforementioned

agencies with 2,388 sworn officers, with just over half of whom identify as Latinx (San

Antonio Police Department 2020). While they may be smaller in size, the SAPD has had

its fair amount of complaints. According to 2019 Internal Affairs Annual Report (San

Antonio Police Department Internal Affairs Unit 2019), there was an average of about

159 formal complaints and about 454 line complaints, as shown in Table 41. Formal

complaints are complaints on an officer for conduct that "exhibits a significant variance

from behavioral expectations established through formal training, departmental rules,

regulations, policies, or procedures which regulate an officer's conduct (San Antonio

Police Department Internal Affairs Unit 2019:8)." In 2019, the top five formal

complaints were: (1) Conduct and behavior, (2) Post event procedures officer-involved

shooting (OIS) and custodial death, (3) Family/dating violence involving member, (4)

Body worn cameras; recording, and (3) Truthfullness of members.

Table 41: SAPD History of Reported Complaints

	2015	2016	2017	2018	2019	5-Year Average
Formal Complaint	184	156	134	176	147	159.4
Line Complaint	401	430	420	484	537	454.4
Source: San Antonio Police Department Internal Affairs Unit (2019)						

Line complaints, however, are typically complaints against an officer for "minor

variances" from rules and polices. In 2019, the top five line complaints were: (1) City

property: safe operation of vehicles, (2) Body worn cameras; recording, (3) Searching of

prisoners, (4) Pre-operation check of electronic control device/taser (ECD), and (5)

Responsibility to serve the public; courtesy.

When examining reported SAPD use of force agencies, there were 510 incidents

in 2018 and 529 use of force incidents in 2019, a 3.7 percent increase (San Antonio

Police Department Internal Affairs Unit 2019). Table 42 shows the 5-year history of use

of force incidents. While it may appear that the numbers have decreased substantially since 2015, this was directly related to policy and reporting changes. Beginning in 2014 policy required officers to report the use of "takedowns" which were previously not recorded as a type of force. According to the San Antonio Police Department Internal Affairs Unit (2019:11), "A 'takedown' is defined as using physical force when executing a leg sweep, body flip or similar control technique intended to control an individual who is offering resistance during arrest and handcuffing."

Therefore, the significant decrease in the use of force incidents beginning in 2017 are a direct result of policy changes that reverted back to the previous policy in which the officers are not required to record "takedowns" as a type of force. Yet, with use of force incidents defined by the San Antonio Police Department as "any incident in which a police officer uses force during a public-police interaction (10)," the use of force numbers seen here do not reflect that definition due to policy changes, and thus further teeters the line of true transparency.

Table 42: SAPD Use of Force Incidents

	2015	2016	2017	2018	2019
Use of Force Incidents	1155	944	586	510	529
Source: San Antonio Police Department Internal Affairs Unit (2019)					

Even today, San Antonio continues to make the news as protests calling for an end to police violence had yet another name added to the list of Black people killed by law enforcement with murder of Black combat veteran Damien Daniels by Bexar County

sheriff's deputies. Daniels was experiencing a mental health crisis at the time of his death

(Walsh 2020). With about 19 percent of fatal police shooting in Texas involving someone

with a history of mental illness, this further highlight the role of law enforcement officers

as first responders to mental health crises one more.

Oklahoma City

Oklahoma City is the capital and largest city of Oklahoma with 637,284 residents,

as shown in Table 43. With a poverty rate of 16.8 percent, 3.7 percent above the national

rate, it is still the city with the lowest poverty rate of the six cites. The residents also have

an employment rate higher than the national average despite having a median household

income about $8000 below the median household income.

Table 43: Poverty in Oklahoma City

	Poverty Rate	Employment Rate	Median Household Income	Population Size
United States	13.1%	59.8%	$61,937	327,167,439
Oklahoma City	16.8%	63.2%	$54,034	637,284
Source: 2018 ACS 5-Year Estimates (US Census Bureau)				

As Table 44 demonstrates, Oklahoma City is predominately white, 67.4 percent,

with about 20 percent of residents identifying as Latinx and only 14 percent Black

residents.

Table 44: Racial and Ethnic Composition of Oklahoma City

	Oklahoma City
White	67.4%
Black or African American	14.0%
American Indian and Native American	3.2%
Asian	5.1%
Native Hawaiian and Other Pacific Islander	0.1%
Some Other Race[1]	4.7%
Two or More Races	5.4%
Hispanic or Latino[2]	19.7%

[1]Hispanic or Latino ethnicity overlaps with other race categories.
Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Table 45 shows that despite being a predominately white city, communities of color are the most impoverished. About 28 percent of both Latinx and Black residents are living below the poverty level. Although Native Hawaiians and Other Pacific Islanders only constitute 0.1 percent of the population in Oklahoma City, 46.9 percent are living below the poverty level. Also, about 19 percent of Native Americans are living below the poverty level despite being only 3.2 percent of the population. Yet, just under 14 percent of white residents are living below the poverty level, the lowest of all six cities.

Table 45: Percent Below the Poverty Level by Race in Oklahoma City

	Percent Below Poverty Level
	Oklahoma City
White	13.8%
Black or African American	28%
American Indian and Alaska Native	18.6%
Asian alone	9.5%
Native Hawaiian and Other Pacific Islander	46.9%
Some other race	25.3%
Two or more races	21%
Hispanic or Latino origin (of any race)	28.2%
Source: 2018 ACS 5-Year Estimates (US Census Bureau)	

Consistent with the previous social indicators, the educational attainment of the Oklahoma City's residents follows similar patterns indicative of the presence of disadvantage. Table 46 shows the percentage of high school graduates or higher in Oklahoma City. Resident falls below the national rate, however, only by 1.5 percent, making Oklahoma City the city with the highest rate of high school graduates of higher.

Table 46: Percent of High School Graduates or Higher in Oklahoma City

	High School Graduate or Higher
United States	87.7%
Oklahoma City	86.2%
Source: 2018 ACS 5-Year Estimates (US Census Bureau)	

Table 47 further presents the educational attainment of Oklahoma City. About 25 percent of residents are high school graduates and only 13.8 percent have less than a high school degree. Approximately 30 percent have a bachelor's degree or higher.

Table 47: Education Attainment in Oklahoma City

	Oklahoma City
Less than 9th grade	6%
9th to 12th grade, no diploma	7.8%
High school graduate (includes equivalency)	25.3%
Some college, no degree	23.3%
Associate's degree	7.3%
Bachelor's degree	19.8%
Graduate or professional degree	10.6%
High school graduate or higher	86.2%
Bachelor's degree or higher	30.3%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

However, educational attainment here, as in the other cities, also varies by race. Table 48 shows the educational attainment by race in Oklahoma City. Here, the racial disparities in education become evident. Whereas 93.2 percent of non-Latinx whites are high school graduates or higher and 36.6 percent have a bachelor's degree or higher, only 54 percent of Latinx resident are high school graduates or higher and about 10 percent have a bachelor's degree or higher. Also, only about 20 percent of Black residents have a bachelor's degree or higher.

Table 48: Education Attainment by Race in Oklahoma City

	Oklahoma City
White	
High school graduate or higher	87.5%
Bachelor's degree or higher	32.8%
White, not Hispanic or Latino	
High school graduate or higher	93.2%
Bachelor's degree or higher	36.6%
Black	
High school graduate or higher	89.2%
Bachelor's degree or higher	20.3%
American Indian or Alaska Native	
High school graduate or higher	85.0%
Bachelor's degree or higher	22.4%
Asian	
High school graduate or higher	81.3%
Bachelor's degree or higher	42.4%
Native Hawaiian and Other Pacific Islander	
High school graduate or higher	84.1%
Bachelor's degree or higher	27.7%
Some other race	
High school graduate or higher	52.6%
Bachelor's degree or higher	6.8%
Two or more races	
High school graduate or higher	86.8%
Bachelor's degree or higher	31.3%
Hispanic or Latino Origin	
High school graduate or higher	54.0%
Bachelor's degree or higher	9.9%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Consistent with previous findings indicating an association between education and poverty, about 27 percent of residents with less than a high school diploma are below

the poverty level, and 17.4 percent of residents with a high school diploma are living

below the poverty level, as shown in Table 49. The group least experiencing poverty are

those with a bachelor's degree or higher at 4.2 percent.

Table 49: Percent Below the Poverty Level by Educational Attainment in Oklahoma City

	Oklahoma City
Less than high school graduate	26.9%
High school graduate (includes equivalency)	17.4%
Some college, associate's degree	10.7%
Bachelor's degree or higher	4.2%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Therefore, Oklahoma City, although unique culturally and historically from the

other cities, demonstrates similar patterns of neighborhood disadvantage as seen in

previous cities. Here, too, it is evident that communities of color face disparities present

throughout the case study. The next chapter will further detail police engagement with the

community and how it differs or resembles policing in other cities.

Police and Community Engagement

Oklahoma City Police Department (OKCPD) is one of the smaller agencies with

only 1169 officers (The City of Oklahoma City 2020). However, even in light of having

46 police killings from 2013-2018, OKCPD stands out among other agencies when it

comes to transparency. While other agencies make documentation, such as Internal

Affairs reports, public, there are none published on the OKCPD website. On the

Interacting with Oklahoma City Police brochure for traffic stops that is published on their

website, the following steps are listed for making a complaint:

- Request to speak to a supervisor immediately, but continue to follow directions. You can complain later if a supervisor is not available.
- Don't confront, argue or debate legal issues, try to get the officer's name and badge number.
- Don't yell at or touch an officer aggressively, it could result in your arrest.
- Cooperation is the best way to resolve a situation quickly. Never resist arrest even if you think the officer's actions are wrong.

Although no real formal complaint process is mentioned of in the brochure, there

is an OKCPD Citizens Advisory Board who facilitate the interaction between the police

department and a committee of citizens. Although they review the investigative process,

they merely address recommendations and concern to the police chief in writing. If

unresolved, they can refer the matter to the Office of the City Manager. They are severely

limited in their powers in that:

Neither the Citizens Advisory Board nor any member thereof, shall:

1. Incur City expense or obligate the City in any manner.
2. Release any written or oral report of any board activity to any individual or body other than to the Chief of Police or the Office of the City Manager. The C.A.B. Chairman may issue a press release utilizing appropriate legal guidance and notice to the non-voting member of the board.
3. Independently investigate citizen complaints against the police department or an employee of the department.
4. Conduct any activity, which might constitute or be construed as an official governmental review of police actions.
5. Conduct any activity, which might constitute or be construed as establishment of City or department policy.
6. Violate the confidentiality of any information related to matters involving pending or forthcoming civil or criminal litigation.

Not only can they not release any report to anyone to anyone other than the chief of

police or Office of the City Manager, but they cannot perform an independent

investigation or review. As seen in other cities, this once again appears as merely

"window dressing" and no real means of seeking accountability.

Bakersfield

Bakersfield is a city in California, north of Los Angeles. Although it is the largest

city of Kern County, it is the smallest city in this case study with only 375,699 residents.

Bakersfield has a poverty rate 5.4 percent higher than the national rate and employment

rate 1.5 percent lower than the national rate, as shown in Table 50. However, it is the

only city with a median income above the national median income most likely due to a

higher cost of living than the national average.

Table 50: Poverty in Bakersfield

	Poverty Rate	Employment Rate	Median Household Income	Population Size
United States	13.1%	59.8%	$61,937	327,167,439
Bakersfield	18.5%	58.3%	$62,340	375,699
Source: 2018 ACS 5-Year Estimates (US Census Bureau)				

Table 51 shows that Bakersfield is a predominately white city, 68.6 percent, with

about half of the population identifying as Latinx. Black resident only constitutes 8.4

percent of the population.

Table 51: Racial and Ethnic Composition of Bakersfield

	Bakersfield
White	68.6%
Black or African American	8.4%
American Indian and Native American	0.7%
Asian	6.4%
Native Hawaiian and Other Pacific Islander	0.3%
Some Other Race	11.8%
Two or More Races	3.8%
Hispanic or Latino[1]	51.4%

[1]Hispanic or Latino ethnicity overlaps with other race categories.
Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Despite only being 8.4 percent of the population, almost 32 percent of Bakersfield's Black residents are living below the poverty level, the highest of all the six cities, as shown in Table 52. Meanwhile, white residents below the poverty level is only 16.6 percent, nearly half that of Black residents.

Table 52: Percent Below the Poverty Level by Race in Bakersfield

	Percent Below Poverty Level
	Bakersfield
White	16.6%
Black or African American	31.9%
American Indian and Alaska Native	28.8%
Asian alone	11.5%
Native Hawaiian and Other Pacific Islander	25.5%
Some other race	23.5%
Two or more races	20.3%
Hispanic or Latino origin (of any race)	22.6%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)

Also, consistent with the previous social indicators, the educational attainment of Bakersfield's residents follows similar patterns indicative of the presence of disadvantage. Table 53 shows the percentage of high school graduates or higher in Bakersfield. Residents fall below the national rate of 87.7 percent by 7.3 percent.

Table 53: Percent of High School Graduates or Higher in Bakersfield

	High School Graduate or Higher
United States	87.7%
Bakersfield	80.4%
Source: 2018 ACS 5-Year Estimates (US Census Bureau)	

Table 17 further presents the educational attainment Bakersfield. About 26 percent of residents are a high school graduate and about 20 percent have less than a high school diploma. Lastly, about 22 percent have a bachelor's degree or higher, the lowest rate of all the six cities.

Table 54: Education Attainment in Bakersfield

	Bakersfield
Less than 9th grade	9.4%
9th to 12th grade, no diploma	10.2%
High school graduate (includes equivalency)	25.9%
Some college, no degree	24.4%
Associate's degree	8.3%
Bachelor's degree	14.3%
Graduate or professional degree	7.5%
High school graduate or higher	80.4%
Bachelor's degree or higher	21.8%
Source: 2018 ACS 5-Year Estimates (US Census Bureau)	

However, as was seen previously, education varies by race in Bakersfield as well. Table 55 shows show the education attainment of Bakersfield residents by race. Once again, there is a stark comparison between the educational attainment of non-Latinx whites and residents of color. About 93 percent of non-Latinx whites are high school graduates or higher and 28.8 percent have a bachelor's degree or higher. Of the Latinx residents, about 67 percent have a high school diploma or higher and only 11 percent have bachelor's degree or higher, the lowest rate of the six cities.

Table 55: Education Attainment by Race in Bakersfield

	Bakersfield
White	
High school graduate or higher	81.7%
Bachelor's degree or higher	21.3%
White, not Hispanic or Latino	
High school graduate or higher	92.9%
Bachelor's degree or higher	28.8%
Black	
High school graduate or higher	85.1%
Bachelor's degree or higher	19.8%
American Indian or Alaska Native	
High school graduate or higher	75.3%
Bachelor's degree or higher	5.2%
Asian	
High school graduate or higher	82.5%
Bachelor's degree or higher	43.6%
Native Hawaiian and Other Pacific Islander	
High school graduate or higher	89.8%
Bachelor's degree or higher	22.0%
Some other race	
High school graduate or higher	65.6%
Bachelor's degree or higher	10.8%
Two or more races	
High school graduate or higher	88.1%
Bachelor's degree or higher	25.2%
Hispanic or Latino Origin	
High school graduate or higher	66.7%
Bachelor's degree or higher	11.0%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)
Population 25 years and over

Educational attainment also impacts poverty rates in Bakersfield as well. About

28 percent of residents with a high school diploma are below the poverty level and 16.4

percent with a high school diploma are below the poverty level. This stand in comparison

to just under 4 percent of resident with a Bachelor's degree of higher below the poverty

level, the lowest rate of poverty for those with a bachelor's degree or higher in the six

cities.

Table 56: Percent Below the Poverty Level by Educational Attainment in Bakersfield

	Percent Below Poverty Level
	Bakersfield
Less than high school graduate	28.3%
High school graduate (includes equivalency)	16.4%
Some college, associate's degree	12.7%
Bachelor's degree or higher	3.9%

Source: 2018 ACS 5-Year Estimates (US Census Bureau)
Population 25 years and over

Therefore, much like the other cities, Bakersfield offers a unique look into

neighborhood disadvantage and how it impacts communities of color regardless of the

proportion of the population they make or the size of the city. The next section delves

further into how this small city is policed. Afterwards, the chapter will conclude with a

summary highlighting the key findings of the case study.

Police and Community Engagement

Lastly, the smallest agencies of the six cities is Bakersfield Police Department

with only 540 full-time paid agency employees, 395 of which are sworn personnel

(United States Department of Justice, Office of Justice Programs, and Bureau of Justice

Statistics 2016). Bakersfield's policing practices have been called into question before. In

2015, Vanity Fair recounted the Mapping Police Violence report that found Bakersfield

Police Department killed more people per million residents than any other large police

department in the United States, dubbing the Bakersfield Police Department the deadliest

department in the United States (Makarechi 2015). The Guardian also conducted a five-part investigation into police in Kern County in 2015, stating that "[a] review by the Guardian identified 54 fatal shootings over the past decade by Bakersfield police and Kern County sheriff's deputies. At least 49 of the 54 were publicly ruled justified by panels of senior officers from the same department as the officers who fired. Four others appear to have been ruled the same, but no records could be obtained (Swaine et al. 2015:para 13)".

The latest Internal Affairs Annual Report available for the Bakersfield Police Department is 2018. In 2018, there were 104 Internal Affairs Reviews, 49 of which were the result of citizen complaints (Bakersfield Police Department 2018). Of the disciplinary actions taken against officers (84 in total), 38.8 percent resulted in only a written reprimand, and only 3.5 percent resulted in termination.

When it comes to use of force, there were 559 incidents involving 1146 officers reported in 2018 (Bakersfield Police Department 2018). Figure 4 shows the type of force applied in the 559 use of force incidents. In over half of the incidents, 58.1 percent, the resident was injured, and in 43.8 percent of the incidents, the resident was taken the hospital. The most frequent reason cited for the use of force was that it was necessary to effect arrest (63.3 percent), with takedowns being included in their use of force incidents.

Type of Force Applied			
Type of Force	Total	Type of Force	Total
40 mm launcher	7	Flex Cuff	1
Aerosol Weapon	14	Foot Strike	15
Baton/ASP	108	Hobble	48
Baton-Impact weapon	1	Improvised Weapon	4
Body Weight	621	Knee Strike	82
Canine	44	Palm Strike	12
Carotid Control Tech	6	Safe Restraint	5
Control Hold	864	Suspect Force/Momentum	59
Elbow Strike	28	SWAT Weapon	3
Fist Strike	105	Takedown	188
Firearm Fired at Suspect	3	Taser	108

Source: Bakersfield Police Department 2018

Figure 4: Type of Force Used by Bakersfield Police Department, 2018

Summary

In the previous chapter, the analysis demonstrated that neighborhoods matter as it pertains to fatal force encounters. To a lesser extent, it demonstrated how agency characteristics also matter. This chapter allowed for further exploration of racial/ethnic inequalities and police engagement in six cities that were in the top quartile of police killings to exemplify how important a location's context is to understanding police brutality. While each city offered a unique composition of residents and location, what was common were the factors present in neighborhood disadvantage; each city's poverty rate was higher than the national poverty rate. There was also a lower percent of high school graduates, which further limits the social mobility of those impoverished. This is further consistent with the previous findings that the average poverty rate for the location of a police killing nationally was 20 percent, almost double that of the national poverty rate.

What was also present across cities was how poverty impacted the Black residents of each city. Blacks were the most impoverished race of residents regardless of the proportion of the city's population they accounted for, despite having comparable rates of education. This further emphasizes not only how detrimental neighborhood segregation is economically, as Massey and Denton (1993) asserted, but also how it relates to fatal force encounters. As was shown in the previous chapter, lethal police encounters in neighborhoods with 100 percent of Blacks were 90.2 times more likely to involve Black men relative to white men, and lethal police encounters in neighborhoods with 100 percent of Blacks were 10.7 times more likely to involve Black women relative to white women.

However, what the previous chapter was unable to highlight was police engagement with the community. Much of what was found in the cities is emblematic of the zero tolerance policing noted in Baltimore for the cause of a legacy of discriminatory law enforcement in which Black residents are disproportionately stopped and searched without cause. Zero tolerance policing has set the benchmark for urban policing around the world. This form of policing encompasses sweeping and aggressive law enforcement as the solution for all social problems (Bowling and Sheptycki 2011). Zero tolerance policing has a pattern of arrests that target African Americans and Latinxs (Golub, Johnson, and Dunlap 2007). This can especially be witnessed in Philadelphia, the most impoverished city, as well as the city with the greatest proportion of Black residents. Black residents were being stopped and detained by police disproportionately, as many as 10 times more than expected, and although most complaints against police are filed by

Black residents, the PPD Internal Affairs Bureau was 21percent more likely to recommend disciplinary action when a white person filed a complaint. Even the Houston Police Department, which has the most police killings of the five cities and Baltimore, thus far has killed and wounded 16 residents, 11 were Black men and 5 were Latinx men. The legacy of zero tolerance policing is very much alive today and it impacts Black and Latinx communities, two of the most impoverished groups in each city, further demonstrating the interplay between policing and neighborhood disadvantage and segregation.

Unfortunately, zero tolerance policies have gone beyond the policing of communities and into the policing of children in schools. Nowhere is the intersection of police, education, poverty, and race more evident than in the school-to-prison pipeline. The concerns about Black youth and the need to control their behavior has roots that are far reaching and have long been in existence.

Houston, one of the cities with police departments that Hinton (2016) notes as historically targeting low-inome neighborhoods, has the lowest high school graduation rate, 78.3%, and has a poverty rate only second to Philadelphia, 20.6 percent. Of those who do graduate, non-Latinx whites have a 96.1 percent graduation rate, the highest of all the racial groups in all the five cities. Philadelphia, also a urban center and the the city with the highest proportion of Black residents, 42.3 percent not only has the highest poverty rate, 24.9 percent, but also the highest proportion of Blacks living below the poverty level, 30 percent, the lowest high school graduation rate for Blacks, 84 percent, and the highest proportion of high school graduates living below the poverty level, 23.7

percent. Of those less than a high school graduate, 37.1 percent are living below the poverty level, the highest of the five cities. Both Philadelphia and Houston, as noted above, have patterns indicative of zero tolerance policing.

Additionally, as Hattery and Smith (2017) point out, despite *Brown v Board of Education*, schools in the United States are continually segregated and very much unequal. The Government Accountability Office (GAO) found in 2016 that 16 percent of all public schools were 75 to 100 percent Black and poor; the most segregated schools districts also have the most Black students being suspended or expelled, providing their entry to the school-to-prison pipeline. This is also evident here in the disproportionate nature of high school graduation rates in each city by race, not just in Houston and Philadelphia. White non-Latinx whites have a graduation rate of over 90 percent in each city, while Latinx residents have about a 50 percent graduation rate. The educational inequalities present today are deep-rooted and are both a cause and result of the school-to-prison pipeline (Hattery and Smith 2017).

Next, although each agency in the six cities had a unique composition of officers, in size and diversity, the previous chapter informed us that the characteristics of the agencies themselves did not account for much of the explanation. We can also see that here with the fact that an agency as small as the Bakersfield Police Department can still be deemed the deadliest department in the United States, and cities like Baltimore with about 40 percent Black officers and San Antonio with over 50 percent Latinx officers can still be in the top quartile of police killings.

However, this chapter was able to highlight the commonalities among these

agencies that the previous data could not account for, such as that the lack of

transparency in each agency. Also noteworthy was the lack of standardized reporting

measures for use of force and officer involved shooting incidents. Not only does the lack

of standardized reporting inhibit comparability across agencies, but it also allows for

unaccountability to thrive. The organizational property of agencies influence police

behavior, and holds the greatest potential as a guide for police reform (Worden 1995).

Without accountability and transparency, police brutality will have no consequence, and

without consequence, it will not be inhibited.

Lastly, the role of police officers as first responders was highlighted here and in

the previous chapters. The extended analysis in Chapter 4 indicated that men who were

killed by police who showed signs of mental illness or being under the influence

increased the odds about 1.6 times that they were unarmed (OR = 1.579) compared to

men with no presumed mental illness. The interplay between police brutality and mental

health can also be seen in the "toxic legacy" of Baltimore and in the death of Damien

Daniels in San Antonio as about 19 percent of fatal police shooting in Texas involve

someone with a history of mental illness. This is also consistent with the literature that

show individuals who display symptoms of serious psychiatric illness are more likely to

be arrested by the police and spend more time incarcerated than those without psychiatric

illness (Corrigan 2004). Similarly the risk of being killed during a police incident is 16

times greater for those with untreated mental illness than that for others approached by

the police (Fuller et al. 2015). Disability does not operate independent of gender and race

(Brune and Wilson 2013), and it has to be accounted for in our understanding of police brutality and intersectionality as a whole.

Therefore, local context, shaped by local racial histories, shapes much of the experiences that lead to lethal police encounters, but national level policing policies matter as well. The residents and the officers that police them are very much intertwined and create a dynamic that can either foster or inhibit occurrences of police brutality. The broken relationship between police and residents is not a phenomenon exclusive to Baltimore. The analysis in the previous chapter demonstrated that disparities existed nationally for police killings. However, this case study portrayed what it looks like on a local level. Like Baltimore, the culture of each city allowed police brutality to uniquely manifest. The larger neighborhood-level characteristics that impacted police brutality was the one thing prevalent through it all: neighborhood disadvantage. Similarly, each of the five agencies had a unique make up of officers and policies, but the lack of transparency and the prevalence of "systematic deficiencies" was far from unique. By better understanding both the commonalities and the unique need of each community and their residents can we begin to address police brutality both nationally and locally.

The next chapter will discuss the results from the multivariate analysis in Chapter 4 and the case study in Chapter 5 in tandem, as well as how they relate to previous scholarship. Then, the limitations of the study will be addressed.

CHAPTER SIX

This dissertation investigated fatal force encounters with police. It done so by addressing the following research question: how do individual characteristics impact the likelihood of lethal police force encounters with people of color relative to whites, to what extent neighborhood-level factors influence lethal police encounters are prevalent in a neighborhood, and how do between-agency factors impact the likelihood of lethal police encounters with people of color relative to whites. This was examined by performing a multivariate analysis of national level data, as well as a case study examining the social indicators and police engagement with the community in six cities that were in the top quartile of fatal incidents according to the Mapping Police Violence database (2013-2018): Baltimore, Maryland; San Antonio, Texas; Philadelphia, Pennsylvania; Houston, Texas; Oklahoma City, Oklahoma; and Bakersfield, California. This chapter will discuss findings from both the multivariate analysis and the case study at the individual-, neighborhood-, and agency-levels. Lastly, it will conclude with limitations of this research.

Individual-Level Results

The first portion of the research question explored how individual characteristics impact the likelihood of lethal police force encounters with people of color relative to whites. What was found in the multivariate analysis was that individual characteristics

impacted the likelihood of lethal encounter with people of color relative to white in various ways. However, as posited by intersectionality, the impact varied by race and gender. Table 6 demonstrates that among those killed by police, unarmed Black men are nearly twice as likely to be victims (OR = 1.983) as compared to white men. Meanwhile, Table 7 demonstrates that among those killed by police, unarmed Latinx men are about 1.5 times as likely to be a victim (OR = 1.486) as relative to white men.

Additionally, the extended analysis indicated in Table 10 that Black men who were killed by police are about 1.9 times more likely to be unarmed (OR = 1.880) than non-Black men, and Latinx men who were killed by police are about 1.4 times more likely to be unarmed (OR = 1.376) than non-Latinx men, all of which are consistent with the literature and previous studies examining bias in policing (Hattery and Smith 2017; Ross 2015; Swaine et al. 2016). Swaine et al (2016) found that of those killed, 26.8 percent were Black, with about a quarter of those killed being unarmed. Of the 102 cases where an unarmed Black man was killed by police in 2015, only 10 cases resulted in the officer being charged (Hattery and Smith 2017). As Hattery and Smith (2017:168) also stress, "… the bodies of Black men are significantly more likely to be policed; their unarmed bodies are shot and killed 2.5 times more often than are the bodies of white men. And, compared to police killings of unarmed white men, more than not, the police killings of unarmed Black men are both a symptom of and generate response to the decades-long tension between the police and the Black community."

As the literature also asserts, gender has consequences at the individual, interactional, and institutional levels (Risman and Davis 2013). It is also a primary

framing device for social relations (Ridgeway 2011). Status expectations attached to

gender recreate inequality and create cognitive bias (Risman and Davis, 2013). Sex

categorization indirectly primes in the individual's mind shared cultural stereotypes about

males and females (Ridgeway, 2011), thus making these stereotypes accessible to shape

individuals' judgments and behaviors toward one another. The criminal justice system

and those who interact with it, both alleged perpetrators and police officers, are no

exception to this process. Race, like gender, is also a categorical distinction which frames

our social world, and like gender, has implications at the individual, interactional, and

institutional levels. Within this context, gender and race stereotypes manifest both

individually and collectively (Ghavami and Peplau 2013; Devine and Baker 1991;

Donovan 2011). Distinctions by race and gender here can be evidenced by the

significance of predictors varying by gender, such as being unarmed not being a

significant predictor of Black or Latinx women but significant for Black and Latinx men.

Whereas Ross (2015) found significant bias in the killing of unarmed Black Americans

relative to unarmed white Americans with probability of being Black, unarmed, and shot

by police about 3.49 times the probability of being white, unarmed, and shot by police on

average, he did not account for gender, which, as seen here, is an imperative intersection

to acknowledge when examining police brutality.

Additionally, race and gender were not the only intersections illuminated by this

study. The findings also highlighted was that disability does not operate independent of

gender and race. Black men with no presumed mental illness are 2.7 times more likely to

be a victim of a fatal encounter than white men (OR = 2.706). Latinx men with no

presumed mental illness are 1.9 times more likely to be a victim of a fatal encounter (OR = 1.907) as compared to white men; Latinx women who were not thought to be mentally ill or under the influence also are twice as likely to be a victim as compared to white women (OR = 2.092). The results of the extended analysis also found that men who were killed by police who showed signs of mental illness or being under the influence are about 1.6 times likely to be unarmed (OR = 1.579). Yet, the results of the extended analysis also indicated that women who were killed by police who showed signs of mental illness or being under the influence were about 36 percent as likely to be unarmed (OR = .365) as compared to women with no presumed mental illness. While studying how mental illness stigma is attributed based on race and gender, Blake (2016) found that Black women with mental illness were more likely to be feared than others with mental illness. As Ghavami and Peplau (2013) articulated, there is neither universal man or women, nor universal Black or White person. The perception of Black and White men and women are each unique. Also, this can be in part be understood in part by the fact that passing has a different meaning depending on specific contexts of gender, race, class, and sexuality (Brune and Wilson 2013). Disability can destabilize race and gender, and race and gender can in turn destabilize disability. Cox (2013:105) further elaborates on this point, "Expectations of sane behavior vary across communities and identities… one's sanity falls into question if one does not act appropriately for one's gender, race, class, sexuality, religion, and so on."

Lastly, the interplay between police brutality and mental health was also evident in the case study. It can be seen in the "toxic legacy" of Baltimore and in the death of

Damien Daniels in San Antonio. About 19 percent of fatal police shooting in Texas

involve someone with a history of mental illness. This is also consistent with the

literature that show individuals who display symptoms of serious psychiatric illness are

more likely to be arrested by the police and spend more time incarcerated than those

without psychiatric illness (Corrigan 2004). Similarly, the risk of being killed during a

police incident is 16 times greater for those with untreated mental illness than that for

others approached by the police (Fuller et al. 2015). Disability does not operate

independent of gender and race (Brune and Wilson 2013), and it has to be accounted for

in our understanding of police brutality and intersectionality as a whole because of the

disproportionate effect on people of color.

Neighborhood-Level Results

The second portion of the research question explored to what extent neighborhood-

level factors influence lethal police encounters. A key factor when discussing

neighborhood disadvantage and economic opportunity is poverty and its impact on life

chances. The multivariate analysis not only demonstrated that neighborhoods matter, but

that they had the greatest impact on likelihood of lethal police encounters for all

individuals. This was further explored in and supported by the six-city case study. The

findings from both will further be discussed in this section, first by addressing indicators

of poverty, then by discussing the indicators and incidences of neighborhood segregation.

Poverty

Results of the multivariate analysis in Tables 7 through 9 indicated that men killed by

police in neighborhoods where 100% of individuals use welfare are 21.6 more likely to

be Latinx (OR = 21.628) (versus white) and women killed by police in neighborhoods where 100% of individuals use welfare are 23.7 times more likely to be Black (OR = 23.723) (versus white) and are 85.4 times more likely to be Latinx (versus white) (OR = 21.628) compared to those killed in neighborhoods where 0 percent of individuals use welfare.

Also, Table 6 shows that neighborhoods where 100 percent of individuals are single are 74.9 times more likely to be Black men (versus white) (OR = 74.876), and Table 7 shows that that neighborhoods where 100 percent of individuals are single are 606.7 times more likely to be Latinx men (versus white) (OR = 606.7) compared to those killed in neighborhoods where 0% of individuals are single. Even more pronounced, Table 8 shows that women killed by police in neighborhoods where 100 percent of individuals are single are 1262.2 times more likely to be Black (versus white) (OR = 1262.208), and Table 9 shows that women killed by police in neighborhoods where 100 percent of individuals are single are 440.9 times more likely to be Latinx (versus white) (OR = 440.894) compared to those killed in neighborhoods where 0% of individuals are single. These findings are consistent with the literature, particularly as it pertains to the women killed by police, further asserting a relationship between poverty and police brutality. Being in a female-headed house was also often linked to poverty (Gindling and Oviedo 2008; Mather 2010; Wilson 1987). Female workers earned substantially less than male workers and were less likely to have supplemental income. According to Wilson (1987), sex and marital status are the most important determinants for poverty, particularly in urban areas. This is even more pronounced when looking at the level of family income

and family structure in Black families. Consequently, "[e]conomic hardship has become almost synonymous with Black female-headed households… (Wilson 1987:27). Consequently, female-headed household, childbirths to unmarried mothers, and teenage pregnancy were all intricately connected to poverty and dependency. More recently, Turney and Harknett (2010) found that among new mothers, living in a disadvantaged neighborhood is associated with less instrumental support, particularly financial assistance, from family and friends. Also, mothers who move to a more disadvantaged neighborhood experience a decline in perceived instrumental support compared to those who do not move (Turney and Harknett 2010). This is of particular importance for single parent households with Black women as the head, because Black women earn less on average than Black men and white men, in addition to earning less than white women (Hegewisch and Barsi 2020), further providing a connection to poverty.

Additionally, men killed by police in neighborhoods where 100% of individuals are in severe poverty are 20 percent as likely to be Black (versus white) (OR = .205) and are 1 percent as likely to be Latinx (versus white) (OR = .011) compared to those killed in neighborhoods where 0 percent of individuals are in severe poverty. Similarly, women killed by police in neighborhoods where 100% of individuals are in severe poverty less than 1 percent as likely to be Black women (versus white) (OR = .00002859) compared to those killed in neighborhoods where 0 percent of individuals are in severe poverty. However, when looking at the sample as whole, the average neighborhood poverty rate for the location of a police killing was 20%. This is almost double the national poverty rate of 13.1 percent. The higher poverty rate for neighborhoods where those killed by

police are indicative of a possible pattern of over-policing in impoverished areas.

Peterson and Krivo (2005) posit that concentrated disadvantage in neighborhoods is one of the most robust predictors of high rates of violent crime, and that differences in neighborhood disadvantage explains much of the racial gap in exposure to violence.

The case study also allowed for further exploration of neighborhood disadvantage. Tables 12-56 present the findings for each of the cities. While each city offered a unique composition of residents and location, what was common were the factors present in neighborhood disadvantage as each city's poverty rate was higher than the national poverty rate. There was also a lower percent of high school graduates, which further limits the social mobility of those impoverished. This is further consistent with the previous findings that the average poverty rate for the location of a police killing nationally was 20 percent, almost double that of the national poverty rate.

In addition to the above social dislocations, unemployment has also been connected to poverty and family dissolution (Paul et al. 2018; Saunders 2002;Wilson 1987). Households whose usual breadwinners are out of work being three times more likely to be poor than working households (Achiron 2009). Yet, the results of the multivariate analysis found that men killed by police in neighborhoods where 100 percent of individuals are unemployed are 20 percent as likely to be Black (versus white) (OR = .207) compared to those killed in neighborhoods where 0 percent of individuals are unemployed. When looking at the multivariate analysis sample as a whole, however, the average unemployment rate for the location of a police killing is 39 percent, which is very similar to the national rate, but that does not indicate that those employed earn a

living wage. When looking at the case study, all of the cities had employment rates comparable to the national rate. However, all of the cities except Bakersfield had a lower median household income, which further supports that employment does not necessarily translate to a living wage for residents of these cities. Even though Bakersfield has a higher median income, this is largely due to the higher cost of living in central California, and because the poverty rate for Bakersfield is still 5.4 percent national average, it is apparent that the higher median income is still not enough for many of the families.

Lastly, the case study also examined the role of educational attainment and its relationship to poverty in each of the six cities. The higher education system in the United States has traditionally had two primary goals: economic efficiency and social equity (Haveman and Smeeding 2006). Yet, growing up in a disadvantaged neighborhood is associated with increased odds of dropping out of high school (Aaronson 1998; Brooks-Gunn et al. 1993; Crane 1991; Ensminger, Lamkin, and Jacobson 1996; Foster and McLanahan 1996; Ginther, Itaveman, and Wolfe 2000; Harding 2003;Owens 2010; Wodtke, Harding, and Elwert 2011), and in addition to the socioeconomic disparities in education are the racial disparities in education (Reardon et al. 2013). This was further evidenced in each of the six cities as racial disparities were evident. Most markedly, white non-Latinx whites have a graduation rate of over 90 percent in each city, while many of the cities had Latinx residents with only about a 50 percent graduation rate. The educational inequalities present today are deep-rooted and are both a cause and result of the school-to-prison pipeline (Hattery and Smith 2017).

The connection between the school-to-prison pipeline and zero tolerance policing was most notable in cities like Houson and Philadelphia. Houston, one of the cities with police departments that Hinton (2016) notes as historically targeting low-inome neighborhoods, has the lowest high school graduation rate, 78.3%, and has a poverty rate only second to Philadelphia, 20.6 percent. Of those who do graduate, non-Latinx whites have a 96.1 percent graduation rate, the highest of all the racial groups in all the five cities. Philadelphia, also a urban center and the the city with the highest proportion of Black residents, 42.3 percent not only has the highest poverty rate, 24.9 percent, but also the highest proportion of Blacks living below the poverty level, 30 percent, the lowest high school graduation rate for Blacks, 84 percent, and the highest proportion of high school graduates living below the poverty level, 23.7 percent. Of those less than a high school graduate, 37.1 percent are living below the poverty level, the highest of the five cities. Poverty is especially a concern as the average neighborhood poverty rate for the location of a police killing is 20 percent with about 9 percent being in severe poverty according to the MPV data. Also, as previously noted, men killed by police in neighborhoods where 100% of individuals use welfare are 21.6 more likely to be Latinx (OR = 21.628) (versus white) and women killed by police in neighborhoods where 100% of individuals use welfare are 23.7 times more likely to be Black (OR = 23.723) (versus white) and are 85.4 times more likely to be Latinx (versus white) (OR = 21.628) compared to those killed in neighborhoods where 0 percent of individuals use welfare. These findings not only further support the connection between poverty and over-policing, but also the intersection of poverty, education, race, and policing as a whole.

Segregation

Segregation was found to be a significant predictor of lethal police encounters in this study. The interplay between segregation and intense poverty that results in the vulnerability of Black neighborhoods to changes in the urban economy that Massey and Denton (1993), Massey and Fischer (2000), and Quillian (2012) referred to can be seen here. Table 6 shows that men killed by police in neighborhoods where 100% of individuals are Black are 90.2 times more likely to be Black (versus white) (OR = 90.202) compared to those neighborhoods where 0 percent of the individuals are Black, and Table 8 shows that women killed by police in neighborhoods where 100% of individuals are Black are 10.7 times more likely to be Black (versus white) (OR = 10.745) compared to those killed in neighborhoods where 0 percent of individuals are Black. Conversely, Table 7 shows that men killed by police in neighborhoods where 100% of individuals are Black are 5 percent as likely to be Latinx (versus white) (OR = .052) compared to those killed in neighborhoods where 0% of individuals are Black, and Table 9 shows that women killed by police in neighborhoods where 100% of individuals are Black are 9 percent as likely to be Latinx (versus white) (OR = .094) compared to those killed in neighborhoods where 0 percent of individuals are Black. These findings are expected since neighborhoods whose population are predominately Black would have a smaller non-Black population, thus making it less likely that the police in that community would interact with residents who are not Black. Lichter, Parisi, and Taquino (2015) examine a new macro-segregation, where the locus of racial differentiation resides increasingly in socio-spatial processes at the community or place level. The macro

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component of segregation was most pronounced and increasing most rapidly among

Blacks, accounting for roughly one-half of all metro segregation in the most segregated

metropolitan areas of the United States. They demonstrate that racial residential

segregation is increasingly shaped by the cities and suburban communities in which

neighborhoods are embedded, as was evidenced here and in each of the six cities

explored below. Consequently, this continual growth of segregation has the potential to

catalyze lethal police encounters as segregation has been linked to fatal interactions with

police (Johnson et al. 2019; Ross 2015).

The case study was also able to further elucidate the intersection of segregation

and poverty. What was present across cities was how poverty impacted the Black

residents of each city. This further emphasizes not only how detrimental neighborhood

segregation is economically. As Massey and Denton (1993) asserted, segregation builds

decay, dissocial order, and crime into Black communities, all the while creating a

disadvantaged environment in which Blacks living in the ghetto have to adapt to. It also

concentrates poverty and joblessness among other deleterious characteristics and impacts,

leaving Massey and Denton (1993) to contend that "…residential segregation is the

institutional apparatus that supports other racially discriminatory processes and binds

them together… [and] until the black ghetto is dismantled as a basic institution of

American urban life, progress ameliorating racial inequality in other arenas will be slow,

fitful, and incomplete (8)."

Also, Quillian (2012) finds that racial segregation and income segregation within

race contribute importantly to poverty concentration, as Massey and Denton (1993)

argued, but that almost equally as important for poverty concentration is the disproportionate poverty of the non-group neighbors of Blacks and Latinxs. The non-group neighbors of Blacks and Latinxs are about 50% more likely to be poor than the non-group average, with little additional effect of the poverty status of the Black or Latinx person. Additionally, Blacks and Latinxs are segregated from higher-income members of other racial groups. Thus, the concentrated poverty in minority communities result from three segregations: racial segregation, poverty status segregation within race, and segregation from high and middle income members of other racial groups. This is particularly foreboding as evidence of concentrated poverty was evident in the multivariate analysis and case studies, as well as the connection to segregation and lethal police encounters as men killed by police in neighborhoods where 100% of individuals are Black are 90.2 times more likely to be Black (versus white) compared to those neighborhoods where 0 percent of the individuals are Black, and women killed by police in neighborhoods where 100% of individuals are Black are 10.7 times more likely to be Black (versus white) compared to those killed in neighborhoods where 0 percent of individuals are Black.

Agency-Level Results

The last portion of the research question explored whether between-agency factors affected the likelihood of fatal encounters with people of color relative to whites. While it did have an impact on the likelihood of fatal encounters, the between-agency factors had a smaller impact than expected. It was found that men killed by police in locations where police agencies have an all-white police force are 45% as likely to be Black and 10

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percent as likely to be Latinx versus white (OR = .101) compared to the likelihood in locations where police agencies have an all-nonwhite police force. Women killed by police in locations where police agencies have an all-white police force are 10 percent as likely to be Latinx versus white compared to the likelihood in locations where police agencies have an all-nonwhite police force (OR = .098). What will be explored further below in the results of the case study is that regardless of the racial/ethnic composition of the police agency, whether more diverse or primarily white, the same patterns of behavior were evident. Instead of individual characteristics, the organization as a whole shaped behavior. Organization theory has long held that the organizational property of agencies influence police behavior, and holds the greatest potential as a guide for police reform (Worden 1995). Police organizations create the way in which the public is served, including the use of force (Alpert and MacDonald 2001), and by shaping the regulations guiding officer discretion, organizational characteristics influence officer behavior (Nowacki 2015). Nowacki (2015) found that administrative policy predicts lethal force incidents for total and Black-specific population models but not White-specific models, and department size predicts lethal force incidents for total and White-specific models but not Black-specific models, emphazing how an understanding of the organizational correlates of police discretion is critical to understanding officer behavior.

Also, while no statistical association was found, it was anticipated that participation in a union would have had a greater influence on the likelihood of lethal police encounters. However, considering that 82 percent of the agencies in this sample belonged to a union, the variability would not have been present in the data to show a greater odds

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of affecting the likelihood of lethal force encounters for people of color. The variability in the agency-level characteristics as a whole was not large between the agencies.

The case study also demonstrated how the between-agency characteristics seem to not be as impactful as well. Each city offered a different racial, ethnic, and gender composition of police officers, from larger agencies to smaller agencies. We can also see that here with the fact that an agency as small as the Bakersfield Police Department can still be deemed the deadliest department in the United States, and cities like Baltimore with about 40 percent Black officers and San Antonio with over 50 percent Latinx officers can still be in the top quartile of police killings. What was prevalent throughout the agencies, however, is the lack of transparently and accountability, once again highlighting how organizational characteristics influence officer behavior. This was further aided by the lack of a standard for reporting use of force and officer involved shooting incidents beyond the individual agency, further hindering comparability. This is also a critical finding as administrative policy predicts lethal force incidents (Nowacki 2015).

Limiting transparency and accountability is beneficial to police agencies. Problems arise when an organization's success primarily depends on isomorphism with institutionalized rules (Meyer and Rowan 1977). The demand for efficiency creates inconsistencies and conflict to efforts to conform to ceremonial rules of production. The issue then is how to resolve these inconsistences. Responses include decoupling and the logic of confidence.

Decoupling arises in an attempt to counter attempts to control and coordinate activities in institutional organization, which leads to loss of legitimacy and control (Meyer and Rowan 1977). Coupling within organizations manifests when "[g]oals are made ambiguous or vacuous, and categorical ends are substituted for technical ends. Hospitals treat, not cure patients. Schools produce students, not learning (Meyer and Rowan 1977)." It buffers organizations from inconsistences and perpetuates the assumption that the formal structure is really working.

While decoupling can help to explain the lack of accountability that the police have exhibited, what legitimates organizations is the logic of confidence and good faith (Meyer and Rowan 1977).

Meyer & Rowan (1977: 337-338) assert:

> What legitimates institutionalized organizations, enabling them to appear useful in spite of technical validation, is the confidence and good faith of their internal participants and their external constituents… Considerations of face characterize ceremonial management. Confidence in structural elements is maintained through three practices—avoidance, discretion, and overlooking… Decoupling and maintenance, in other words, are mechanisms that maintain the assumption that people are in good faith.

In addition, rituals of inspection and evaluation are present in present in all organizations although they produce illegitimacy (Meyer and Rowan 1977). According to Meyer and Rowan (1977: 339), "[e]valuation and inspection are public assertions of societal control which violate the assumption that everyone is acting with competence and in good faith." However, police departments all over the country have now been subject to evaluation and inspection as a result of the clear evidence of police brutality. Now their competence and good faith have been bought into question more than ever,

and their policing has shown the inefficiency of their policing practice. Now, we demand change.

Summary

Individual characteristics, neighborhood-level factors, and between-agency factors all affect the likelihood of lethal police encounters with people of color relative to whites. Of these factors, the majority of the explanation for both male and female fatalities was accounted for by neighborhood-level factors in the multivariate analysis. The case study further explored neighborhood-level and agency factors, emphasizing the negative affect of neighborhood disadvantage and segregation, while also demonstrating a culture of unaccountability and lack of transparency among the agencies in each of the six cities.

While my research supports earlier scholarship on intersectionality, neighborhood disadvantage, and organizational theory, it is novel in that it puts all three into dialogue with one another and explores them each in relation to police brutality. The findings of this study indicate the interwoven nature of individuals, neighborhoods, and organizations. When framing gender as a social institution, it exists at the individual, interactional, and institutional/organizational level (Risman 2018). The interplay between individual, interactional, and institution was also seen here with race. Consequently, while much of the existing contemporary literature on police brutality does not utilize an intersectional lens (such as Holmes, Painter II, and Smith (2019), Ross (2015), and Johnson et al. (2019)), this research has indicated it is paramount to understanding incidents of police brutality. Key to the contribution of my research, however, is the inclusion of disability into intersectionality. Previous studies often rely on either race

and/or gender when they examine police brutality. However, disability is also paramount. Instead of examining race, gender, and disability as distinct concepts regarding incidents of fatal force encounters, this research examined how they are all interwoven, and how each uniquely affect perceptions of threat. This was evident in the finding that being unarmed was a significant predictor for Black and Latinx men, but not for Black and Latinx women. Similarly, Black men with no presumed mental illness are 2.7 times more likely to be a victim of a fatal encounter than white men and Latinx men with no presumed mental illness are 1.9 times more likely to be a victim of a fatal encounter as compared to white men. Meanwhile, Latinx women who were not thought to be mentally ill or under the influence also are twice as likely to be a victim as compared to white women, but there is mental illness was not a significant predictor for Black women. Additionally, men who were killed by police who showed signs of mental illness or being under the influence are about 1.6 times likely to be unarmed compared to men with no presumed mental illness, but women who were killed by police who showed signs of mental illness or being under the influence were about 36 percent as likely to be unarmed as compared to women with no presumed mental illness. These findings highlight that police brutality, both fatal and non-fatal encounters, is a complex social problem and have to be understood beyond just a unilateral understanding of the victims.

Also, my research is novel in that it employs both a multivariate analysis and a case study. Although the use of the topics of quantitative/qualitative has increased in its presence since the 1960s (Hanson 2008), so has the "methodological divide of sociology" (Schwemmer and Wieczorek 2019). This debate has oscillated between epistemological

positions and the associated techniques (Bryman 1984). Growing out of this divide has

also been the growing prominence of mixed methods research. Mixed methods, which

capitalize on both quantitative and qualitative methods, has also held currency in

sociology for decades (Pearce 2012). A combination of two methods is used to balance

out the strengths and weaknesses of each other to produce richer data on a research

problem (Axinn and Pearce 2006). Because of its richness, this type of analysis offers

great insight for many complex social problems, such as police brutality. This has

especially been true here where the case study offered an understanding at the city level

that the national MVP data was unable to, particularly as it pertains to the culture and

patterns of police agencies, a topic where existing data is far and few in between.

Whereas the agency characteristics in the multivariate analysis accounted for less of the

explanation of lethal force encounters, the case study elucidated the importance of the

organization characteristics of the agencies, such as the lack of transparency, the lack of

standardized reporting polices, and lack of real oversight. Taken altogether, this allowed

for a culture of unaccountability, which is a critical finding that the multivariate analysis

could not have accounted for. Therefore, the use of both methods allows for a fuller view

of the police brutality, and who it most affects.

Limitations

While this dissertation provided great insight into police brutality, there are

limitations to it and the conclusions that can be drawn. Because the multivariate analysis

data only contained victims of fatal encounters, it could not measure the overall risk of

being involved in a fatal encounter. Also, the composition of the sample does not take

into account the much small proportion of people of color in the United States as compared to the proportion of people of color who are killed. However, it was able to highlight the bias by examining the odds of being killed as a person of color who is unarmed.

As noted in Chapter 3, this study was limited by the availability of data. The United States does not have a national database that systematically collects incidents of the use of lethal force by police (Fyfe 2002). Consequently, researchers have relied upon official databases to estimate incidents of lethal force, such as the Supplemental Homicide Reports (SHR), National Vital Statistics System (NVSS), and the Death in Custody Reporting System. However, official sources have been widely criticized as inaccurate, as well as limited by the classifications used and underreporting (Fyfe 2002; Ross 2015 Nix et al. 2017;Williams, Bowman, and Jung 2019), particularly by race when compared to "unofficial" sources (Gray and Parker 2019). While unofficial sources, such as MPV, offer great potential in the reporting of unbiased incidents of lethal force that move beyond the limitations of official data, linking it to other official sets of data is a much a much more laborious process which allows for greater error. Additionally, nonfatal force encounters could not be accounted for in the multivariate analysis, as this was not available in the MPV dataset. Both fatal and nonfatal incidents have to be taken into consideration to fully understand the totality of police brutality.

Lastly, as exemplified in Chapter 5, because there are not national reporting standards for police agencies, comparing across agencies can be very difficult for both residents and researchers alike. Differences in how incidents are classified and recorded

did not allow for a straightforward comparison in the incidents and complaints received by each agency. The information has to be taken contextually with the understanding that each city differs in their reporting, and the number of incidents and complaints can be much higher or much lower for any given agency depending on their operationalization.

The next chapter, Chapter 7, will conclude this dissertation. Implications of the research will be explored, both policy and academic. Lastly, it will discuss what the findings mean for public sociology and why police brutality should be a focus of public sociology.

CHAPTER SEVEN

In light of George Floyd's death and the ongoing struggle for justice for Breonna

Taylor, many cities and states across the country have been forced to take a hard look at

how they police the communities they serve. Many of the same cries from the

communities can be supported by what was found in the previous chapters. Therefore,

here I will present the implications of this dissertation for policy and for academia. I will

conclude with why not only police brutality is a social issue for public sociology, but why

it also should be made a focus of the discipline going forward.

Policy Implications

To begin, at the individual level there were several key takeaways from this research.

Firstly, as will be discussed further in the next section, intersectionality has to be

discussed in conjunction with police brutality. The multivariate analysis conveyed the

intersection of race and gender, as well as mental illness as it pertains to fatal force

encounters. Police are first responder and thus need to have training for interacting with

individuals with severe mental illnesses (SME), as this intersection has often proved

deathly during police encounters.

Next, at neighborhood level, as both Chapters 4 and 5 demonstrated,

neighborhoods are paramount. Resultantly, efforts to address and prevent police brutality

should incorporate neighborhood-level solutions and interventions. Impoverished

neighborhoods need more funding and opportunities. Many residents have called for defunding the police for that very reason. Instead of being reactive, being proactive and bringing opportunities to neighborhoods in need help prevent crimes from happening and thus minimizing the need for police intervention, which sadly can be deadly.

Lastly, at the agency level, there a great need for change. Organization theory has long held that the organizational property of agencies influence police behavior, and holds the greatest potential as a guide for police reform (Worden 1995). By shaping the regulations guiding officer discretion, organizational characteristics influence officer behavior (Nowacki 2015). As such, concerns about police brutality also often consider the characteristics of the officers committing the homicide, the policies in place, and the institutional practices that enable lethal use of force to occur (Johnson et al. 2019), and it has long been argued that "elements of formal organization structure the incidence with which force is used" (Wilson 1968:60). Therefore, mechanisms need to be in place to better shape regulations governing police agencies and their officers. Most importantly, transparency with disciplinary records as well as public complaints is paramount to helping obtain accountability. Several organizations are now making the push for public disciplinary records, and on June 12, 2020, Governor Andrew Cuomo signed into law the repeal of Civil Rights Law 50-A, the policy that previously allowed misconduct records to be shielded from the public (Brown 2020). While progress is being made, however, much more is still needed to be done.

Next, while body cameras may not directly reduce the risk of incidences of police brutality, their use can be a step towards accountability. In 2014, the Department of

Justice Office of Community Oriented Policing Services (COPS) issued "Implementing a Body-Worn Camera Program" for guidance on implementing body-worn cameras (Nolan 2019). By 2016, forty-seven percent of general-purpose law enforcement agencies acquired body-worn cameras (Hyland 2018). The main reasons cited to obtaining them were to improve officer safety, increase evidence quality, reduce civilian complaints, and reduce agency liability. By 2018, it is estimated that about 10,500 of the 18,000 law enforcement agencies (58.3%) in the United States have body-worn cameras (Miller 2019). As seen with the San Antonio Police Department, however, one of the most common officer complains, both formal and line, was adherence to body camera policies. Therefore, greater emphasis should be placed on the adherence to these polices and greater consequences should be implemented for offices who do not adhere.

Lastly, there needs to be independent oversight and standard reporting techniques. As was seen in agencies such as the San Antonio Police Department, policies dictate what is reported and how it is reported. But because the polices vary by agency, it limits comparability and transparency, further preventing accountability. Also, at agencies like the Houston Police Department and the Bakersfield Police Department where their oversight is merely "window dressing" that have no real power or ability to enact disciple, it allows for a culture of unaccountability, especially when none of the complaints or disciplinary actions can be made public.

Therefore, there is room for change at the policy level in a variety of ways. Uniform, consistent, and concrete policies allow for greater transparency and

accountability. They also allow for aid to the communities that need it the most. In the same way that this dissertation had to me multilayered, so too do the policy solutions.

Academic Implication

This study highlighted the importance of utilizing an intersectional lens, as well of the importance of the incorporation of disability as an intersection. The results of the multivariable and case study both illustrated to how gender, race, and disability are critical to understanding disparities in the criminal justice system, incarceration, and patterns of police brutality. While this study specifically provided evidence for the inclusion of disability, it should not be limited there. Although gender was included in my intersectional analysis here, gender needs to also be understood beyond the binary. This is also true of transwomen of color, in particular, as they are also highly victimized, stigmatized, and discriminated against in the United States and countries around the world (Sevelius 2013). Additionally, violence against transwomen of color has been deemed a "national epidemic" by the Human Rights Campaign (2018). According to the Human Rights Campaign (2018), at least 22 transgender people had been killed in 2018 at the time of the publication, 82% percent were transwomen of color.

This violence also extends to police violence, and state violence as a whole. In the 2015 U.S. Transgender Survey, over half of the transgender participants reported some sort of violence or abuse by the police (Ritchie 2017). Irvine (2015) also found that within the LGBT community of New Orleans alone, transwomen of color are up to four times more likely to be harassed by police, and up to fifty times more likely to be treated disrespectful or dismissed by police.

However, violence against transgender communities is not a problem that can be localized to the United States. Far from being just a national epidemic, it represents what Kidd and Witten (2008:31) refer to as a "global pandemic of focused prejudice". From Argentina (Valente 2016), Nepal (Human Rights Watch 2006), Jamaica (Logie et al. 2017), and all over the world, transgender and gender non-conforming individuals are subject to many types of violence. While each instance must be understood within its particular cultural location, the local and global inform one another. As Ritchie (2017:235-236) so well articulates:

> Attending to police violence against women of color, in all its forms, thus opens possibilities for genuine and deeper solidarity among men and women, among cisgender and transgender and gender non-conforming people, among women of color, among movements against police and gender-based violence… It also offers fertile ground for building alliances between Global North and South by framing human rights violations against women not as "horribles" that happen elsewhere, fueling anti-Muslim/anti-Black/Orientalist logics justifying a never-ending machinery of war, but as tools of subjugation used against communities of color within the United States and around the world.

As the "New York Miracle" of zero tolerance policing setting the benchmark for urban policing around the world, it is paramount to situate police violence against transwomen of color in the United States within a larger discussion of violence against global transgender communities, as well as understand the mechanisms that interact to cause and perpetuate it.

Therefore, police brutality should not only be examined intersectionally, but globally to fully understand its impact and the experiences of those who have to navigate their life at this intersection, and sociologists are well equipped to do so. However, this is not the task of professional sociology alone. The next section will discuss public

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sociology and how police brutality is an issue that implores for researchers to expand beyond academia to engage with the public.

The Role of Public Sociology

Burawoy (2005), much like Mills (1959), lamented on the present state of sociology. Noticing the growing disconnect between sociologist and the publics they study, he asserts the importance of public sociology, a sociology that interacts with the publics. This is not an attempt to displace professional sociology, however, but to complement it. According to Burowoy (2005:5) ,"[w]e have spent a century building professional knowledge, translating common sense into science, so that now, we are more than ready to embark on a systematic back-translation, taking knowledge back to those from whom it came, making public issues out of private troubles, and thus regenerating sociology's moral fiber. Herein lies the promise and challenge of public sociology, the complement and not the negation of professional sociology."

Burowoy (2005) also address the multiplicity of public sociology as he further distinguished between *traditional* public sociology and *organic* public sociology. The traditional public sociologist "write[s] in the opinion pages of our national newspapers where they comment on matters of public importance (Burowoy 2005:7)." They instigate debates within or between publics. However, they are not a participant. The organic public sociologist, however, "works in close connection with a visible, thick, active, local and often counter- public (Burowoy 2005:7)." They make the invisible visible and make the private public. The traditional public sociologist and the organic public sociologist, too, are complementary and not antithetical.

There is still much more that needs to be made visible. Police brutality is a very public problem with very public consequences. Sociologists have the tools to examine this social problem and offer an approach that not only examines institutions, but the people who comprise them. Merely discussing this problem with other academics will not be sufficient. If our research is to mean anything and to make a contribution to the social world that we study, it must engage with the publics, which by and large we often fail to do. In the midst of all the conversations around police brutality and police reform, vary rarely are sociologists at the table of these discussions or publishing accessible material and articles that are available to the publics for consumption. The changes taking place now are happening beyond academic walls. While sociologists may not be able to predict future outcomes, as Stinchcombe (2007) points out, we still have much to offer to the here and now in order to help create reform.

There are, however, exemplar organic public sociology practitioners today who engage in work on police-civilian relations, such as Dr. Rashawn Ray, Professor of Sociology and Executive Director of the Lab for Applied Social Science Research (LASSR) at the University of Maryland, College Park. Ray has written for the New York Times, *Newsweek*, *Huffington Post*, and NBC News, in addition to appearing on C-SPAN, MSNBC, HLN, Al Jazeera, NPR, and Fox News. His research has been also cited by the *Washington Post*, Associated Press, Reuters, CNN, ESPN, Vox, The Root, and The Chronicle. He has also served on the 50th Anniversary of the March on Washington Planning Committee and the Commission on Racial Justice with Alpha Phi Alpha Fraternity, Inc. (University of Maryland 2020). His most recent publication articulates

how lethal police brutality is an important neighborhood risk factor for illness, particularly for women's health (Sewell et al. 2020), further making the much needed argument that police violence is also a public health concern.

There are also ways to engage publics in our research as well, such as participatory action research, a research design that rejects approaches where an external expert enters a setting to present and record what is occurring (Kemmis, McTaggart, and Nixon 2013). Instead, participatory action research has two apparent tenets (Kemmis et al. 2013:4): "the recognition of a capacity of people living and working in particular settings to participate actively in all aspects of the research process; and the research conducted by participants is oriented to making improvements in practices and their settings by the participants themselves." Sandwick et al. (2018), in particular, reflect on the promise and challenges of critical participatory action research that is connected to social policy "in times of racialized state violence and massive community resistance". It is important that communities, especially those most disenfranchised, have the right to research (Appadurai 2006).

While although sociologists practicing organic public sociology are very much needed, traditional public sociology is still of great value. Writing publicly accessible materials, such as opinion pieces and blogs that are directed at the publics who need to engage with these conversations is paramount. Having informed and data-driven information at a time when so much misleading information is prevalent is always needed. Our research has the potential to do much more when it is put into the hands of

people who can implement new policies nationally, locally, and even inside of organizations. However, it has to be accessible to them first.

Therefore, while there are policy and academic implications from this research, policy, professional, and public sociology are not in competition. Each complement each other and work in tandem to address social issues. Each have a place in addressing police brutality, and public sociology has the tools to aid in leading the way. With an issue as multi-faceted and far reaching as police brutality, it takes us all.

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