

ARTICLE

Life lessons: Examining sources of racial and ethnic disparity in federal life without parole sentences*

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This article is dedicated to the memory of our colleague and collaborator, Anat Kimchi, who tragically died after the manuscript was accepted for publication. Her contributions to the article were invaluable and she will be sorely missed by many.

Abstract

Alongside capital punishment, sentences to life without the possibility of parole are one of the most distinctive aspects of the American system of criminal punishment. Unlike the death penalty, though, almost no empirical work has examined the decision to impose life imprisonment. The current study analyzes several years of recent federal sentencing data (FY2010–FY2017) to investigate underlying sources of racial disparity in life without parole sentences. The analysis reveals disparities in who receives life imprisonment, but it finds these differences are attributable mostly to indirect mechanisms built into the federal sentencing system, such as the mode of conviction, mandatory minimums, and guidelines departures. Both Black and Hispanic offenders are more likely to be eligible for life sentences under the federal guidelines, but conditional on being eligible, they are not more likely to receive life sentences. Findings are discussed in relation to ongoing debates over racial inequality and the growing role that life imprisonment plays in American exceptionalism in punishment.

KEYWORDS

criminal punishment, federal sentencing, life without parole, racial disparity

Life imprisonment without the possibility of parole (LWOP) is one of the most distinctive and least studied aspects of the American criminal justice system (Kazemian & Travis, 2015; Ogletree & Sarat, 2012; Seeds, 2021). Although it shares similarities with long sentences and the death penalty, LWOP is a unique sanction. Unlike long prison terms, LWOP precludes back-end sentencing discounts, removes all hope of release, and according to critics, sacrifices principles of human dignity by denying human capacity for redemption and rehabilitation (Appleton & Grover, 2007). LWOP is not accompanied by the same procedural protections, due process rights, or automatic review procedures as capital sentencing; even in states where it is the most severe available punishment, it entails no bifurcated trial or postconviction, state-appointed counsel (Nellis, 2012). Moreover, life sentences—and especially LWOP sentences—have not been subjected to the same type of scrutiny directed at the decision to send an offender to prison or to impose capital punishment. As Ogletree and Sarat (2012, p. 10) observed, “Although LWOP has become both a more prominent and controversial part of the carceral state, scholars have done little to unearth its meaning and significance in American society.”

The limited attention to life sentences is especially important given the growing number of people sentenced to life (Nellis, 2017). More offenders are serving life sentences today than were held in all U.S. prisons in the early 1970s (Mauer & Nellis, 2018, p. 3). Worldwide, the United States accounts for more than one third of all life sentences and eight out of ten LWOP sentences (van Zyl Smit & Appleton, 2019). Even as crime rates have declined in recent decades, criminal justice policy shifts have intensified the scale of life imprisonment in America (Nellis, 2017). This reflects two broader punishment trends. First, policy changes during the “tough-on-crime” era ratcheted up sentence severity for a wide range of crimes, increasing average prison terms appreciably (Courtney et al., 2017). Growth in federal incarceration was especially pronounced during this time (Tonry, 2015). The result was a dramatic increase in the punishment ceilings for federal offenses, making the incremental shift to life imprisonment more palatable. Second, death penalty reformers championed LWOP as an alternative to capital punishment. Currently, 22 states have abolished the death penalty, and an additional 11 states have not carried out an execution in more than a decade (Death Penalty Information Center, 2019). Survey research reveals that most Americans now favor life without the possibility of parole over the death penalty (Jones, 2019). As death sentences have declined, LWOP sentences have increased concomitantly.

Recent scholarship has argued for greater empirical attention to be directed at life sentences, recognizing their growing importance in American penology (Seeds, 2021). There are many reasons why it is especially important to study life without parole. First, although LWOP sentences are relatively rare, they exert an outsized impact on prison populations. Even offenders sentenced to long prison terms may eventually be released, whereas those sentenced to LWOP will spend the rest of their natural lives behind bars. In federal court, for example, life without parole accounts for only a fraction of 1 percent of all sentences imposed in a given year, yet more than 6000 federal inmates—approximately 4 percent of all federal prisoners—are serving life terms (Nellis, 2021). Because LWOP ensures perpetual incarceration, critics argue it is a major impediment to modern decarceration efforts (Mauer & Nellis, 2018; Seeds, 2021).

Second, life sentences, like death sentences, involve unique sentencing considerations and have special impacts on offenders (Herbert, 2019). When judges sentence offenders to life in prison—and especially to LWOP—they are making the determination that the individual is beyond redemption (Henry, 2012). The permanency and indeterminacy of life distinguish it from other long prison sentences (Leigey & Schartmueller, 2019). Some critics have noted that LWOP, which has been equated to a “living death” (Cockburn, 2009) or “death-in-prison” sentence (Henry, 2012), shares many similarities with capital punishment—both are uniquely punitive and

degrading, deny the basic humanity of the offender, have been outlawed in most Western nations, and signal a “finality in spite of the possibility of change” (Dolovich, 2012, p. 122; van Zyl Smit & Appleton, 2019). As the U.S. Sentencing Commission has recognized, “the impact these sentences have on the lives of the offenders . . . sets them apart from all other sentences” (USSC, 2015, p. 19). Yet sentencing research to date has “largely ignored the issue of long termers and lifers” (Kazemian & Travis, 2015, p. 357).

Third, some scholars have contended that life sentences are fraught with racial bias (Ogletree & Sarat, 2012; Nellis & King, 2009), noting that they render “race less visible” and “less pressing” but not any less important than in capital cases (Capers, 2012, p. 179). The potential consequences of racial disparities are substantial, especially in light of the growing number of offenders impacted. If there are racial disparities in life sentences, it is essential to investigate the mechanisms that contribute to them. Whereas the death penalty has spawned a wealth of scholarly research on racial disparity (Baldus & Woodworth, 2003), little empirical work has investigated racial inequity in life sentences. This is concerning given that two out of three people serving life terms are defendants of color (Nellis, 2017). As Seeds (2021, p. 287) opined, “studies of the causes of racial disproportionality in life sentencing” represent a pressing need in criminological research.

Finally, greater research attention to life and LWOP sentences is needed, in part, because of their burgeoning popularity in American penal culture, which raises a host of broader moral and philosophical concerns. An important body of legal scholarship has argued that LWOP sentences are arbitrary, capricious, and overly harsh (Appleton & Grover, 2007; Gottschalk, 2013; Henry, 2015; Kazemian & Travis, 2015; Leigey & Schartmueller, 2019; Seeds, 2021). Other work has highlighted their perverse impacts on shifting age and mortality rates in penal institutions (Porter et al., 2016), emphasizing that “the pains of imprisonment are significantly heightened” for “life sentences” (van Zyl Smit & Appleton, 2019, p. x). A small but growing body of scholarship has begun to investigate life sentences, detailing their historical evolution in crime policy (Seeds, 2018), and examining their impact on select outcomes like inmate adjustment (Leigey & Schartmueller, 2019), prison infractions (Sorensen & Reidy, 2019), and violent crime rates (Kleinstuber & Coldsmith, 2020). Little research, however, has examined inequalities in the judicial imposition of life sentences (Hamilton, 2016). As such, little is known about the factors judges consider in imposing these sentences or about the various procedural mechanisms that may indirectly contribute to overarching patterns of inequality in life-sentenced populations.

The current study investigates these issues. Using detailed data on offenders convicted in U.S. District Courts from 2010 to 2017, we address several inter-related research questions. First, we examine the overall prevalence of official life sentences in federal court and test whether they are characterized by patterns of racial and ethnic inequality. Life sentences are especially salient in this context because they uniformly entail life without parole,¹ and because eligibility for a life sentence is closely tied to the federal sentencing guidelines. Second, we consider the demographic and legal factors that are associated with life eligibility. Most offenders are protected by statutory sentence limitations, and few are placed into guidelines cells where life imprisonment is a real possibility. Yet, little is known about who is eligible to receive a life sentence. Third, we investigate the subset of life-eligible defendants and consider the factors that shape judicial decisions to impose LWOP. This approach allows us to isolate the role that judicial discretion plays in

¹When discussing the federal justice system, we use “life sentence” and “LWOP” interchangeably because all life sentences are LWOP sentences.

disparities in life sentences. Finally, we also examine intermediate punishment processes that may indirectly contribute to racial disparity, including the mode of conviction, mandatory minimums, and guidelines departures, all of which have been shown to be highly consequential in federal sentencing (Johnson et al., 2008; Rehavi & Starr, 2014; Spohn & Fornango, 2009). This allows us to consider both the direct and indirect effects of race and ethnicity on life sentencing. In the sections that follow, we review the literature on life and LWOP sentences before examining how the sentencing guidelines structure their application in the federal courts.

1 | LITERATURE REVIEW

1.1 | The growing prevalence of life imprisonment

Historically, statistics on life sentences have been difficult to come by, although this is beginning to change. Recent efforts to collect data have begun to shed light on their growing prevalence (Nellis, 2021). Current estimates suggest one in nine people in prison is serving a life sentence. When “virtual life” terms—periods of incarceration that exceed a person’s natural life expectancy—are included, the rate increases to one in seven.² Approximately 1 in 28 inmates is serving LWOP (Nellis, 2017, 2021). Moreover, the number of life sentences has quadrupled since the early 1980s, substantially outpacing general prison growth. In part, this reflects changes in “the meaning of life”—for most of the twentieth century, “life” meant that the offender would serve 10 or 15 years in prison (Gottschalk, 2013). The situation is very different today. Select jurisdictions, including the federal system, have abolished parole, meaning a life sentence is the functional equivalent of LWOP. Even in jurisdictions that retain parole, offenders are often required to serve more time before being eligible for release, and parole boards have increasingly denied release petitions (Nellis & King, 2009). Contemporary estimates suggest the typical offender sentenced to life with a possibility of parole will be in prison for three decades (Mauer et al., 2004). Many life sentences, in other words, “provide the offender with the theoretical possibility of release, but in practice often result in the offender’s death in prison” (Henry, 2012, p. 68).

As with growth in the general prison population (Blumstein & Beck, 1999), increases in life sentences are largely attributable to changes in sentencing policy (Seeds, 2018). These policy changes, most of which were enacted during the tough-on-crime era that began in the early 1980s, include expansions in the scope of habitual offender laws; enactment of three-strikes-and-you’re-out statutes, which often mandate life for a third (or even a second) felony conviction; expansion of mandatory minimum sentencing provisions; and passage of legislation extending the time a lifer must serve before being eligible for parole. Coupled with the decreased use of gubernatorial clemency, these changes have fueled expansive growth in LWOP populations. Anti-death-penalty efforts have also played an important role in expanding life sentences as abolitionists have touted LWOP as a fairer, more effective, and more humane punishment than a death sentence (Appleton & Grover, 2007; Gottschalk, 2013; Seeds, 2018, 2021). As Capers (2012, p. 169) put it, “one

²We focus our discussion and analysis on official life sentences because they are more clearly defined and arguably carry special significance and symbolic meaning in society (Appleton & Grover, 2007); however, as we note in the Discussion section, similar findings emerge if very long sentences are included as “virtual” or “de facto” life terms. These additional analyses are available as part of an appendix in the online supporting information. Additional supporting information can be found in the full text tab for this article in the Wiley Online Library at <http://onlinelibrary.wiley.com/doi/10.1111/crim.2021.59.issue-4/issuetoc>.

consequence of the turn from death has been a turn to life without parole.” Even though life sentences are still applied in a small fraction of all cases, “over the past 40 years, life imprisonment without the possibility of parole (LWOP) has been transformed from a rare sanction and marginal practice of last resort into a routine punishment in the United States.”

Increased use of life without parole has generated ongoing debate among legal scholars over its philosophical justifications. Advocates contend some crimes are so heinous they deserve life in prison, arguing that life sentences deter would-be offenders and ensure permanent incapacitation (Blair, 1994; Cheatwood, 1988). Critics challenge these assertions. Robinson (2012), for example, argued that life without parole fails to achieve *any* of the distributive goals of punishment, including general deterrence, incapacitation, and just deserts. Opponents have also argued that life sentences violate certain basic human rights and are meted out in racially biased ways (Ogletree & Sarat, 2012; Nellis & King, 2009), but little empirical research exists on these issues. As we describe in the next section, this is important because the population of federal “lifers” is in many ways unique.

1.2 | The characteristics of “lifers” and their offenses

Studies have revealed that most offenders serving life sentences have been convicted of serious crimes, especially homicide or, in the federal system, trafficking in large amounts of drugs (USSC, 2015). According to Mauer and Nellis (2018, p. 14), 59 percent of lifers nationwide in 2016 were convicted of homicide, and 32 percent were convicted of other serious violent crimes. Life terms, however, have also been long applied to habitual offenders, and today, 1 in 12 lifers is serving a sentence for a nonviolent offense (American Civil Liberties Union, 2013; Hall, 2013; Nellis, 2017).

Recent descriptive reports have suggested that the most common federal crimes involving life imprisonment are drug trafficking, firearms offenses, murder, and extortion and racketeering offenses (USSC, 2015). Federal life sentences are possible for drug trafficking when death or serious bodily injury results, an offender has one or more prior drug trafficking convictions, or the offense involves large quantities of drugs. Life sentences can also result from other sentence enhancements (e.g., mandatory minimums for use of firearms) that are related to the current offense. Although the United States is exceptional in allowing LWOP sentences for juvenile offenders (Rovner, 2020), most “lifers” in both state and federal prisons are men who were adults when their crimes were committed (Nellis, 2017; USSC, 2015).

Another reality of life sentences is that they are served disproportionately by people of color. At both the state and federal levels, nearly half of those serving life sentences are Black and two thirds are either Black or Hispanic. Racial disproportionality is even more pronounced for LWOP (Nellis, 2017). Not surprisingly, some scholars have argued that life sentences are “riddled with racial disparity” (Ogletree & Sarat, 2012, p. 7). According to Seeds (2021, p. 291), “the symbolic and expressive aspects of life sentencing are deeply intertwined with the nation’s history of slavery and racial discrimination,” which has “the potential to induce social patterns imbued with a racialized politics of exclusion.” Because federal life sentences, however, are carefully structured by the sentencing guidelines, and limited to a select subset of eligible cases, the full extent of racial disparity and its underlying causes in federal court remains unknown.

The only study, to date, to look at federal life sentences was conducted by Hamilton (2016), using data on federal offenders convicted between 2008 and 2014. She found that the primary predictors of life were legally-relevant case characteristics. Not surprisingly, offenders convicted of more serious crimes and with more serious criminal histories were more likely to receive life

sentences, as were offenders in pretrial custody, convicted at trial, or convicted of non-drug offenses, especially when a mandatory minimum applied. The odds of a life sentence were minimal for offenders who received a guidelines departure. Somewhat surprisingly, race and ethnicity were unrelated to the likelihood of life imprisonment among all convicted offenders.

The current study builds on and extends this prior work in several ways. First, it focuses explicitly on racial inequalities in life imprisonment. Critics have decried the racialized nature of life imprisonment, but few studies have examined this issue. As Mauer and Nellis (2018, p. 103) observed, there is little “direct evidence” for “the impact of race on sentences of life imprisonment.” Second, unlike Hamilton’s (2016) research, our study separates eligibility for a life sentence from its imposition. This distinction is important because many federal offenders are not eligible for a life sentence and most fall outside the guidelines cells that recommend it. Including all offenders in an analysis of life imprisonment can provide valuable information on its overall prevalence, but it conflates the legal and procedural mechanisms that shape eligibility for life with judicial decisions to impose it. The current analysis also focuses on non-immigration offenses. Immigration crimes are unusual because they are concentrated in southwestern districts and are often handled through early disposition programs that involve “fast-track” departures (USSC, 2019). Importantly, not a single immigration offender was sentenced to LWOP during our study period. Immigration offenses are the largest category of federal crime and are closely associated with offender ethnicity, so they can profoundly impact disparity estimates (Ulmer et al. 2011).

Finally, the present study also investigates multiple mediating mechanisms, including the mode of conviction, mandatory minimums, and guidelines departures. Prior work has suggested these are powerful determinants of federal punishment, but little is known about how they shape life sentences. Official life sentences are uniquely severe, closely structured by the guidelines, and applicable to only a select subset of offenders. Moreover, life-eligible offenders are far more likely to face mandatory minimums and go to trial, and they are less likely to be sentenced within standard guidelines ranges, so it is unclear whether and how these mediating mechanisms might shape disparities in life imprisonment. This study addresses this issue, examining both direct and indirect mechanisms of inequality in life imprisonment. We next provide a brief overview of life sentences in the federal system before detailing our specific research questions and hypotheses.

2 | LIFE SENTENCES IN THE FEDERAL SYSTEM

The federal justice system offers a valuable context for studying life imprisonment. It metes out punishments that are longer than states on average, and it plays an important symbolic role as a semaphore of national legal culture and criminal justice policy (Johnson et al., 2008). The federal system is one of eight jurisdictions to abolish parole for life sentences, meaning all federal life terms are equivalent to LWOP. Federal life sentences can be applied to a broad array of offenses, and the federal guidelines provide explicit recommendations regarding their use. The federal data are also unusually detailed, allowing for an investigation of both direct and indirect sources of racial inequality. This offers a useful starting point for examining racial disparity and for considering the broader societal implications of life imprisonment in America.

As with many sentencing systems, the federal system underwent major policy reforms during the 1980s and 1990s (Stith & Cabranes, 1998). In 1984, Congress passed the Sentencing Reform Act, which established the U.S. Sentencing Commission and charged it with promulgating guidelines

to structure federal sentencing. In 1987, federal guidelines went into effect. As part of this process, Congress prospectively eliminated parole, replacing it with truth-in-sentencing provisions that limited good time credit to 15 percent. Prior to sentencing reform, federal inmates, including those sentenced to life, were eligible for parole after ten years (Hoffman, 2003); under the current system, those with life sentences are categorically ineligible for release.

As part of federal sentencing reform, Congress also enacted a wave of mandatory minimum sentencing statutes that significantly raised punishment floors for many federal crimes. Today, more than 200 mandatory minima are provided for in federal law, approximately one fifth of federal offenders are sentenced under mandatory sentencing provisions, and ~40 different federal offenses can result in a mandatory life sentence (Hamilton, 2016). Mandatory minimum sentences trump the lower guidelines recommendation, and some mandatory minimums, such as 924(c) firearms enhancements, are applied consecutively in ways that can lead to extremely long sentences (USSC, 2018). As some have argued, the combined force of sentencing guidelines, parole abolition, and mandatory minimums have created “a one-way upward ratchet” that substantially increased federal sentences and created new opportunities for extreme terms of incarceration alongside life without parole sentences (Bowman, 2005, p. 1319).

In 2005, as a result of the *Booker* decision, the federal guidelines became advisory, but judges still must consider the guidelines when deciding sentences (see Hofer, 2019). This process involves establishing a base offense level and a criminal history score and then applying a variety of adjustments related to the nature of the offense, the offender’s role in the crime, and various special offense characteristics or general aggravating and mitigating circumstances. Based on these calculations, offenders are placed into a sentencing table, where approximately 10 percent of cells allow for the possibility of a life sentence (see appendix A at the end of the article).

Both probation officers and prosecutors play an important role in the federal sentencing process. Probation officers are tasked with populating the presentence reports that inform sentencing (Pryor, 2017), whereas prosecutors decide what charges to file and stipulate to offense details that affect one’s placement within the sentencing table. As van Zyl Smit and Appleton (2019, p. 165) noted, in addition to judges, prosecutors “may play a significant part in determining whether or not life sentences are imposed.” Prosecutors can file charges that trigger mandatory life sentences, and they can use their discretion to circumvent these enhancements (Schulhofer & Nagel, 1989). In drug cases, eligibility for a life sentence can depend on whether a prosecutor issues a notice of prior drug trafficking convictions, files separate weapons-related charges, or stipulates to specific thresholds of drug quantities (Lynch, 2016). Because the guidelines are complex and involve a broad array of fine-grained, subjective determinations (Stith & Cabranes, 1998), a multitude of prosecutorial decisions influences an offender’s relative position within the sentencing guidelines and subsequent eligibility for LWOP.

Importantly, other mechanisms, like downward guidelines departures, can be used to mitigate life sentences. There are several types of departures in the federal system, some of which require prosecutorial motions, such as “substantial assistance” departures for aiding in the prosecution of another federal case. Substantial assistance is especially important because it allows court actors to circumvent applicable mandatory minimums, meaning mandatory life statutes do not always result in life terms. Other downward departures can be given at the discretion of the judge when atypical circumstances exist. Studies examining federal departures have found they are an important source of racial disparities (Johnson et al., 2008; Spohn & Fornango, 2009; Ulmer & Johnson, 2017), although no work has focused on their significance in the context of life sentences. Other case processing decisions are also consequential. The mode of conviction is important because defendants who plead guilty routinely benefit from a two- or three-level offense severity

reduction, placing them into lower guidelines cells, and potentially limiting their exposure to life sentences. Of course, the decision to plead guilty is a product of many factors, including the quality of the prosecutor's plea offer and the defendant's willingness to admit guilt (Redlich et al., 2017).

These case processing mechanisms illustrate an important distinction between factors that affect eligibility for life and those that shape its imposition. Although distinguishing underlying sources of disparity is inherently difficult, it represents an essential research task (Bushway & Forst, 2013). This is especially true for LWOP because the overwhelming majority of federal life sentences result from guidelines cells that recommend life imprisonment. By examining racial differences in guidelines recommendations, we can begin to understand how the guidelines themselves shape these punishments, whereas by focusing on the subset of life-eligible cases, we can better isolate judicial discretion in their application. Moreover, by considering the influence of guilty pleas, mandatory minimums, and departures, we can begin to pinpoint the direct and indirect mechanisms that shape the use of life without parole in federal court.

3 | THEORY AND RESEARCH QUESTIONS

Theoretical perspectives on racial inequality in the justice system traverse broad intellectual terrain and span diverse academic disciplines. Social-psychological theories of social cognition emphasize implicit bias and the subtle influence of racial stereotypes in decision-making, highlighting how human social judgments often occur outside of conscious process (Albonetti, 1991; Kang et al., 2012; Lynch, 2019). By contrast, sociological perspectives on racial inequality often emphasize group-level processes, focusing on the role of broader social structures and institutional processes in establishing and maintaining inequality. Enduring racial hierarchies, from this perspective, are evidence of the structural foundations of racism (Bonilla-Silva, 1997). Despite their distinct theoretical foundations, both schools of thought are valuable for informing criminological research on disparities in the justice system. In many ways, these perspectives are complementary—structural inequalities build disadvantages into the justice system in ways that can shape and exacerbate individual disparities in criminal case processing.

Importantly, racial inequities may compound across stages of criminal case processing. Much of the existing theoretical work has focused on the direct effects of race in sentencing. Although clearly important, this is only part of the broader portrait of punishment. Sentencing decisions, along with available sentencing options, are constrained by earlier case processing decisions and by the formal structure of punishment systems. As Bushway and Forst (2013) noted, there is a fundamental distinction between the type of discretion that has been historically investigated in sentencing research (i.e., whether a judge sentences an eligible offender to incarceration) and the much broader, systemic discretion inherent in legal structures themselves (i.e., whether guidelines recommend incarceration for a particular offense). Both types of discretion are important. What Bushway and Forst (2013, p. 199) referred to as “Type A discretion” encapsulates “discretion of individual actors to make decisions within a set of laws and rules,” whereas “Type B” discretion involves “the crafting of laws and setting of rules in the first place.” The latter is important because, as Savelsberg (1992) noted, the creation of law is itself a substantively rational process. A complete understanding of racial disparity, then, requires consideration of the ways that offender race shapes individual case outcomes, as well as how it is related to broader structural influences that condition available sentencing options.

3.1 | Individual and structural perspectives on inequality in punishment

Theories of sentencing have long been focused on understanding racial and ethnic disparities in criminal case outcomes. Much of this work is couched in individual theoretical arguments that emphasize the role of subtle prejudices, subconscious racial stereotypes, and other implicit decision-making biases (Albonetti, 1991; Eberhardt et al., 2006; Johnson & King, 2017; King & Johnson, 2016; Rachlinski et al., 2009; Steffensmeier et al., 1998). In line with organizational theory, judges are often limited by time and information constraints that preclude full knowledge of relevant case details, alternative courses of action, and future behavior (Albonetti, 1991). Under these conditions, they may rely on decision-making heuristics, or “perceptual shorthands” (Hawkins, 1981), that draw on past experience, routine operating procedures, and stereotypical attributions tied to offender characteristics like race, ethnicity, age, and gender. Offender attributions involve assessments of whether the underlying reasons for criminal behavior are internal or external, stable or dynamic (Kelley, 1973), and they may be colored by pervasive social and cultural stereotypes that link these characteristics to perceived criminality (Russell-Brown, 2009). Accordingly, cognitive efforts to streamline decision-making and reduce uncertainty may unwittingly trigger stereotypical evaluations that produce less favorable outcomes for racial and ethnic minority offenders.

Criminal stereotypes can impact court actor evaluations of a broad set of sentencing criteria. Steffensmeier and colleagues (1998) argued that court actors’ decisions are shaped by three focal concerns: offender culpability, community protection, and practical decision-making constraints. Culpability reflects the harmfulness and wrongfulness of a criminal act. Community protection involves assessments of the likelihood and severity of future offending. Practical constraints include individual offender considerations, like ability to “do time,” along with organizational factors, such as prison capacity and maintenance of courtroom workgroup relations. Accordingly, racial and ethnic disparities can result from stereotypical assessments of these focal concerns. To the extent that minority and male offenders are viewed as more culpable or as greater threats to public safety, they will systematically receive more severe punishments. In line with this, some recent work has found that Black and Hispanic offenders score higher on subjective ratings of danger, blame, and ability to “do time” (Johnson & Richardson, 2017), and other work has revealed a unique punishment cost is associated with being young, male, and minority (Spohn & Holleran, 2000; Steffensmeier et al., 1998). Taken together, individual-level perspectives on sentencing inequality suggest that cognitive biases grounded in deep-seated racial stereotypes may systematically disadvantage minority offenders.

Any understanding of individual sources of racial bias, however, cannot be divorced from a broader appreciation of the structural influences that also shape and constrain punishment. Recent work has suggested that broader, macro-level factors may be especially important for understanding overarching patterns of racial inequality in the justice system (Bushway & Forst, 2013; Omori & Petersen, 2020). Some classical scholarship has portrayed organizations as bureaucratically rational and race neutral (Weber, 1978), but more recent work has argued race and ethnicity play fundamental roles in the structuring of organizational outcomes (Bonilla-Silva, 1997). From an institutional perspective, inequities are often deeply embedded within organizational rules, processes, and procedures in ways that reproduce existing inequalities, even without individual-level discrimination (Bonilla-Silva, 1997; Lynch, 2019; Ray, 2019). This is what Lynch (2013, p. 2) identified as “the codification of inequality in how crimes and criminal culpability are

defined and how sentencing rules are structured.” From this perspective, organizational structures in formal institutions of social control are influenced by existing status hierarchies in ways that reify and reproduce racial disadvantage (Ray, 2019). Entrenched inequalities in economic, cultural, legal, and political power ensure the inequitable distribution of resources and opportunities, which are reflected in racialized applications of the law (Black, 1976; Lynch, 2013). Therefore, inequalities that are embedded within established policies and procedures of the criminal courts can generate inequities in case outcomes, even in the absence of individual bias on the part of sentencing judges.

Furthermore, a greater need exists to examine intermediate decisions that indirectly contribute to punishment inequities—a theme consistent with emergent theoretic perspectives on cumulative disadvantage in the justice system (Kurlychek & Johnson, 2019; Kutateladze et al., 2014; Wooldredge et al., 2015). To the extent that inequalities are embedded in organizational praxis, they may be exacerbated across sequential decisions in the punishment process. As Kurlychek and Johnson (2019, pp. 291–292) noted, research has historically focused on “episodic disparity” in sentencing, without a full consideration of the indirect procedural mechanisms that contribute to racial inequality. Notably, both social-psychological and sociological perspectives on racial inequality are consistent with cumulative disadvantage theory—subtle biases in decision-making can accrete across multiple stages of court actor decision-making, at the same time that broader structural sources of inequality contribute to racial disadvantage in punishment.

Racial inequality in the justice system, then, can be understood as the combined output of the sum of individual court actor decisions and the set of broader institutionalized biases embedded in formal policies, procedures, and practices of the courts. Critical race theorists, for example, emphasize that race is socially constructed through the interpersonal dynamics of everyday interactions, but it is also a product of the historical legacy of structural racism in society (Parks et al., 2010). With regard to life sentences, scholars have emphasized the importance of a “link between life sentencing, race-based conceptions of incorrigibility and criminality, and the United States’ history of racial oppression and exclusion” (Seeds, 2021, p. 302), suggesting both stereotypical bias and structural disadvantage can play an important role in racial disproportionality in the justice system. We outline the specific hypotheses that we test in the next section.

3.2 | Current research questions and hypotheses

Not all sentencing studies have found evidence of unwarranted racial and ethnic disparity, but an expansive corpus of research has supported the overarching expectation that minority offenders will receive harsher punishment (e.g., Baumer, 2013; Spohn, 2000; Ulmer, 2012). Consistent with this, recent accounts of life imprisonment have detailed racial and ethnic imbalances in the population of offenders serving life sentences (Mauer & Nellis, 2018), and both social-psychological theories of court actor decision-making and socio-structural perspectives on racial inequality are consistent with the expectation that minority defendants will be disadvantaged in overall patterns of life imprisonment. To investigate aggregate patterns of life imprisonment, we test the following:

H1: *Among all federal offenders, Black and Hispanic offenders will be more likely than White offenders to be sentenced to life imprisonment.*

Importantly, there are multiple pathways through which minority overrepresentation can occur. It may reflect racial differences in legal case factors, such as crime severity, extralegal influences, like the direct impact of race on sentencing, or indirect sources of inequality that are tied to the punishment process itself. The federal guidelines prescribe life in a small minority of cases, but many factors affect eligibility for life. First, there may be sources of inequality embedded in federal law or in the structure of the guidelines themselves—what Bushway and Forst (2013) referred to as Type B discretion in the legal parameters of punishment. This can happen, for example, if crimes that are commonly charged against minority defendants are disproportionately defined as life eligible. Second, there may also be discretionary sources of inequality in how the guidelines are calculated and applied—what Bushway and Forst (2013) referred to as Type A discretion in the application of the law. As described above, prosecutors play an especially important role in this process. If, for example, they are more likely to file mandatory minimums or prior drug trafficking notices in cases involving minority defendants, or if they offer less favorable plea deals to defendants of color, this could impact life eligibility. Because the federal guidelines are highly complex, and data on charging decisions are limited, it is difficult to model all of the factors that enter into federal guidelines calculations (Stith & Cabranes, 1998), but these processes can be indirectly investigated by examining overall racial differences in eligibility for a life sentence under the guidelines. Based on prior research and theorizing, we expect the following:

H2: *Black and Hispanic offenders will be more likely than White offenders to be eligible for life imprisonment under the sentencing guidelines.*

A second avenue of potential inequality involves the discretionary use of life sentences for life-eligible offenders. Consistent with recent arguments that “discriminatory sentencing drives the demographics of prison populations” (Ogletree & Sarat, 2012, p. 8), minority offenders may be more likely to receive a life sentence when it is an available sentencing option. To isolate judicial discretion, it is important to focus on the subset of cases eligible for life under the guidelines. Consistent with social-psychological perspectives that emphasize the role of decision-making heuristics and racial stereotypes in sentencing, we predict the following:

H3: *Among life-eligible offenders, Black and Hispanic offenders will be more likely than White offenders to receive a sentence of life imprisonment.*

Finally, a full examination of racial disparity in life sentences also requires an investigation of the indirect mechanisms that shape both life eligibility and life imprisonment. In the federal courts, trial conviction, mandatory minimums, and guidelines departures have been shown to be especially important. According to Ray (2019, p. 26), “the decoupling of formal rules from organizational practice is often racialized,” which suggests intermediate punishment processes may produce adverse effects for defendants of color. Similarly, Lynch (2013) argued that “institutional empathy”—or organizational efforts to circumvent harsh punishments—will tend to favor white defendants (see also Savelsberg, 1992). Given the import of intermediate case-processing decisions in federal sentencing, and their association with racial inequality, we expect they will be important mediators of the relationship between race and punishment. As such, we expect the following:

H4: *Black and Hispanic offenders will be disadvantaged by intermediate case-processing mechanisms that shape eligibility for life imprisonment and imposition of life sentences, including trial conviction, mandatory minimums, and guidelines departures.*

4 | DATA AND METHOD

We test these hypotheses with USSC data that include detailed information on all offenders convicted in U.S. District Courts in FY2010–FY2017. We restrict the analytic sample in several ways. Consistent with prior research (e.g., Ulmer et al., 2011), we remove immigration cases and cases with incomplete court findings, as well as the small number of cases adjudicated in foreign territories.³ The sample is also limited to cases with requisite data on offender demographics, such as race and ethnicity.⁴ After these exclusions, the analytic sample includes 366,612 non-immigration offenders sentenced in 90 federal district courts.

4.1 | Dependent variables

The dependent variables are binary indicators that capture whether an offender was eligible for life imprisonment (eligible = 1; not eligible = 0) and whether a life sentence was imposed (imposed = 1; not imposed = 0), in both the full and life-eligible samples. To examine the overall likelihood of life imprisonment, we use the full sample. To investigate eligibility, we code whether the final adjusted guidelines range includes the possibility of life imprisonment. The final guidelines recommendations reflect the impact of various charging decisions and sentence enhancements, including mandatory minimums and statutory maximums in the case. For models analyzing the judicial decision to impose a life sentence on life-eligible offenders, we restrict the sample to cases in which the guidelines allow for the possibility of life imprisonment ($N = 4,852$). A total of 1,194 offenders received official life sentences during our study period.

4.2 | Independent variables

The independent variables include various offender and case characteristics. Offender race/ethnicity is measured with a series of dummy variables (White, Black, Hispanic, other) using Whites as the reference. Binary variables capture the offender's gender (male = 0; female = 1), citizenship status (U.S. Citizen = 0; non-U.S. citizen = 1), and educational attainment (high school degree or less = 0; more than high school = 1). Offender age is measured in years.

Several variables capture legally relevant case characteristics. We include continuous measures of the final offense severity level, which ranges from 1 to 43, and the offender's final criminal history score, which ranges from 1 to 6.⁵ The primary offense type is also controlled using a series of dummy variables comprising murder/manslaughter, kidnapping, sex offense, robbery/assault,

³ In addition to immigration cases ($N = 193,222$), cases with incomplete guideline application information are excluded ($N = 43,571$). This removes cases with incomplete or conflicting guidelines calculations as well as cases with no known or applicable guidelines (see USSC, 2020). Consistent with prior work, we also remove 8,788 cases sentenced in foreign territories (U.S. Virgin Islands, Guam, Puerto Rico, the Marianna Islands) because they may differ from domestic cases in important ways (Johnson et al., 2008).

⁴ Cases with missing data on offender demographics were rare, constituting less than 1 percent of the sample ($N = 3,616$), so they were listwise deleted rather than opting for imputation methods.

⁵ We include separate measures of offense severity and criminal history in lieu of the presumptive sentence because guidelines-eligibility for life sentences is closely tied to the structure of the guidelines and is highly collinear with the presumptive sentence. Alternative models with separate dummy variables for each criminal history category produce equivalent results.

firearms offense, racketeering/extortion, and other offenses.⁶ Drug offenses serve as the reference category. We include the logged number of counts of conviction as well.

We also control for relevant case-processing characteristics. Pretrial detention is coded 1 for offenders detained prior to sentencing and 0 otherwise. The mode of conviction is captured with a variable coded 1 for trial and 0 for plea. Mandatory minimum is coded 1 if the case involved the application of a mandatory minimum sentence. Our models of life imprisonment for the full sample also include guidelines departures, with downward departures coded 1 and cases sentenced within the guidelines coded 0.⁷ Upward departures are not examined separately because of their rarity in the data.⁸ Consistent with prior work (Hamilton, 2016), all models also include year and circuit-level fixed effects to capture any stable, unmeasured influences related to temporal and jurisdictional variations.⁹

4.3 | Analytic approach

We test our hypotheses using logistic regression and path analysis. To investigate the direct effects of race and ethnicity on life sentences, we estimate a series of logistic regression models. As figure 1 summarizes, these models examine the overall prevalence of life imprisonment in the full sample, life eligibility in the full sample, and the imposition of a life sentence in the subset of life-eligible cases. To investigate the indirect pathways among race, ethnicity, and life imprisonment, we estimate a series of structural equation models that incorporate key procedural mediators, including the mode of conviction, mandatory minimums, and guidelines departures. These path models allow us to account for dependencies among endogenous variables and to simultaneously examine both direct and indirect effects of race and ethnicity on life imprisonment. The dependent variables in the path models are identical, but they also include endogenous mediating variables as outcomes. Because the mediating variables are all categorical, they are specified using Bernoulli link functions that make them interpretable as logistic regression coefficients.

⁶ The “other” category includes property offenses (arson, burglary, auto theft, and larceny), which make up less than 2.5 percent of the full sample (and only 0.27 percent of those eligible for a life sentence), as well as white-collar offenses (fraud, embezzlement, forgery/counterfeiting, bribery, tax offenses, money laundering, and antitrust violations) and other miscellaneous crimes such as civil rights, prison offenses, administration of justice, environmental and wildlife offenses, gambling/lottery, national defense, food and drug offenses, and offenses classified as “other” by the USSC.

⁷ All types of downward departure (substantial assistance, government-sponsored, other downward departure) were ultimately combined because of the small cell counts in the samples of life-eligible and life-imposed cases, but alternative models separating substantial assistance from other types of downward departures produce equivalent results.

⁸ Only in a small number of cases did a life sentence result from an upward departure ($n = 25$). Supplemental models including these cases in the life-eligible sample produce equivalent results (available by request). As a result of the rarity of upward departures, it was not possible to conduct separate analysis of them or include them as a separate mediating mechanism, but it is worth noting that 44 percent of these cases involved Black offenders, 28 percent White offenders, 16 percent Hispanic offenders, and 12 percent other race offenders.

⁹ Models using district-level fixed effects in lieu of circuit-level variables produce parallel findings. We report the circuit-level analysis because it is consistent with prior work on life sentences (Hamilton, 2016) and because not all districts experienced life sentences for some subsets of offenses during our time frame.

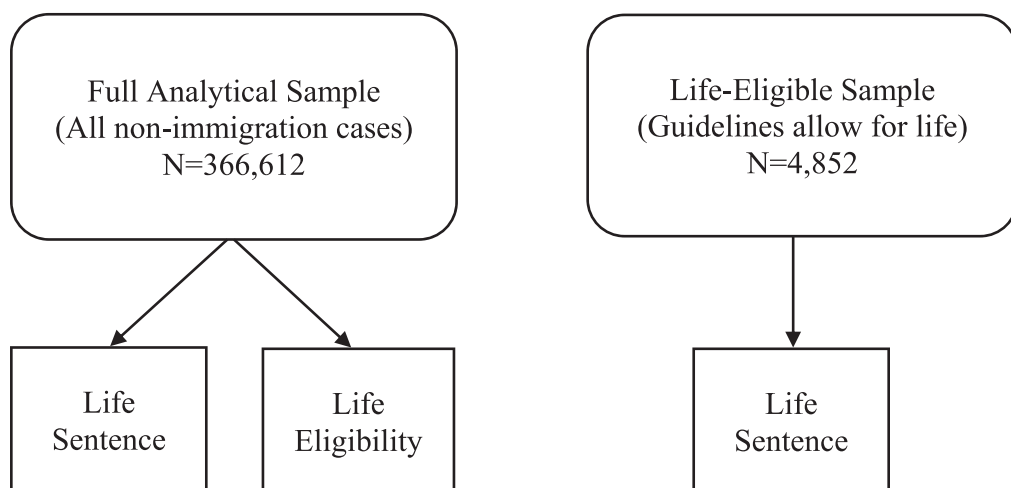


FIGURE 1 Samples used and outcomes examined in analysis of federal life sentences

5 | DESCRIPTIVE STATISTICS

Table 1 presents descriptive statistics for offenders in the full sample ($N = 366,612$) and for offenders eligible for life imprisonment under the guidelines ($N = 4,852$). An important takeaway is that offenders who are eligible for LWOP differ from other federal defendants in important ways. Black offenders account for fewer than one third of all cases but constitute nearly half of those who are eligible for LWOP; by comparison, White offenders account for more than one third of all cases but less than one quarter of life-eligible cases. The percentage of Hispanic offenders in both samples is similar. Life-eligible offenders are more likely to be male, have more extensive criminal histories, and are convicted of more counts, for more serious crimes. Cases involving violent crimes (murder/manslaughter, kidnapping, sex offenses, and robbery) are also more common in life-eligible cases.

Whereas one third of all (non-immigration) offenders are released prior to sentencing, nearly all life-eligible offenders are detained pretrial. Among the general offender population, trials are rare, yet more than 40 percent of life-eligible offenders are convicted by trial. Nearly two out of three life-eligible cases have a mandatory minimum applied. Finally, guidelines departures are also important. Approximately 62 percent of life-eligible offenders received a downward departure, which almost always results in less than a life sentence. Additional comparisons for offenders who received life sentences (available by request) indicate they are generally similar to the life-eligible population. With regard to race and ethnicity, 44 percent of eligible offenders are Black compared with 47 percent of life sentences; 30 percent of eligible offenders are Hispanic compared with 25 percent of life sentences. Life sentences are more likely to involve violent crimes, trial conviction, and mandatory minimums, and they are far less likely to include a downward departure. Although downward departures occur in almost two thirds of life-eligible cases, they are nonexistent among offenders who are sentenced to life in prison. Overall, the descriptive results intimate an important role for intermediate case-processing factors in shaping life sentences in federal court—a key theme we return to in the multivariate analyses in the next section.

TABLE 1 Descriptive statistics: Life sentences in federal court, FY2010-FY2017

Variables	All Cases %/Mean (SD)	Life-Eligible Cases %/Mean (SD)
Dependent Variables		
Life-Eligible under Guidelines	1.32%	—
Life Sentence Imposed	.33%	23.30%
Independent Variables		
Race/Ethnicity		
White	34.37 %	21.81%
Black	29.56%	43.98%
Hispanic	30.76%	29.58%
Other Race	5.32%	4.64%
Gender		
Female	16.02%	3.59%
Male	83.98 %	96.41%
Age	36.93 (11.68)	36.75 (9.64)
Non-U.S. Citizen	19.00%	16.67%
Less than High School Education	28.80%	18.20%
Criminal History Score	2.41 (1.77)	4.02 (1.97)
Offense Severity Score	21.48 (8.75)	39.85 (3.69)
Ln(Number of Counts)	.23 (0.50)	.81 (0.84)
Offense Type		
Murder/Manslaughter	.28%	4.86%
Kidnapping	.10%	2.43%
Sex Offense	5.07%	8.24%
Robbery/Assault	3.09%	.80%
Drug Trafficking	45.94%	54.60%
Firearms	15.34%	15.13%
Racketeering/Extortion	1.73%	9.21%
Other Offense	28.45%	4.72%
Pretrial Detention	66.49%	97.22%
Trial Conviction	4.34%	40.40%
Mandatory Imposed	19.54%	65.05%
Downward Departure	53.64%	61.62%
Fixed Effects		
Years	—	—
Circuits	—	—
N	366,612	4,852

6 | MULTIVARIATE ANALYSES

6.1 | Aggregate patterns of life without parole

Our first research question addresses overall racial patterns in federal LWOP sentences. Based on prior research and theorizing, we hypothesized that Black and Hispanic offenders would be more likely than White offenders to experience life imprisonment. Model 1 in table 2 reports the association between offender demographics and life sentences in the full sample before introducing controls for legal and case characteristics. Consistent with the descriptive statistics, the odds of a life sentence for Black offenders are more than twice the odds for White offenders, although no significant differences emerge between Hispanic and White offenders. Results in model 1 also suggest that the odds of life imprisonment are substantially lower for female, more educated, and younger offenders.

Model 2 in table 2 presents estimates controlling for other relevant variables but before introducing our three mediators (trials, departures, and mandatory minimums). In this model, racial differences are attenuated but not eliminated, and consistent with model 1, ethnicity is not significant. When the three procedural mediators are included in model 3, however, the effects of offender characteristics are altered substantially. Most importantly, the coefficient for Black offenders is no longer statistically significant and the estimate for Hispanic offenders is significant but negative. Model 3 also illustrates that the imposition of a life sentence is significantly related to offense-related factors, including offense severity, criminal history, number of counts, and type of offense. Relative to drug offenses, life sentences are substantially more likely for murder/manslaughter, racketeering/extortion, kidnapping, and robbery/assault.

The results in model 3 suggest that the three intermediate case-processing factors play an important role in conditioning racial and ethnic differences in life imprisonment. All three exert large and statistically significant effects on life sentences. Offenders convicted at trial have odds of a life sentence that are more than four times greater than the odds for offenders convicted via guilty plea. Similarly, the odds of a life sentence for offenders who had a mandatory minimum applied are more than five times greater than the odds for offenders without a mandatory minimum. By contrast, no offenders who received a downward departure were sentenced to life. Importantly, though, the inclusion of these variables in model 3 leads to fundamentally different conclusions about racial and ethnic disparities. In the aggregate, Black offenders are more likely to be sentenced to life (even after controlling for legal case characteristics), but once the process-related variables are included, the racial disparity disappears and ethnic disparity favoring Hispanics emerges. This suggests that race and ethnicity are indirectly related to life sentences through these intermediate procedural mechanisms. Before examining this issue in greater detail, we next consider racial and ethnic differences in eligibility for life sentences under the federal guidelines.

6.2 | Eligibility for life sentences

It is important to recognize that only a subset of federal offenders is eligible for a life sentence. To investigate this, we estimate additional models using life eligibility as the dependent variable. As shown in model 1 of table 3, offender characteristics are related to eligibility for a life sentence. Consistent with our second hypothesis, both Black and Hispanic offenders have increased odds of being eligible for a life sentence compared with White offenders. Eligibility is also related to the offender's gender, citizenship status, age, and education. Even after controlling for other factors

TABLE 2 Logit models for life sentences in the full sample of all cases (N = 366,612)

Variables	Model 1 Odds Ratio	Model 2 Odds Ratio	Model 3 Odds Ratio
Black	2.249 (.168) ^{***}	1.596 (.165) ^{***}	.997 (.125)
Hispanic	1.082 (.110)	.821 (.098)	.660 (.095) ^{**}
Other Race	1.457 (.208) ^{**}	1.358 (.239)	1.148 (.267)
Female	.167 (.029) ^{***}	.677 (.127) [*]	1.193 (.282)
Non-U.S. Citizen	1.065 (.105)	.999 (.109)	1.030 (.132)
Age at Sentencing	1.016 (.002) ^{***}	1.017 (.004) ^{***}	1.006 (.004)
More than High School	.617 (.046) ^{***}	.738 (.071) ^{**}	.819 (.092)
Criminal History Score		1.285 (.025) ^{***}	1.362 (.034) ^{***}
Offense Severity Score		1.568 (.017) ^{***}	1.610 (.023) ^{***}
Ln(Number of Counts)		2.118 (.090) ^{***}	1.491 (.084) ^{***}
Murder/Manslaughter		4.956 (.774) ^{***}	6.009 (1.332) ^{***}
Kidnapping		2.329 (.495) ^{***}	4.062 (1.182) ^{***}
Sex Offense		.254 (.036) ^{***}	.192 (.031) ^{***}
Assault/Robbery		3.470 (.811) ^{***}	4.034 (1.236) ^{***}
Firearms		1.157 (.117)	.857 (.103)
Racketeering/Extortion		2.743 (.309) ^{***}	5.103 (.867) ^{***}
Other Offense		.277 (.050) ^{***}	.568 (.106) ^{**}
Pretrial Detention		4.778 (1.246) ^{***}	1.700 (.508)
Trial			4.284 (.404) ^{***}
Downward Departure			.001 (.001) ^{***}
Mandatory Imposed			5.358 (.717) ^{***}
Pseudo R ²	.027	.555	.734

Notes: Robust SE in parentheses. Circuit and year fixed effects in models 2 and 3 are not reported.

* $p < .05$.

** $p < .01$.

*** $p < .001$. Odds ratios presented for ease of interpretation.

in model 2, Black and Hispanic offenders remain significantly more likely to be placed into guidelines cells that recommend life without the possibility of parole. Specifically, Black offenders have odds of life eligibility that are about twice those for White offenders, and Hispanic offenders have odds that are roughly one and a half times greater.

Model 3 introduces the two mediating factors that potentially impact life eligibility. We exclude the downward departure variable from this model because departure decisions occur *after* an offender is placed into the sentencing table; departures are used to tailor final sentences rather than to shape placement within the guidelines.¹⁰ Trial conviction and mandatory minimums, on the other hand, can both affect life eligibility. Offenders who opt for trial do not benefit from plea discounts and are unlikely to receive other process-related discounts, like acceptance of responsibility, which reduces one's final offense severity score (Johnson, 2019). At the same time, facing a life sentence may increase an offender's willingness to go to trial. Consistent with this, trial

¹⁰ Equivalent results obtain if the downward departure variable is included in this model. Notably, a small positive association exists between departure and life eligibility ($b = .178$; $SE = .057$), but this reflects the fact that being eligible for life increases the odds of downward departure, rather than the reverse (results available by request).

TABLE 3 Logit models for life eligibility in the full sample of all cases (N = 366,612)

Variables	Model 1	Model 2	Model 3
	Odds Ratio	Odds Ratio	Odds Ratio
Black	2.205 (.086)***	1.962 (.130)***	1.726 (.115)***
Hispanic	1.540 (.074)***	1.562 (.111)***	1.522 (.108)***
Other Race	1.436 (.107)***	1.945 (.246)***	1.877 (.241)***
Female	.210 (.016)***	.920 (.098)	.982 (.105)
Non-U.S. Citizen	.782 (.037)***	.883 (.057)	.863 (.057)*
Age at Sentencing	1.009 (.001)***	1.000 (.002)	.994 (.002)**
More than High School	.609 (.024)***	.761 (.044)***	.763 (.045)***
Criminal History Score		2.054 (.037)***	2.037 (.037)***
Offense Severity Score		2.089 (.027)***	2.050 (.027)***
Ln(Number of Counts)		1.518 (.044)***	1.261 (.039)***
Murder/Manslaughter		2.601 (.359)***	2.818 (.414)***
Kidnapping		2.904 (.459)***	3.462 (.583)***
Sex Offense		.117 (.011)***	.123 (.011)***
Assault/Robbery		.424 (.146)*	.365 (.127)**
Firearms		1.172 (.074)*	1.047 (.065)
Racketeering/Extortion		1.055 (.112)	1.224 (.137)
Other Offense		.168 (.021)***	.181 (.024)***
Pretrial Detention		2.275 (.259)***	2.134 (.247)***
Trial			2.660 (.137)***
Downward Departure			— ^a (.057)
Mandatory Imposed			1.353 (.072)***
Pseudo R ²	.029	.700	.708

Notes: Robust SE in parentheses. Circuit and year fixed effects in models 2 and 3 are not reported.

^aDeparture is not included in the model because life eligibility is determined before departures are decided.

* $p < .05$.

** $p < .01$.

*** $p < .001$. Odds ratios presented for ease of interpretation.

conviction is positively associated with life eligibility, multiplying its odds by a factor of 2.66. Similarly, because mandatory minimums trump the guidelines, they can lead to higher recommended sentences and increase one's risk of being eligible for a life sentence. Offenders sentenced under a mandatory minimum have odds of life eligibility that are 35 percent greater. These findings suggest that procedural variables play an important indirect role in shaping eligibility for life imprisonment. Even after accounting for these and other factors, though, Black and Hispanic offenders have odds of life eligibility that are significantly greater than White offenders—a key finding we return to in the Discussion section.

6.3 | Imposition of life sentences

Our third hypothesis anticipated that, among life-eligible offenders, judges would be more likely to impose a life sentence on Black and Hispanic offenders. As shown in table 4, this expectation is not supported. When we limit the sample to life-eligible cases, race has no effect on the likelihood

TABLE 4 Logit models for life sentences in the subsample of life-eligible cases (N = 4,852)

Variables	Model 1	Model 2	Model 3
	Odds Ratio	Odds Ratio	Odds Ratio
Black	1.091 (.099)	1.092 (.120)	.833 (.098)
Hispanic	.684 (.075)***	.586 (.077)***	.555 (.074)***
Other Race	1.010 (.173)	.920 (.175)	.814 (.172)
Female	.700 (.141)	.651 (.147)	.840 (.207)
Non-U.S. Citizen	1.473 (.155)***	1.085 (.132)	.954 (.125)
Age at Sentencing	1.011 (.004)**	1.019 (.004)***	1.011 (.004)*
More than High School	.996 (.090)	.891 (.090)	.869 (.095)
Criminal History Score		.947 (.023)*	.921 (.025)**
Offense Severity Score		1.069 (.017)***	1.066 (.020)***
Ln(Number of Counts)		1.941 (.096)***	1.313 (.071)***
Murder/Manslaughter		4.598 (.706)***	8.066 (1.381)***
Kidnapping		1.799 (.383)**	3.897 (.968)***
Sex Offense		.767 (.121)	.852 (.147)
Assault/Robbery		19.82 (9.098)***	23.47 (11.94)***
Firearms		1.087 (.121)	1.086 (.138)
Racketeering/Extortion		3.474 (.415)***	8.144 (1.143)***
Other Offense		.833 (.164)	1.149 (.245)
Pretrial Detention		2.022 (.630)*	1.722 (.512)
Trial			5.095 (.491)***
Downward Departure			— ^a
Mandatory Imposed			4.157 (.526)***
Pseudo R ²	.008	.135	.256

Notes: Robust SE in parentheses. Circuit and year fixed effects in models 2 and 3 are not reported.

^aDownward departure is omitted from Model 3 because it perfectly predicts life sentences.

* $p < .05$.

** $p < .01$.

*** $p < .001$. Odds ratios presented for ease of interpretation.

of a life sentence and the effect of ethnicity, which is significant, is negative. The fully specified model (model 3) shows that imposition of a life sentence is closely related to legal case factors, including crime seriousness, criminal history, number of counts, and type of offense. Relative to drug offenses, for instance, the odds of a life sentence are much higher for violent crimes like murder, kidnapping, and robbery or assault, as well as for racketeering/extortion.

Life sentences are also strongly associated with intermediate case-processing mechanisms in the subsample of life-eligible cases. Specifically, the odds of a life sentence are about five times greater for offenders convicted at trial and more than four times greater for cases involving a mandatory minimum sentence. Notably, the downward departure variable had to be omitted from this model because it perfectly predicted the outcome—none of the life-eligible offenders who received a downward departure had a life sentence imposed, signifying an important role for guidelines departures. The results presented thus far imply an important role for intermediate case-processing factors in shaping racial disparities in life sentences. To further investigate this,

we estimate a series of path models that explicitly model the direct and indirect effects of race on life imprisonment.

7 | PATH ANALYSIS

7.1 | The indirect effects of race/ethnicity on life sentences

Our final research question addresses the role that intermediate punishment processes play in racial disparities in life imprisonment. We hypothesized that Black and Hispanic offenders would be disadvantaged by key procedural mechanisms tied to federal sentencing, including the mode of conviction, mandatory minimums, and downward departures. To assess these relationships, we examine a series of path models that treat these intermediate outcomes as endogenous variables. These results are summarized in path diagrams reporting odds ratios for our estimates of interest.¹¹

Figure 2 shows odds ratios for the relationships between race and ethnicity, the key case-processing factors, and the imposition of a life sentence in the full sample of all non-immigration cases. Similar to table 2, this provides an assessment of overall racial differences, but it also reveals the indirect ways that racial disparities are shaped by intermediate punishment processes. Consistent with table 2, the direct effect of race is not statistically significant, and the effect of ethnicity is significant but negative. The path diagram, however, also implies strong indirect effects via the three mediating mechanisms. Black and Hispanic offenders are more likely than White offenders to have mandatory minimums imposed, which increases their odds of life imprisonment. Moreover, Black and Hispanic offenders are less likely to receive downward departures, which are associated with substantially lower odds of a life sentence. Results for trial conviction among all offenders differ by race and ethnicity, with Black offenders more likely and Hispanic offenders less likely than White offenders to be convicted by trial instead of plea.

The embedded table in figure 2 reports the direct and indirect effects of race and ethnicity on life imprisonment, which can be summed to produce a total effect.¹² Overall, the total effect of being Black is to multiply the odds of life imprisonment by a factor of 1.58, which is equivalent to the cumulative indirect effects associated with trial conviction, downward departures, and mandatory minimums. What this means is that the odds of a life sentence for Black offenders are more than 50 percent greater than for White offenders, but only because they are indirectly disadvantaged by trial conviction, downward departures, and mandatory minimums.

By contrast, the direct effect of Hispanic ethnicity on life imprisonment is significant and negative. Hispanic offenders have odds of life imprisonment that are two thirds those of White offenders. This direct effect, however, also masks significant indirect effects. Hispanic offenders are disadvantaged by both downward departures and mandatory minimums, even though they benefit

¹¹ The path models include all legal, case-processing, and demographic variables in the fully specified models shown in previous tables. Consistent with prior work (e.g., Wooldredge et al., 2015), complete pathways are not reported in the interest of clarity and interpretability, but full results for all coefficients are available upon request.

¹² In linear models, indirect effects are equivalent to the product of all coefficients for all pathways linking the independent and dependent variables (see Iacobucci, 2008). With categorical mediators, the nonlinear functional form complicates these calculations. Winship and Mare (1983) offered a useful description of how indirect and direct effects can be calculated in path models with discrete data, and Buis (2010) provided a generalized method for estimating indirect effects in nonlinear models using the *ldecomp* command in Stata 14. We apply these methods, which use bootstrapped standard errors to generate statistical significance tests, to estimate our indirect effects.

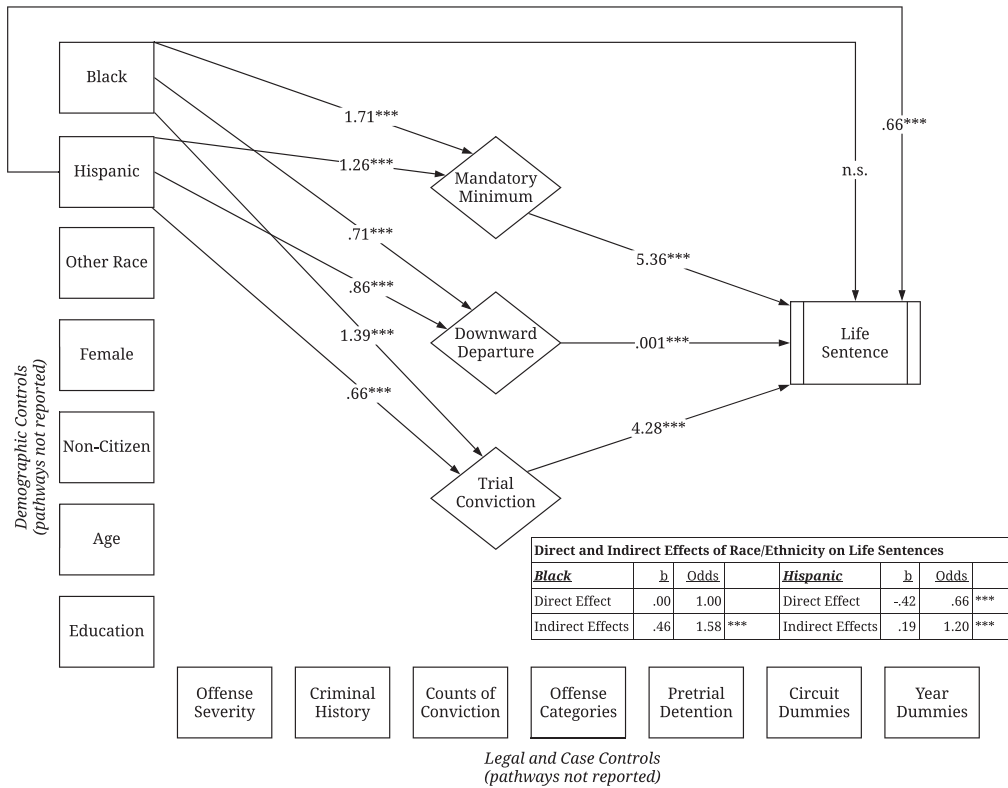


FIGURE 2 Direct and indirect effects of race and ethnicity on life sentences Full Sample (N = 366,612)—(Odds Ratios Reported)

from lower rates of trial conviction. The net indirect effect is to increase the odds of a life sentence by 20 percent for Hispanic relative to White offenders. After accounting for both direct and indirect effects, Hispanic offenders have overall odds of receiving a life sentence that are approximately .80 times those of White offenders.¹³

Figure 3 replicates the path model with *eligibility* for life imprisonment as the dependent variable. The relationships between race, ethnicity, and the two endogenous mediators in the model are unchanged, as one would expect, but the mediating variables do not explain much of the disparity in eligibility for a life sentence. This is consistent with table 3. Even after accounting for various legal and case-processing factors, Black and Hispanic offenders are substantially more likely to be placed into guidelines cells that allow for life sentences. For Black offenders, trial conviction and mandatory minimums slightly exacerbate the odds of life eligibility; for Hispanic offenders, the indirect effects are negligible. Overall, the indirect effects are small compared with the direct effects of race and ethnicity. As we elaborate below, many discretionary decisions can impact one’s placement within the guidelines, and these results suggest these processes work to disadvantage minority offenders with regard to eligibility for life sentences in federal court.

Lastly, we restrict the sample to life-eligible offenders and reestimate the path model with a life sentence as the dependent variable. As with table 4, this helps isolate the role of judicial discretion

¹³ The direct effect ($b = -.42$) can be added to the indirect effect ($b = .19$) to generate the total effect ($e^{-0.23} = .80$).

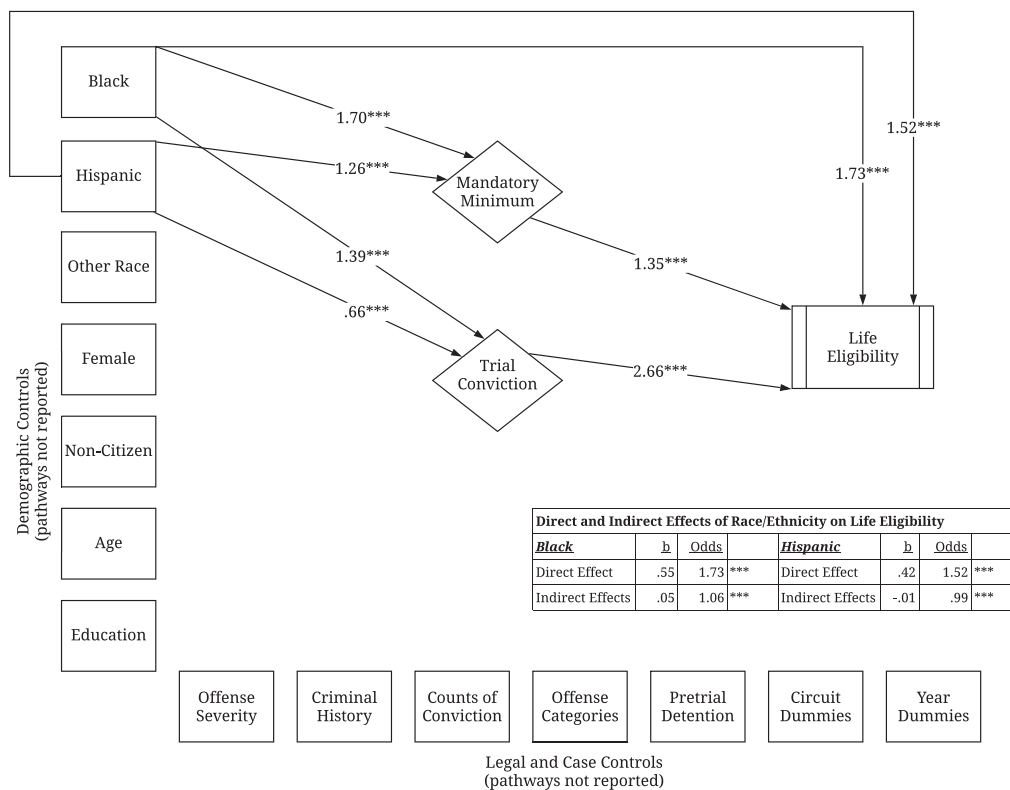


FIGURE 3 Direct and indirect effects of race and ethnicity on life eligibility Full Sample (N = 366,612)—(Odds Ratios Reported)

in the imposition of life sentences. Consistent with prior findings, figure 4 shows no evidence of direct race effects and the effect of ethnicity is opposite of that predicted. Meaningful indirect effects, however, are once again present. For Black offenders, mandatory minimums and trial conviction indirectly increase the odds of a life sentence by 33 percent. Because the direct effect of race was negative (but not significant), the total effect is positive but modest in magnitude ($b = .11$; Odds = 1.12). Still, it highlights the importance of considering indirect mediating processes that impact life imprisonment. For Hispanic offenders, there are no significant indirect effects, so the total effect is just equal to the direct effect.

As in table 4, the downward departure variable had to be omitted from the path model because it perfectly predicted the outcome—no life-eligible offender received a downward departure and was sentenced to life in prison. To examine the potential indirect effects of departures on racial disparity, we estimated a separate logistic regression model with downward departure as the dependent variable. This model is included in the online supporting information, but the key finding is that among life-eligible offenders, Black defendants are less likely than White offenders to receive a departure ($b = -.18$; SE = .08; $p < .05$) whereas Hispanic offenders are more likely ($b = .28$; SE = .14; $p < .01$). This implies that the indirect effects of race and ethnicity reported in figure 4 may be even stronger if downward departures could be included as an additional mediator, and it suggests future work is needed that focuses explicitly on the role of departures in mitigating life sentences. We elaborate on these and other key findings in the next section.

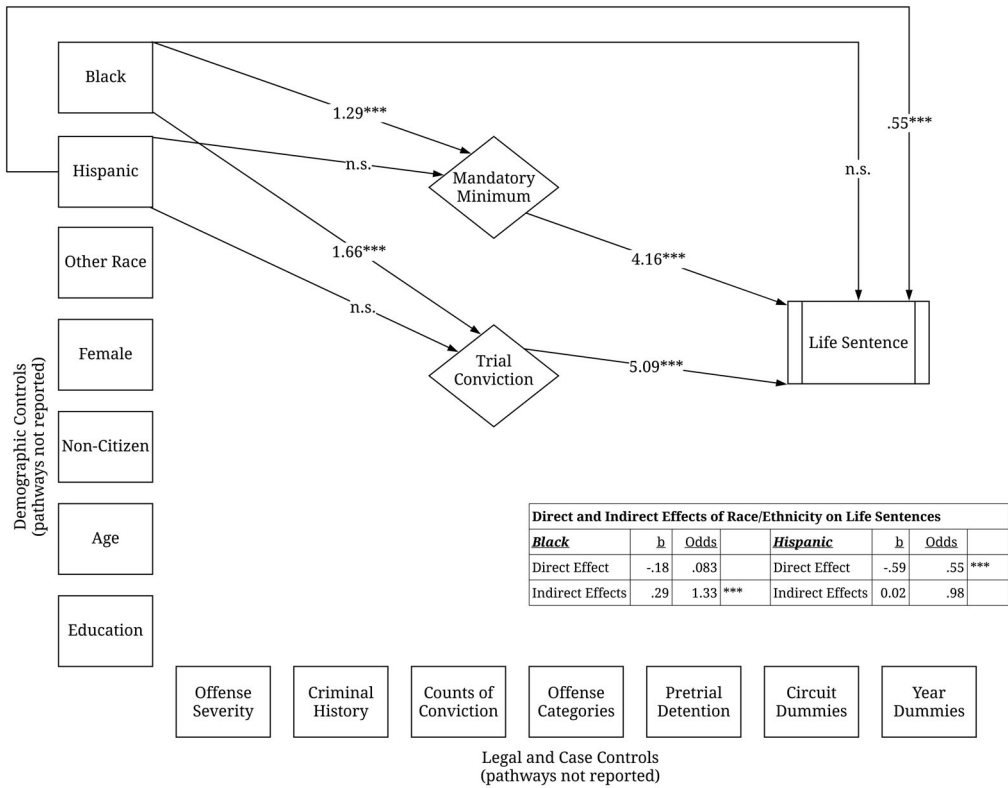


FIGURE 4 Direct and indirect effects of race and ethnicity on life sentences among eligible offenders Eligibility Sample ($N = 4,852$)—(Odds Ratios Reported)

8 | DISCUSSION

In line with recent remarks that “Life-sentencing research is an important area for studying race and punishment” (Seeds, 2021, p. 302), the current work examined the association between race, ethnicity, and life sentences in federal court. We elucidate broad patterns of inequality in life sentences and identify key mechanisms that shape eligibility for, and imposition of, LWOP. Integrating insights from social-psychological theories of court actor decision-making with broader socio-legal perspectives on racial inequality, we develop and test four hypotheses regarding the direct and indirect effects of race and ethnicity on life sentences.

As table 5 illustrates, we find mixed evidence for our theoretical expectations. In line with hypothesis 1, Black offenders have greater odds of being sentenced to life in prison relative to White offenders. Aggregate race differences, however, are partially related to legal case characteristics, and they are not significant after accounting for core procedural factors (trial conviction, mandatory minimums, and guidelines departures). This suggests that part of the overall racial disparity in life sentences is a result of differences in the way federal cases are processed. No evidence emerged for ethnic disadvantage. In fact, after accounting for other case factors, Hispanic offenders were significantly less likely than White offenders to be sentenced to life. Overall, these results align with public criticisms aimed at racial but not ethnic overrepresentation in life

TABLE 5 Summary of hypotheses tested and results of analyses

Hypotheses	Results of analyses	
	Black offenders	Hispanic offenders
H1: <i>Among all federal offenders, Black and Hispanic offenders will be more likely than White offenders to be sentenced to life imprisonment.</i>	Partially supported: Aggregate race differences exist but are partially explained by legal and case factors	Not supported: Hispanic offenders are not more likely than White offenders to receive a life sentence
H2: <i>Black and Hispanic offenders will be more likely than White offenders to be eligible for life imprisonment under the guidelines.</i>	Supported: Black offenders are significantly more likely than White offenders to be eligible for life	Supported: Hispanic offenders are significantly more likely than White offenders to be eligible for life
H3: <i>Among life-eligible offenders, Black and Hispanic offenders will be more likely than White offenders to receive a sentence of life imprisonment.</i>	Not supported: No significant difference between Black and White offenders	Not supported: Hispanic offenders are significantly less likely than White offenders to receive a life sentence
Full sample: Life sentence		
H4: <i>Black and Hispanic offenders will be disadvantaged by intermediate case-processing mechanisms that shape eligibility for life imprisonment and imposition of life sentences, including trial conviction, mandatory minimums, and guidelines departures.</i>	Supported: Race indirectly affects life sentences through all three intermediate mechanisms in expected ways	Partially supported: Ethnicity affects life sentences in expected ways for downward departures and mandatory minimums (but not trial conviction)
Full sample: Life eligibility		
	Partially supported: Total indirect effects are significant but account for little of the total effect of race	Not supported: Indirect effects do not add meaningfully to the total effect of ethnicity
Eligibility sample: Life sentence		
	Supported: Race indirectly affects the imposition of life sentences through both trial conviction and mandatory minimums, and is negatively related to downward departures	Not supported: Ethnicity does not indirectly affect the imposition of life sentences through trial conviction or mandatory minimums, and is positively related to downward departures

sentences (e.g., Ogletree & Sarat, 2012), and they imply that other indirect processes may be at least partially responsible for observed inequalities.

Strong support emerged for our second hypothesis. Consistent with socio-legal perspectives on structural disadvantage that emphasize how racial inequalities can be embedded in formal legal structures and operating procedures, we found significant racial differences in eligibility for life imprisonment. Both Black and Hispanic offenders were more likely than White offenders to be eligible for life sentences under the guidelines, even after adjusting for other legal or case-processing characteristics. This highlights the importance of examining eligibility as a distinctive outcome, and it suggests aggregate disparities in life imprisonment are closely tied to how and where offenders are situated within the guidelines. The fact that Black and Hispanic offenders are at increased risk of being placed into guidelines cells that allow or even mandate a life sentence raises important questions about hidden inequalities. On the one hand, racial disparities may be codified in federal sentencing laws themselves (Bushway & Forst, 2013). The 100:1 crack-cocaine disparity offers a now-infamous example of this type of “built-in” disparity (Tonry, 1995). To the extent that similar processes attach to legal statutes defining eligibility for life in prison (and other severe sentencing options), this may partially account for aggregate patterns of racial disparities. Future research is clearly needed on this important topic.

Nevertheless, there is considerable discretion in how the guidelines are calculated and applied in individual cases. Federal guidelines calculations are exceedingly complex and involve a multitude of subjective decisions. Some scholars therefore argue that the guidelines present the façade of a uniform system of rules when in fact they offer ample opportunity for disparity (Stith & Cabranes, 1998). Federal probation officers and especially prosecutors play an essential role in this process. Stipulations to drug types and amounts, determinations of career offender and criminal history enhancements, decisions regarding obstructing justice, accepting responsibility, and various role and weapons adjustments all involve a level of discretion that shapes how offenders are situated within the guidelines. Subtle disparities in plea processes can also shape guidelines calculations in consequential ways (Johnson & Larroulet, 2019; Lynch, 2016). Directly testing the surfeit of factors involved in the federal guidelines is a Sisyphean task, and one that is beyond the scope of the present analysis. Without comprehensive charging information, it is not possible to fully explain residual race differences in life eligibility, but our findings are consistent with the notion that these processes work to systematically disadvantage minority defendants in terms of their placement within the federal sentencing guidelines.¹⁴

By contrast, we did not find support for our third hypothesis. Contrary to social-psychological theories grounded in racial stereotypes and heuristics, we did not find evidence that federal judges are more likely to impose life sentences on eligible Black and Hispanic offenders. When we limit the sample to life-eligible offenders, both the descriptive statistics (table 1) and multivariate analysis (table 4) suggest that judges base these decisions primarily on legal factors; the likelihood of a LWOP sentence is substantially higher for eligible offenders convicted of violent crimes or racketeering/extortion and for those sentenced under mandatory minimums. This may be because federal life sentences are structured by legal statutes and the guidelines in ways that may limit the potential for judicial bias once life eligibility has been determined.

¹⁴ We investigated several additional special case characteristics, including weapon enhancements, 924(c) gun charges, career offender status, and aggravating role adjustments, and they did not account for race disparities in life eligibility. There are also meaningful racial differences in statutory eligibility for life sentences, which may suggest the inequalities are being driven by the laws themselves rather than by their subjective application. Clearly additional research is needed on the underlying reasons for racial differences in eligibility for different types of punishments.

Notably, this contrasts with prior work on sentencing disparities in incarceration, sentence lengths, and death penalty decisions (Baumer, 2013; Radelet, 1981; Ulmer, 2012; Ulmer et al. 2020). It does not necessarily mean, however, that life sentencing decisions are free of prejudice. Our findings suggest that racial overrepresentation in life imprisonment is closely tied to other racialized patterns in federal case processing. As noted, there are important differences in who is eligible for a life sentence. If minority offenders are more likely to be placed into life-eligible guidelines cells, then selection effects could account for the limited racial and unexpected ethnic effects among life-eligible offenders. Moreover, race also has important indirect effects on life sentences not captured by the direct race coefficients in these analyses.

In line with this, our fourth and final hypothesis anticipated significant indirect effects for race and ethnicity, operating through key procedural mechanisms in federal court. This expectation was supported in part. In both the full sample and the life-eligible sample, Blacks were more likely than Whites to be convicted at trial and to have a mandatory minimum sentence imposed, and they were less likely to receive a downward departure; as a result, they faced significantly higher odds of life imprisonment. By contrast, in the full sample of non-immigration cases, Hispanic offenders were disadvantaged by mandatory minimums and departures, but not by trial conviction, and these factors did not contribute to indirect disadvantages among life-eligible cases. Although both Black and Hispanic defendants were more likely to be eligible for a life sentence under the guidelines, the three procedural mechanisms examined did little to explain these differences. Interestingly, for Hispanic offenders, disadvantages in life eligibility seem to be offset by their reduced odds of receiving a life sentence when eligible. The same is not true for Black offenders, who are not only more likely to be eligible for life but are also more likely to have life imposed after accounting for both direct and indirect race effects.

Many of these findings have broader implications for sentencing scholarship writ large. First, much of the existing work analyzes final sentence outcomes without accounting for availability of punishments or for selection processes that lead to some defendants becoming eligible for more severe sentencing options. Future research needs to explicitly consider how different selection processes work to shape the racial distribution of available sentencing options, how these processes are embedded in existing punishment systems, and how they might indirectly contribute to systemic inequalities in sentencing. Our findings suggest that eligibility for life sentences is at least as important as judicial decisions to impose these sentences when available.

Second, sentencing scholars have long recognized the importance of investigating intermediate case-processing decisions (e.g., Hagan, 1974; Klepper et al., 1983; Zatz, 1987), but explicit tests of these influences remain rare (see Brennan, 2006; Wooldredge et al., 2015; Ulmer et al., 2016). Our analysis highlights the importance of procedural factors for understanding inequality in life imprisonment. Whereas prior research found no significant racial differences in life sentences (Hamilton, 2016), our results reveal important indirect disparities. As Lynch (2019, p. 1159) observed, “the narrow focus on ‘disparities,’ operationalized as a single end-stage outcome” is problematic when it “nets out how legal mechanisms differentially operate for different demographic groups.” Our findings illustrate how statistical models that control for process-related factors can obscure indirect mechanisms of racial disadvantage. In addition to the factors that we examine, future work is needed that expands the range of potential mediators to include other considerations, such as criminal history scores (Hester & Hartman, 2017), pretrial detention decisions (Kutateladze et al., 2014), and guilty plea discounts (Johnson & Larroulet, 2019). Greater focus on the role of intermediate decisions has the potential to significantly improve our theoretical understanding of the punishment process by clarifying how disadvantages accumulate over

the life course of a criminal case, and it permits a more complete assessment of the direct and indirect ways that race and ethnicity impact sentencing.

Finally, our results further highlight the importance of examining LWOP as an important and distinctive sentencing decision. LWOP sentences share similarities with both the death penalty and long terms of incarceration, but they are also unique. They do not carry the same procedural protections as capital punishment, and they categorically preclude release, leading some to equate them to a “slow form of the death penalty” (Leigey & Schartmueller, 2019, p. 249). Still, our findings are consistent with prior work that has suggested trial conviction (Johnson, 2019), mandatory minimums (Rehavi & Starr, 2014), and guidelines departures (Ulmer & Johnson, 2017) are important drivers of inequalities in punishment. Future work is needed that delves more deeply into the various ways LWOP sentences are similar to and different from other severe sanctions. Qualitative research on judicial views of life sentences vis-à-vis other available sentencing options could be especially valuable in this regard.

Our study is only the second to investigate federal life sentences, and it is the first to consider life eligibility and the imposition of life given eligibility. This allows us to investigate broader sources of inequality and to begin to isolate the role of judicial discretion, but as with most sentencing work, we cannot directly measure decision-making bias, and we are therefore limited in what we can conclude. Our initial findings, however, are consistent with the notion that racial disparity is driven more by structural sources of inequality in the ways federal cases are processed, rather than by implicit prejudice or overt bias on the part of judges. This aligns with recent arguments that emphasize the importance of examining broader structural mechanisms of inequality built into sentencing systems (Bushway & Forst, 2013; Lynch, 2019), and it clearly suggests that more work is needed in this regard.

8.1 | Limitations

Despite its contributions, this study also has several limitations that highlight fruitful directions for future research. First, we examine the federal system for many reasons: It is a model for state and international punishment policy; federal data offer detailed information on life sentences; the federal guidelines closely structure these sentences; and all federal life sentences are LWOP, which is one of “the most prominent penal developments of the late twentieth century” (Seeds, 2021, p. 291). Focusing on the federal system also has limitations, though. The federal system is unique in its caseload composition, guidelines, and punishment procedures, so the current findings may not generalize to state systems. Life sentences in federal court are more likely to involve drug trafficking and less likely to involve murder, they apply to a wider range of offenders and also coexist with the death penalty, whereas in many states LWOP has replaced capital punishment. Clearly, additional research on life sentencing is needed in other research contexts—both domestic and international, and in states with and without capital punishment—to fully understand sources of racial disproportionality.

Second, we analyze official, *de jure*, LWOP sentences because they are clearly defined, tied to specific guidelines recommendations, and arguably carry special social and political significance. Some scholars, for instance, have argued that the permanency and indeterminacy of LWOP makes it qualitatively distinct from other sentences (Leigey & Schartmueller, 2019), and several countries have officially outlawed life without parole sentences (van Zyl Smit & Appleton, 2019). Still, it is important to recognize that many federal offenders receive sentences so long that they are “*de facto*” or “*virtual*” life sentences (USSC, 2015). We report additional analysis of virtual life

sentences in the online supporting information. These findings are consistent with our results for official life terms, but additional research on similarities and differences between official and virtual life terms would be welcomed. Ultimately, we agree that studies that “look more deeply into the relationship between the death penalty, life sentences, and other forms of perpetual confinement” are needed (Seeds, 2021, p. 303).

Third, like most federal sentencing research, our study is limited to convicted offenders and we have no information on initial charging or plea bargaining decisions. Examining federal plea bargaining is a difficult enterprise, but it needs to be a priority in future research (Nagel & Schulhofer, 1992; Johnson, 2019; Lynch, 2016). We also lack information on some factors that could influence the use of life sentences, such as victim, prosecutor, and judge characteristics. Research on capital punishment has suggested that decision-maker characteristics exert minimal effects, but it is not uncommon to find race-of-victim influences (Paternoster et al., 2004; Ulmer et al., 2020). Additional research is needed to examine these issues for life imprisonment. In addition, research has shown punishments often vary by context and has suggested the application of law may be tied to the organizational characteristics of local court workgroups (Johnson et al., 2008; Lynch, 2016; Ulmer & Johnson, 2004, 2017). We use fixed effects to remove geographical and temporal variation, but future work is also needed to investigate organizational and jurisdictional variations in the use of life sentencing. Finally, additional work is needed to hone in on the various factors that shape guidelines calculations. We find large racial disparities in life eligibility that are not attributable to other cases characteristics. Federal probation officers and federal prosecutors play integral roles in determining an offender’s placement within the guidelines, yet very little research has examined these decision-making processes (Lynch, 2016); future scholarship needs to focus on these consequential decisions for life sentences and other punishment decisions. As van Zyl Smit and Appleton (2019, p. 168) noted, “The role of authorities, other than sentencing courts, in determining the imposition of a life sentence should not be underestimated.”

9 | CONCLUSION

As life and LWOP sentences have proliferated, questions have arisen regarding their fairness, efficacy, and cost-effectiveness (Cheatwood, 1988; Kleinstuber & Coldsmith, 2020). Life sentences are at odds with well-established findings that suggest offenders age out of crime (e.g., Sampson & Laub, 2003). Nearly one in three “lifers” is older than 55 years of age, raising questions about diminishing public safety returns (Nellis, 2021). Other work has suggested negative cognitive, emotional, and health consequences may be associated with long-term incarceration (Clemmer, 1940; Cohen & Taylor, 1972; Fleury-Steiner, 2015). Many scholars have argued that life sentences are a major impediment to decarceration and to efforts to reign in prison budgets in light of the high health care costs for older inmates (Leigey & Schartmueller, 2019). Even Pope Francis recently called for the abolition of LWOP, referring to it as “a hidden death penalty” (*Guardian*, 2014).

Critics also have begun to question whether LWOP offers a viable alternative to the death penalty. Approximately 2,500 prisoners are on death row, whereas more than 55,000 inmates are serving LWOP; the death row population has declined for 18 consecutive years, yet the number of LWOP sentences continues to rise (DPIC, 2019; Nellis, 2021). Some death penalty abolitionists continue to tout LWOP as a fairer and more humane punishment, but critics retort that LWOP sentences are “inherently arbitrary and capricious and the antithesis of fairness” (Irons, 2020). Although the Supreme Court has repeatedly ruled that “death is different,” recent decisions have

restricted the use of LWOP for juveniles, arguing that “life without parole sentences share some characteristics with death sentences that are shared by no other sentences” (*Graham v. Florida*, 2010), and that “imprisoning an offender until he dies alters the remainder of his life by a forfeiture that is irrevocable” (*Miller v. Alabama*, 2012). As debates over LWOP intensify, empirical research on inequities and unfairness in the life sentencing process will be critically important for informing future policy reforms (Kleinstuber & Coldsmith, 2020). In the end, we concur with Supreme Court Justice Sotomayor who recently opined that, “Trial judges making the determination whether a defendant should be condemned to die in prison have a grave responsibility” because “it means that whatever the future might hold in store for the mind and spirit of the convict, he will remain in prison for the rest of his days” (*Glen Campbell v. Ohio*, 2018).

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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Appendix A: Federal Sentencing Guidelines Matrix

SENTENCING TABLE
(in months of imprisonment)

Offense Level	Criminal History Category (Criminal History Points)					
	I (0 or 1)	II (2 or 3)	III (4, 5, 6)	IV (7, 8, 9)	V (10, 11, 12)	VI (13 or more)
	1	0-6	0-6	0-6	0-6	0-6
	2	0-6	0-6	0-6	0-6	1-7
	3	0-6	0-6	0-6	0-6	2-8
Zone A	4	0-6	0-6	0-6	2-8	4-10
	5	0-6	0-6	1-7	4-10	6-12
	6	0-6	1-7	2-8	6-12	9-15
	7	0-6	2-8	4-10	8-14	12-18
	8	0-6	4-10	6-12	10-16	15-21
Zone B	9	4-10	6-12	8-14	12-18	18-24
	10	6-12	8-14	10-16	15-21	21-27
	11	8-14	10-16	12-18	18-24	24-30
Zone C	12	10-16	12-18	15-21	21-27	27-33
	13	12-18	15-21	18-24	24-30	30-37
	14	15-21	18-24	21-27	27-33	33-41
	15	18-24	21-27	24-30	30-37	37-46
	16	21-27	24-30	27-33	33-41	41-51
	17	24-30	27-33	30-37	37-46	46-57
	18	27-33	30-37	33-41	41-51	51-63
	19	30-37	33-41	37-46	46-57	57-71
	20	33-41	37-46	41-51	51-63	63-78
	21	37-46	41-51	46-57	57-71	70-87
	22	41-51	46-57	51-63	63-78	77-96
	23	46-57	51-63	57-71	70-87	84-105
	24	51-63	57-71	63-78	77-96	92-115
	25	57-71	63-78	70-87	84-105	100-125
	26	63-78	70-87	78-97	92-115	110-137
Zone D	27	70-87	78-97	87-108	100-125	120-150
	28	78-97	87-108	97-121	110-137	130-162
	29	87-108	97-121	108-135	121-151	140-175
	30	97-121	108-135	121-151	135-168	151-188
	31	108-135	121-151	135-168	151-188	168-210
	32	121-151	135-168	151-188	168-210	188-235
	33	135-168	151-188	168-210	188-235	210-262
	34	151-188	168-210	188-235	210-262	235-293
	35	168-210	188-235	210-262	235-293	262-327
	36	188-235	210-262	235-293	262-327	292-365
	37	210-262	235-293	262-327	292-365	324-405
	38	235-293	262-327	292-365	324-405	360-life
	39	262-327	292-365	324-405	360-life	360-life
	40	292-365	324-405	360-life	360-life	360-life
	41	324-405	360-life	360-life	360-life	360-life
	42	360-life	360-life	360-life	360-life	360-life
	43	life	life	life	life	life