LONG-TERM INCARCERATION AND PUBLIC SAFETY: PREDICTING THE RECIDIVISM RISK OF LONG-TERM PRISONERS

by

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Administrative data used in this study was obtained from the New York State Department of Corrections and Community Supervision (DOCCS) and the Division of Criminal Justice Services (DCJS). The data received from these agencies included institutional data, provided by DOCCS, and criminal history data, provided by DCJS. The researcher was provided with a dataset of anonymous matched cases from DCJS and DOCCS. Records included in the dataset were unidentifiable to the researcher. The researcher is solely responsible for the statistical methods used in this study, and the conclusions expressed are those of the researcher and do not represent the opinions of DOCCS or DCJS.

Abstract

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Advisor: Jeff Mellow, Ph.D.

Since the 1970s, the number of people incarcerated in the United States has grown exponentially. The United States has now reached a historical moment as it incarcerates more of its citizens that it ever has before. Moreover, the rate at which it does surpasses all other nations. Increased length of sentences and time served have contributed substantially to America's prison growth, calling into focus the need for research that examines the impact long prison sentences have on an individual's likelihood of recidivism. To date, little is known about the relationship between long prison sentences and public safety outcomes. Unfortunately, in recent years, long-term incarceration has received minimal attention from the academic world.

Despite the gap in research, questions surrounding long-term incarceration are as critical now as ever. Today, people are spending more time in America's prisons than ever before. Individuals, who at one time would have been released, are collecting in our nation's prison system, creating a larger and longer-term prison population. Today's economic reality forces criminal justice administrators all over the country to consider ways to cut budgets without compromising public safety. This study outlines the importance of considering the impact length of stay has on recidivism when making sentencing and release decisions. Using data from New York, this study examines the impact that each additional month served has on the likelihood that a person will be re-arrested or re-incarcerated within two years of release. Put another way, this

study seeks to identify the point at which individuals pose no heighten risk to public safety. Results indicate that this point occurs years before people serving long prison terms are released. The relationship between long prison sentences and recidivism are explored further as factors associated with positive release decisions and criminal justice system involvement are controlled for in the models, helping to identify factors that are significant in predicting recidivism outcomes. Implications for sentencing practice and parole release decisions are discussed. Additionally, future research opportunities are identified.

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Introduction

The size of the prison population is a direct function of two factors: the number of people that enter the system and the length of time they stay (Austin, 2010; Flanagan, 1995a), both of which have been on the rise since the 1970s resulting in a prison population that is larger and longer-term than ever before. A great deal of criminological scholarship has focused on the exponential rate of prison growth and the large number of people entering the prison system. This project, however, focuses on the second factor contributing to the growth of the prison population: the length of time people stay. This research seeks to understand the effects long prison sentences have on rates of recidivism. More specifically, using administrative data, this study predicts recidivism rates for people serving long terms in New York prisons.

The dramatic increase of the prison population over the previous four decades has generated an array of research examining issues related to incarceration including its impact on individuals, communities, and crime. However, in recent years, there has been a dearth of research on long-term incarceration. This is true despite the increasing amount of time people are serving in prison. Today, men and women, who in previous decades would have already been released from prison, are collecting in the system, creating a larger and longer-term prison population.

For the purposes of this study, "long-term" is defined as serving 15 consecutive years or more in prison. In New York, the focus of this study, the number of people serving long prison sentences has increased exponentially since the 1980s. Between 1985 and 2010, the number of people serving a minimum sentence of 15 to 20 years increased by over 150 percent while the number of people serving a minimum of 20 years or more increased by over 250 percent (Donnelly & Bala, 1993; Bernstein, 2010). These statistics are largely comprised of individuals

convicted of class A-1 violent felonies. In New York, the class A-1 violent felony category includes the following crimes: first and second-degree murder, first-degree kidnapping, first-degree arson, and first-degree conspiracy, representing the most serious and violent crimes one can commit. Due to the serious nature of their crimes, a great deal of political risk is taken when decisions are made to allow these individuals back into the community. Should they cause more harm to society media and public backlash will inevitably occur, raising questions as to why the person had been released back to the community in the first place. Perhaps the most well known example is that of Willie Horton, who in 1987, while on a weekend furlough, committed assault, rape, and armed robbery. At the time, Horton was serving a sentence of life without the possibility of parole for murder; however, he had been granted the privilege of weekend leaves from prison.

While the Willie Horton case paints a horrifying picture of what could happen when an individual convicted of a violent crime is released into the community, he is an exception, not the rule. Indeed, recidivism rates indicate that, as a group, people who serve long prison sentences are the least likely to recidivate. For example, in New York, the average three year re-incarceration rate for individuals released after serving a sentence for murder is drastically lower than the overall re-incarceration rate for the entire released population (Staley & Kim, 2010). These lower rates suggest that, as a group, those who have been convicted of the most serious crimes and served long prison terms may in fact, from a public safety standpoint, be good candidates for release.[1] However, the point in sentences at which people become good candidates for release remains unknown. Put another way, the lingering question is whether lower

[1] A summary of the literature on parole release decisions is provided in Chapter 3. As will be discussed, there are a number of factors that releasing authorities rely on to determine individuals who are good release candidates. For the purposes of this research, the phrase "good candidates for release" refers to the point at which people serving long prison sentences can be released from prison without a heightened risk of recidivism.

recidivism rates are achieved at earlier points in time. If so, what factors influence the relationship between time served and recidivism?

Given the seriousness of the crimes that have been committed by most people serving long prison sentences, many community members and policy makers would likely argue that keeping an individual in prison prevents harm in the community. Obviously, one way to ensure that a person never harms the community again is to keep him or her institutionalized. However, while it cannot and should not be ignored that individuals have caused a great deal of harm to society, prison sentences cannot be infinite for two reasons. First, proportionality is an underlying principle of our justice system. Beccaria, when writing on proportionality, argued that disproportionate punishment violates the social contract and excessive punishment encourages crime. In this way, wrestling with how to do release while retaining community safety is a requirement of the criminal justice system. Secondly, the economic cost of locking people up for long periods of time makes release an important issue, particularly in current fiscal climates. Presently, legislatures all over the country are looking for ways to reduce prison populations and correctional spending. It is estimated that the United States spends $2.5 billion a year to incarcerate individuals serving a life sentence (Mauer, King, & Young, 2004). Given the fiscal cost associated with long-term incarceration, it is important to ask the following question: if this population poses little threat to public safety, are longer periods of incarceration an efficient use of public safety funds?

This study is intended to provide a nuanced understanding of the relationship between long-term incarceration and recidivism. Specifically, it seeks to expose how the relationship between long-term incarceration and recidivism unfolds. To do so, this research considers the

effect a variety of individual-level factors have on re-arrest and re-incarceration rates. Controlling for these factors, this research addresses four specific questions:

1. What is the impact of each month served on the likelihood of an individual becoming re-involved (re-arrest or re-incarceration) with the criminal justice system upon release?
2. How long are individuals who served long sentences successful (remain free from criminal justice system involvement) upon release compared to other time served groups?
3. If re-incarcerated, is there a difference in type of return (technical violation versus new conviction) for men and women who served long prison sentences compared to other time served groups?
4. If convicted of a new crime, is there a difference in type of return crime (violent or non-violent) for men and women who served long prison sentences compared to other time served groups?

The models developed to answer these questions have been informed by criminological theory, including the relationship between age and crime and social learning theory, as well as literature on parole release decision-making. They are designed to capture the complex story underling the relationship between long-term incarceration and recidivism. In conducting these analyses, this research seeks to quantitatively illustrate the point, or points, at which the risk of recidivism for those serving long prison sentences begins to decline. In addition, it will identify factors associated with this decline, ultimately documenting when individuals sentenced to long prison terms in New York can be released without a heightened risk of recidivism.

In the pages that follow, a number of topics related to long-term incarceration are discussed. Chapter 1 provides an overview of long-term incarceration in the United States. It begins by defining "long-term" and then illustrates how the long-term prison population has

grown over the last three decades. Policies and ideologies contributing to this growth are also discussed. The chapter concludes with an examination of the impact reentry – the release of men and women from prison – has on crime. Chapter 2 looks at what is known about the psychological effects of long-term incarceration. It also reasons why people who have served a long prison sentence experience low rates of recidivism. To this end, four criminological perspectives – deterrence theory, the relationship between age and crime, social learning theory, and desistance narratives – are discussed. The third chapter explores the research on parole release decisions. Since the overarching goal of this study is to identify when the risk of recidivism for people serving long prison sentences is no longer heightened, an understanding of the factors that influence release decisions is necessary and informative to the analyses.

This study uses data from New York to answer the research questions identified above. Given this focus, Chapter 4 provides an overview of the state of long-term incarceration in New York. It summarizes the growth of the population, identifies the factors contributing to this population's growth, and presents recidivism rates experienced by this population. The remaining three chapters focus on the analyses themselves. Chapter 5 provides an overview of the study methodology and describes the data used. The findings are presented in Chapter 6 and their implications are discussed in Chapter 7.

Chapter 1
Incarceration, Crime, and Reentry

Essential to the topic of long-term incarceration and public safety is a discussion of the increased use of long prison sentences as a strategy to respond to crime. In recent decades, jurisdictions have adopted policies that have contributed to the growth of the prison population, both in terms of the number of people admitted to prison and the length of time they stay. While diversion is a strategy that has received much attention in the world of criminal justice policy, addressing length of stay would also yield a significantly different picture of incarceration in the United States. Indeed, Mauer (2007) estimates that if time served had not increased since 1990, there would be nearly 400,000 fewer incarcerated people today. The following sections discuss the current state of long-term incarceration in the United States, philosophies and policies that contributed to the increase in the number of people serving long prison sentences in the United States, and the effect long prison sentences have on recidivism.

This chapter begins by defining long-term incarceration, first reviewing how previous research has defined "long-term" and then presenting the present study's definition. Next, the growth of the long-term prison population is illustrated using statistics that highlight the increase in time served over the last three decades. Third, the policies and ideologies that contribute to the increase in the incarcerated population are discussed. Contributing to the growth of the prison population is the perspective that incarceration reduces crime. The fourth section explores the impact incarceration has on crime rates. Finally, this chapter concludes with an examination of the impact reentry – the release of men and women from prison – has on crime rates. Literature that seeks to determine the threat individuals released from prison pose to public safety is reviewed, focusing on studies examining people who have served long prison sentences.

Defining Long-term Incarceration

The term "long-term" has been used to describe two populations within the prison system, some of which are individuals who have received an indeterminate life sentence. Additionally, there are those within the long-term population who will never be released from prison as they have received a life sentence without the possibility of parole. Both of these groups are commonly referred to as lifers. In addition to lifers, the term "long-term" has been used to describe individuals who have served anywhere from five to 15 consecutive years in prison.

Previous research has based the definition of long-term on time actually served as well as sentence length (MacKenzie & Goodstein, 1985). Unfortunately, the research on long-term incarceration has yet to yield a uniform definition for long-term (Flanagan, 1995a). However, because sentence length and the length of time served have increased over the decades, the lack of standardized definition is understandable. For example, what was considered long-term in the 1980s is closer to average-term today. While lifers have been included in the long-term population since the 1970s (Cowels & Sabath, 1996; Irwin, 2009), researchers have also defined long-term as five years of continuous time served in the 1980s, two times the average time served by incarcerated people at that time; seven years in 1985 (MacKenzie & Goodstein, 1985); eight to 10 years in 1991 (Maguire & Flanagan, 1991), a time at which the average prison sentence for violent felonies in 1988 state courts ranged from 7.5 to 20 years; and a determinate sentence of 10 years or more (Cowles & Sabath, 1996). Additionally, 15 years ago, the New York State Department of Corrections and Community Supervision Services (DOCCS) released a report on long-term incarceration in the New York prison system. This report defined long-term as individuals serving at least 15 consecutive years or more on a given sentence (Lyons,

1996). The present study utilizes data from DOCCS to explore the impact long prison sentences have on the public safety outcomes of men and women being released from New York prisons. Given this New York focus, and that the DOCCS report provides one of the most recent long-term definitions, this study defines long-term as an individual who has served 15 consecutive years or more in a New York prison. Both released lifers and others who served long prison sentences will fall under this definition.

Defining what is meant by long-term is important for the purposes of the analyses included in this study, but it is also important for understanding existing research on long-term incarceration. The reality of incarceration in America is that people now serve longer sentences than those incarcerated in previous decades. Thus, the perception of long-term has changed throughout the years. Individuals once identified as long-term (i.e. five continuous years, seven years, etc.) will not be captured by the current study. Therefore, findings from studies on long-term incarceration conducted in the 1970s should not be compared to findings from studies conducted today. As discussed in the following section, sentence length and length of stay have increased significantly over the last 30 years. The definition adopted by the current study accounts for such increases, making this research timely and relevant to the current reality of incarceration in the United States.

The Growth of Long-term Incarceration

Prior to the 1970s, the rate of incarceration in the United States was relatively stable, always remaining around 100 per 100,000 residents. The rate of incarceration between 1925 and 1980 was relatively flat, with a dramatic increase occurring in the 1980s (see Figure 1.1). By 2004, it was estimated that six million people living in the United States – 2.9 percent of the adult population – were serving or had served time in a state or federal prison (Uggen, Manza, &

Thompson, 2006). Today, nearly 1.6 million men and women are incarcerated in state and federal prisons (Glaze, 2010).

As the prison population expanded, so too did the number of men and women serving long prison sentences. One way to document the change in the number of people serving long prison sentences is to look at the number of individuals serving a life sentence, an indeterminate sentence in which the maximum term is life. For example, people convicted of class A-1 violent offenses in New York receive a sentence of 15 years to life.[2] Considered a "life sentence," these sentences typically do not result in the person being incarcerated for the rest of his or her natural life (Wikberg & Foster, 1998). There are, however, some within the long-term prison population who will never be released from prison. These individuals have received a life sentence without the possibility of parole.[3] These individuals will die in prison unless the governor of the state in which they are incarcerated grants clemency. As discussed in the previous section, people who receive a sentence of 15 years to life or life without the possibility of parole are considered lifers.

In 1992, there were 67,804 lifers in 47 states (Flanagan, 1995b). Sixty-six percent were serving a sentence for homicide, eight percent for sex crimes, and seven percent for drug offenses (Flanagan, 1995b). Between 1992 and 2003, the number of lifers in prison grew to over 120,000 (Mauer, King, & Young, 2004). Put another way, one out of every 11 individuals incarcerated in state prison during 2003 was serving a life sentence (Mauer, King, & Young, 2004). Several states stand out in terms of the number of lifers in their system. Using data from 2002 and 2003, Mauer and colleagues found that in 12 states, more than 10 percent of the prison population was comprised of individuals serving a life sentence. California, Nevada, and New York led all states with nearly one out of every five individuals serving a life sentence. Just

[2] Class A-1 violent felonies include first and second-degree murder, first-degree kidnapping, first-degree arson, and first-degree conspiracy.
[3] This group represents a small portion – 28 percent – of the lifer population (Clear & Lam, 2006).

under 20 percent of the New York prison population – 12,985 individuals – were lifers (Mauer, King, & Young, 2004). Very few people in New York receive a sentence of life without the possibility of parole. In 2002 and 2003, just .1 percent, or 110 individuals, of the New York prison population was serving a sentence of life without the possibility of parole (Mauer, King, & Young, 2004). Ultimately, this means the vast majority of lifers in New York will one day be released.

In addition to the increase in the number of men and women serving life sentences, changes in policy and practice have resulted in lifers spending more time in prison than they did prior to the 1980s. An increase in the number of people receiving a sentence of life without parole and limited or eliminated gubernatorial commutation, along with changes like truth-in-sentencing that have increased the amount of time that must be served before becoming eligible for parole, converge to significantly lengthen prison stays (Mauer, King, & Young, 2004). The median time served by lifers released from prison in 1983 was eight years and seven months (Bureau of Justice Statistics, 1984 as cited in Wikberg & Foster, 1998). Using data from the Bureau of Justice Statistics, Mauer and colleagues estimated the amount of time served by someone with a life sentence in the 1990s. In 1991, lifers served approximately 21 years in prison; by 1997 they served 29 years (Mauer, King, & Young, 2004). This represents more than a doubling of time over a decade and a tripling of time served in the span of 14 years.

Just like lifers, others in the prison system experience longer prison terms than their counterparts in previous decades. Typically, convictions for violent crimes yield the longest sentences. Looking specifically at men and women convicted of violent crimes, there have been significant increases in time served over the last 15 years. Between 1993 and 2008, time served in state prisons for a violent offense increased from three years to four years and three months,

an increase of nearly 42 percent (see Table 1.1). The largest increases took place for crimes classified as "homicide." The Bureau of Justice Statistics reports time served for four separate categories of homicide: (1) murder, (2) non-negligent manslaughter (voluntary manslaughter), (3) negligent manslaughter, and (4) unspecified homicide. The greatest increase in time served occurred for individuals convicted of voluntary manslaughter – 202 percent – while people convicted of murder experienced a 72 percent increase (see Table 1.1). According to Austin (2010), increases in time served are due to laws limiting the reduction in sentence length for good time and extending the date of release eligibility, along with the greater frequency of discretionary parole board decisions to deny release.

Also contributing to the growth of the long-term prison population are shifts in sentencing laws that expand the pool of crimes and circumstances for which longer sentences are given. These shifts have impacted the demographic characteristics of the long-term prison population, which have changed considerably over the last 40 years.[4] In the 1970s, the typical person serving a long prison sentence was a white male convicted of homicide, rape, or robbery who had little criminal history and little propensity for violence in prison (Flanagan, 1995a). During the 1980s, the long-term population became more heterogeneous in terms of offense (though a higher percentage of the population still serves a sentence for homicide), more racially diverse,[5] more violent (present and previous offense), and experienced higher rates of drug abuse (Flanagan, Clark, Aziz, & Szelest, 1990). These demographic changes suggest that as sentence lengths have increased, the type of crime subject to longer prison sentences has also changed.

[4] Data collected from the Bureau of Justice Statistics' *Survey of Inmates at Correctional Facilities* allows researchers to examine the characteristics of the prison population and identify any changes that have occurred over time.

[5] The percentage of African Americans serving a long-term prison sentence increased from 42 percent in 1974 to 53 percent in 1991, causing a shift in the long-term prison population from a white majority to a black majority (Flanagan, 1995b).

While the longest sentences are still typically reserved for the most violent crime – murder – people convicted of other violent offenses and those with extensive criminal histories are now part of the long-term prison population.

The number of people entering the system and the amount of time they stay contribute to the size of the prison population. However, Lynch and Sabol (2001), given the decrease in the rate of intakes but the continued growth of the prison population, attribute most of the population growth in the 1990s to the increase in the length of time people serve in prison. Therefore, time served plays a significant role in the story of imprisonment in the United States. Thus, it is critical to understand how the increase in the amount of time served by all people in prison – regardless of crime – occurred.

Shifting Policy and Punishment Philosophies

During the early 1970s, a time at which incarceration levels had remained stable since the 1920s, it is unlikely that researchers and policymakers could envision a society that incarcerates millions of its citizens. Indeed, during the 1970s, Blumstein and Cohen (1973) theorized that a stable society would maintain a stable level of punishment. That is, if crime rates dropped, levels of punishment would increase for less serious crimes. Alternatively, if crime rates increased, society would embrace more lenient crime policies, sending fewer people to prison and adopting alternative punishments. That, however, is not what occurred. Instead, the prison population exploded throughout the 1980s and 1990s, undermining Blumstein and Cohen's theory (Travis, 2005).

Blumstein and Cohen (1973) could neither imagine a society that would remove such a large group of people from the mainstream nor believe that taxpayers would be willing to cover the increased costs of incarceration. That, however, is precisely what has occurred over the last

40 years. As the rate of property crime victimization has declined since the mid-1970s (see Figure 1.2), policymakers and society embraced harsher crime policies and sentences. Moreover, as victimization rates for violent crime began to decline in the 1990s, and continue to decline today, harsh policies and sentences remain, continually expanding the reach of the prison system.

Rehabilitation and indeterminate sentencing. The belief that people can be reformed was a fundamental principle in the development of the first penitentiary, Walnut Street Jail, in the late 18th century. A project of the Quakers, the penitentiary created a system of punishment in which individuals convicted of a crime would no longer be subjected to harsh and publicly humiliating punishments like the stocks, quartering, or some other form of bodily harm. Instead, individuals would be given the opportunity to seek penitence for their crimes in a single cell. Punishment would no longer focus on the body; it would focus on the soul (Foucault, 1977).

As America's prison system has developed and grown, the role of rehabilitation has continually fallen in and out of favor. The metaphor of a swinging pendulum is often used to describe shifts in punishment philosophy in the United States: rehabilitation on one side and punishment on the other. As times passes, the pendulum swings back and forth between the two philosophies. Of course, policies adopted under both of these philosophies have consequences. When looking at moments in which punishment has been the philosophy *de jour*, a common consequence of criminal justice policies has been facility overcrowding, leading to unsanitary and unsafe living conditions for those incarcerated. Indeed, such was the consequence in the 1800s, a time in which determinate sentencing was the guiding sentencing framework.[6] It was during this time that world-renowned thinkers and writers, Charles Dickens (*Notes on America)* and Alexis de Tocqueville (*De la démocratie en Amérique*), visited America's prisons and

[6] Determinate sentencing is the framework presently used by most jurisdictions throughout the United States.

recorded how shocked and appalled they were by the inhumane nature of the prison system in the United States.

It was consequences such as this that sparked reform in the late 19th century. Meetings were held and reformers gathered; a document that would guide punishment philosophy in the United States for the next 100 years was created (Bosworth, 2010; Travis, 2005). Known as the Declaration of Principles, this document explained crime as a moral illness that could be treated. From this framework, two key policies arose: (1) incarcerated people could earn their release and (2) sentences should not be precisely determined; that is, sentences should be indeterminate (Bosworth, 2010; Travis, 2005). Under the indeterminate framework, the primary purpose of punishment is rehabilitation (Travis, 2005; Tonry, 1999). With two main features: (1) a minimum and maximum sentence set by a judge and (2) a release date determined by a parole board (Spohn, 2000), indeterminate sentencing focuses on the individual. Sentencing and release decisions are based on factors such as treatment needs and the risk to public safety that each person poses (Tonry, 1999). Release from prison is earned, not dictated by sentencing law. People in prison are granted parole based on good behavior and participation in work and education programs designed to facilitate rehabilitation.

From the 1870s until the 1970s, indeterminate sentencing and rehabilitation reigned. However, in the later part of the 20th century, they both came under attack. Indeterminate sentencing was criticized from both sides of the political isle. Liberals expressed concerns over the fairness of indeterminate sentencing, vocalizing fear about the lack of uniformity and fairness, particularly across class and race, due to the large amount of discretion given to judges (Travis, 2005; Spohn, 2000; Tonry, 1995). Conservatives criticized its focus on rehabilitation, claiming indeterminate sentencing was soft on crime (Wilson, 1975). Additionally, in 1974,

Robert Martinson released a review of rehabilitative programs in correctional facilities. In this report, Martinson concluded "nothing works" as he found rehabilitative programs generally had very little impact on reducing recidivism (Martinson, 1974). His conclusion further fueled the Right's critique of indeterminate sentencing and the correctional system's focus on rehabilitation.

With rehabilitation essentially deemed a failure and the concerns surrounding indeterminate sentencing, the pendulum began to swing once again towards punishment. This shift was reinforced by the spiking crime rate in the 1970s (Bosworth, 2010). Since that time, jurisdictions have created and implemented criminal justice policies aimed at achieving incapacitation and deterrence. Policies that at one time would have been "unthinkable" (i.e. indiscriminate three-strikes laws and truth-in-sentencing policies) are now commonplace (Tonry, 2001, p. 141). These and similar policies have resulted in more people going to prison and staying there for longer periods of time, helping to create a larger long-term population.

Retributivism and "get-tough" sentencing. There are a number of unique sentencing policies that have been adopted over the last 30 years that solidify America's shift towards punishment-focused policies. These policies include determinate sentencing structures that limit judges' discretion, mandatory minimums requiring individuals to serve absolute minimum prison terms, truth-in-sentencing laws to ensure individuals serve the majority of the sentence they receive in court (typically 85 percent), and three-strikes legislation designed to augment punishments for individuals convicted of felonies on three or more occasions (Tonry, 2001; Spohn, 2000). Built on the severity principle of deterrence theory, these sentencing policies, according to Tonry (1996), are "based on the premises that harsher penalties will reduce crime rates and that judges cannot otherwise be trusted to impose them" (p. 3). While jurisdictions have

been left to adopt their own criminal justice policies, federal efforts such as the Sentencing Reform Act of 1984 and the Violent Crime Control and Law Enforcement Act of 1994 undoubtedly influenced policies and approaches adopted throughout the United States. Both acts have resulted in more people going to prison and staying there for longer periods of time.

Bushway and Paternoster (2009) state there are two punishment philosophies currently shaping sentencing policy in the United States – retributivism and crime control. While crime control is based on the utilitarian principle that punishment reduces crime for the greater good, retributivism is a philosophy that punishment is justified simply because a crime was committed (Bushway & Paternoster). For example, Immanuel Kant, an 18th century German philosopher and retributivist, subscribed to the doctrine of *lex talionis*; there is a moral imperative to punish those who commit crime and the punishment given must be in proportion to the amount of harm caused (Tonry, 2004). While retribution might not lead to the most efficient and affective policies for a society, retribution is a feeling and desire that is deeply interwoven into our social fabric and western tradition (Foucault, 1977/1995), and its importance is glorified during moments in which punishment-focused policies dominate. Thus, retribution persists as a powerful argument for implementing long-term prison sentences.

Under the crime control perspective, the act of punishment is considered to be instrumental in reducing crime and thus justified for the greater good of society (Bushway & Paternoster, 2009). Under this logic, incarceration essentially becomes a necessary crime reduction tool in society. According to Clear (2007), incarceration controls crime in two primary ways – deterrence and incapacitation. The former is a concept first introduced by Beccaria (1764/1986) in *On Crimes and Punishment*:

> The purpose of punishment, then, is nothing other than to dissuade the criminal from doing fresh harm to his compatriots and to keep

> other people from doing the same. Therefore, punishments and the method of inflicting them should be chosen that, mindful of the proportion between crime and punishment, will make the most effective and lasting impression on men's minds and inflict the least torment on the body of the criminal (p. 23).

More simply, deterrence is the "omission or inhibition of a criminal act because of the fear of legal punishment" (Bushway & Paternoster, 2009, p. 131). In *On Crimes and Punishment*, Beccaria discusses two types of deterrence: general and specific deterrence. General deterrence is the "imposition of sanctions on one person to demonstrate to the rest of the public the expected costs of a criminal act, and thereby discourage criminal behavior in the general population" (Nagin, 1978, p. 96). Put another way, it is the threat that legal sanctions have on the general public (Gibbs, 1975). Specific deterrence, on the other hand, refers to the effect the experience punishment has on an individual. A person is deterred from future criminal behavior due to his or her direct experience with punishment (Meier & Johnson, 1977). Even Beccaria believed that while the death penalty is a cruel and ultimately absurd punishment, a life sentence for certain offenses is an acceptable deterrent (Beccaria, 1764/1986, p. 50). Under this logic, long prison sentences, including natural life sentences, will prevent crime because (1) the threat of a harsh sentence will prevent members of the public from engaging in criminal activity as the cost is too high and (2) an individual who experienced a harsh sentence will refrain from future criminal behavior because they have directly felt the implications of committing crime.

In addition to deterrence, "get-tough" punishments are grounded in the belief that incapacitation will reduce crime. According to Wilson (1983), incapacitation intrinsically reduces crime by physically restraining people from committing crime in society. In order for incapacitation to reduce crime, however, three conditions must be met: "some offenders must be repeaters, offenders taken off the streets must not be immediately and completely replaced by

new recruits, and prison must not increase the post-release criminal activity of those who have been incarcerated" (Wilson, 1983, p. 146). In a review of the most recent research on the impact of incarceration on criminal behavior, Bushway and Paternoster (2009) note there is a benefit to incarceration from a public safety standpoint; however, the amount of crime it reduces is dependant on where an incarcerated individual is situated in the overall distribution of offending and the degree to which he or she is replaced by others (p. 127).

At their emergence, harsh, or punishment-focused, policies became popular based on the assumption that their use would produce a subsequent reduction in the crime rate (Turner, Greenwood, Chen, & Fain, 1999). Put simply, it was believed that policies such as determinate sentencing and recidivist statutes would control crime through deterrence and incapacitation. The degree to which this relationship holds has been debated among academics.

Incapacitation and Crime

If one transposes a graph documenting the growth of incarceration over the crime rate in the United States, a seemingly simple trend can be immediately identified. At first glance, the relationship between incarceration and crime seems straightforward: the more people locked up, the less crime there is. Indeed, the United States has seen significant decreases in crime as incarceration rates have grown exponentially. Yet, research suggests that multiple factors – not just incarceration – have contributed to historically low crime rates. Moreover, some academics have concluded that there is a point in which the size of the prison population no longer impacts crime. Such findings indicate there is a much more complex relationship between incarceration and crime than a simple line graph suggests.

Researchers generally agree that incarceration does prevent crime. However, conclusions about the degree to which, and how, it prevents crime are less conclusive. Incarceration is just one of a variety of factors criminal justice experts identify as a contributor to the unprecedented

crime drop of the last 30 years. Researchers analyzing the relationship between incarceration and crime note the complexity of the association and argue that a number of issues must be considered within the analysis, including differences in state and national trends, measures of crime and victimization, and time periods to be included in the analysis (King, Mauer, & Young, 2005; Stenius, 2005). There are also a number of social factors that affect crime and must be considered when seeking to determine the impact of incarceration on crime. These include "economic trends, employment rates, age, demographics, rates of drug abuse, and geographic variation" (King, Mauer, & Young, p. 2).

Studies in the 1990s indicate that with every one incarceration a certain number of index crimes are prevented on the streets.[7] Marvell and Moody (1994) suggest that with each additional incarceration nearly 17 index crimes are prevented. Other studies indicate the effect is slightly lower, with incarceration preventing 15 index crimes (Levitt, 1996). While it is estimated that a significant crime drop would have occurred regardless of the growth of the prison population, the size of the drop would not have been as great (Spelman, 2000). In an analysis using the best methods available, controlling for economic indicators and the age structure of the population, Spelman's models estimate that violent crime "would have dropped anyway, at almost the same time, but the crime drop would have been 27 percent smaller than it actually was" (p. 123). This leaves other factors to explain nearly three-quarters of the drop.[8] Scholars suggest the growing economy (King, Mauer, & Young, 2005; Spelman, 2000), changing drug markets (King, Mauer, & Young; Levitt, 2004), the increase in the number of police (Levitt, 2004), and community

[7] Documented in the Uniform Crime Report (UCR), index crimes include murder, forcible rape, aggravated assault, robbery, burglary, larceny-theft, motor vehicle theft, and arson.
[8] Estimating the effect incarceration had on adult homicide, Rosenfeld (2000) found the growth of the prison population accounted for over "one-fourth of the drop in total victims and victims of adults" (p. 148).

response to crime (King, Mauer, & Young, 2005) are all factors that likely contributed to the drop.

While the prison build-up of the 1980s and 1990s contributed to America's crime drop, some scholars argue that jurisdictions can max-out the public safety value of prison (see Liedka, Piehl, & Useem, 2006). Gainsborough and Mauer (2000), when analyzing the impact incarceration has had on crime at the state level, found that "during the national decline in crime from 1991 to 1998, states with the largest increases in incarceration experienced, on average, smaller declines in crime than other states" (p. 4).[9] Such a finding suggests the scale of incarceration reaches a point of declining effectiveness. Put another way, high rates of punishment do not yield infinite reductions in crime.

Clear (2007) affirms that there is an undeniable "face validity" to the argument that prisons prevent crime (p. 15). He further states that it is "absurd to think that prisons would have *nothing* to do with crime" (p. 15-16, emphasis original). Indeed, removing a person from society during his or her active years of criminality certainly incapacitates and prevents harm that specific individual might cause. Instead, Clear argues that what is uncertain is "how prisons *do* affect crime" (p. 16, emphasis original). What also remains uncertain is how long prison sentences affect crime.

Incarceration Length and Crime

While some of the research on the impact of incarceration length on crime rates is contradictory, there is an overall belief that increased incarceration lengths are associated with limited effects. Put bluntly, Doob and Webster (2003) conclude, "the null hypothesis that

[9] Specifically, Texas experienced the largest increase in incarceration in the 1990s – an increase of 144 percent – and also experienced the greatest decline in crime (35 percent). However, California, Massachusetts, and New York also experienced similar reductions in crime but did not experience the same increase in the rate of incarceration, ranging from 21 percent to 52 percent (Gainsborough & Mauer, 2000).

variation in sentence severity does not cause variation in crime rates should be conditionally accepted" (p. 187). Most recently, Durlauf and Nagin (2011), reviewing the research on sentence severity and deterrent effects, called the effect "small." Much of this research has focused on three-strikes laws, recidivist statutes for which a person would receive a long prison sentence. Adopted in the early 1990s, these laws created a natural experiment in which researchers could observe differences in crime rates in relation to prison length.

There are a number of studies that examine the overall deterrent impact of lengthy prison sentences. Turner and colleagues (1999) use data from the Bureau of Justice Statistics, the Uniform Crime Reports (UCR), and U.S. Census Bureau to explore the impact three-strikes and truth-in-sentencing laws had on crime rates between the years 1986 and 1996. As discussed earlier, both of these sentencing policies are designed to ensure that people serve longer prison sentences. While jurisdictions all over the country experienced a crime drop during the 1990s, states that adopted both truth-in-sentencing and three-strikes laws reported the highest rates of index crimes two to three years after implementation (Turner, Greenwood, Chen, & Fain, 1999). Meanwhile, states with neither truth-in-sentencing nor three-strikes had the lowest index crime rates. Important to cost benefit, states without these sentencing policies spent less money on corrections and appear to have lower crime rates than states with the laws (Turner, Greenwood, Chen, & Fain, 1999).

The analysis by Turner and colleagues only includes data within two to three years after implementing truth-in-sentencing and three strikes laws. It could be that positive affects on crime rates would not result so soon after the adoption of truth-in-sentencing and three-strikes laws. Instead, it might take a number of years before such laws have a deterrent value. Perhaps more relevant, then, is a recent analysis by the Justice Policy Institute (Ehlers, Schiraldi, &

Ziedenberg, 2004) which uses UCR data from 1990 to 2001. Similar to Turner et al., Ehlers and colleagues report that non three-strikes states had a larger average violent crime drop and index crime drop than three-strikes states.

California's "Three Strikes and You're Out" law is considered one of the most sweeping three strikes legislation in the nation. Under California's three strikes law, a law under which over 40,000 people have been incarcerated (Schiraldi, Colburn, & Lotke, n.d.), individuals convicted of a third eligible offense are given a mandatory 25-year sentence. The subject of several analyses, California's "Three Strikes and You're Out" law has been demonstrated to be relatively ineffective at reducing crime. At its adoption, California, like other states in America, was experiencing a downward crime trend. Taking this fact into consideration, Stolzenberg and D'Alessio (1997) claim the law did not reduce crime rates below any level that would have already been anticipated. While no clear pattern of crime reduction has been found because of the three-strikes law (Austin, Clark, Hardyman, & Henry, 1999), a more recent analysis claims the law reduced felony crime rates in California by just two percent (Zimring, Hawkins, & Karmin, 2001). With such a small return, researchers have assessed the law from a financial standpoint and have found that the total cost of imprisonment under California's three-strikes law outweighs the crime-reduction benefits (Helland & Tabarrok, 2007). Despite findings that suggest increased sentence severity has little impact on crime rates, California's three-strikes law and other recidivist statutes remain active policies throughout the country. This, of course, is unsurprising given the motivation for punishment in America is two-fold: crime control *and* retribution. As discussed earlier, the latter is a powerful argument for the need of long prison sentences.

Research suggests that, at the macro level, locking people up for longer periods of time is costly and does not have a significant impact on crime rates. However, the individual effect of incarceration and time served must also be considered, especially given the seriousness of crimes most often committed by individuals serving long prison sentences and the political implications of releasing them. As discussed earlier in this chapter, while more heterogeneous than before, the long-term prison population is comprised predominately of people convicted of homicide. Those serving long prison sentences are often regarded as high "stakes" releases (Gottfredson & Tonry, 1987; Clear & Lam, 2006) and represent a challenge for releasing authorities (Clear & Lam, 2006). That is, these individuals represent a political risk. Should they commit a crime upon release, releasing authorities are often held accountable, after the fact, for exposing society to a dangerous individual. Considering these concerns about public safety alongside evidence about the limited public safety value of large incarceration rates and long-term sentencing, the question of reentry is not only a critical one but also undoubtedly a complicated one.

Reentry and Crime

Over 725,000 men and women made the journey from prison to home in 2009, and hundreds of thousands more will make the journey in the years to come. The most recent national recidivism data indicate that over two-thirds of these men and women will be re-arrested within three years of release and half will return to prison for a new crime or parole violation (Langan & Levin, 2002). For many, the behavior patterns that resulted in their involvement in the criminal justice system can be hard to break. Given the old adage "the best predictor of future behavior is past behavior," it is likely not surprising to many that those who have experienced prison disproportionately contribute to crime. Arrest rates for formerly incarcerated people are 30 to 45 times higher than the general population (Rosenfeld, Wallman, & Fornango, 2005).

One of the primary reasons for adopting harsher sentencing laws is to deter future criminal activities committed by the person who was once incarcerated. As discussed earlier, this form of deterrence is known as specific deterrence. Supporters of long prison sentences work under the assumption that the experience will deter future criminal behavior because the costs associated with crime are too great (Song & Lieb, 1993). Specifically, the threat of incarceration will evoke a negative emotional response for those who have experienced it, causing them to choose not to commit additional crime. Thus, the underlying idea of long-term sentencing is quite simple: a longer sentence will leave a stronger impression on someone than a shorter sentence. In other words, the experience itself will prevent future crime. While seemingly straightforward, research suggests the relationship between time served and recidivism is more complex.

In a review of studies on time served and recidivism, Song and Lieb (1993) conclude the effect of sentence length is likely specific to each individual. For some, longer periods of confinement increase the risk of recidivism. For others, the likelihood of recidivism will not be affected by incarceration length (Song & Lieb, 1993; see also Dejong, 1997). While some early studies found no significant relationship between time served and recidivism (Beck & Hoffman, 1976), other work contradicts these findings. In fact, the majority of studies analyzing data from the 1970s and 1980s indicate that more time served is associated with higher rates of recidivism. For example, Gottfredson, Gottfredson, and Garofalo (1977) followed 104,182 men in the United States who had been were paroled for the first time between 1965 and 1970. Within this group, the median time served for homicide was just over four years and six months. They found that within one year of release individuals who served the longest period of time had the highest rates of return. However, because the amount of time served is significantly greater today than 40

years ago, findings based on data from the 1970s are not applicable to today's population. "Longer sentences" identified in earlier research more closely mirror the average time served today, as seen in Orsagh and Chen's (1988) study of 1,425 individuals in North Carolina released in 1980. According to their findings, two-year post-release re-arrest rates went up for people who served more than 1.2 years.

More recent studies also suffer from the issue of dated data. After reviewing 26 studies conducted on the effect of more or less time on recidivism, Smith, Goggin, and Gendreau (2002) claim that more time served is associated with a slight increase in recidivism. However, more than 90 percent of the effects sizes reviewed came from studies conducted during the 1970s, a time when the prison population was much smaller and had different demographic characteristics. Moreover, the relevance of these findings today are limited given the increase in the amount of time currently served by people who are incarcerated.

However, a more recent analysis by Mauer, King and Young (2004) looks specifically at those released in 1994 after serving an indeterminate life sentence (actual time served is not identified). They find that lifers released from prison are "less than one-third as likely as all released offenders to be re-arrested within three years of release from prison" (p. 24). Of the lifers released from state prison in 1994, 20.6 percent were re-arrested within three years compared to an overall re-arrest rate of 67.5 percent (see Table 1.2). Cumulatively, research indicates the relationship between time served and recidivism does not appear to be a simple one. In contrast to the assumption that as time served increases the likelihood of recidivism decreases, the relationship seems be more curvilinear with likelihood of recidivism remaining constant or even increasing for a period of time before it begins to decrease.

Many of these analyses, however, do not take into account other factors that might explain decreases in recidivism rates. In particular, they do not control for factors such as criminal history, age, gender, race, or family factors. These are a part of a larger list identified by researchers as the most significant predictors of recidivism (Gendreau, Little, & Goggin, 2006). Another difficulty about this literature is that varying definitions of recidivism are used. Some studies look at rates of return to prison while others define "recidivism" as re-arrest. Moreover, the length of time individuals are tracked upon release varies, from one to three years. Both of these factors make comparisons across studies and populations impossible.

Keeping these methodological issues in mind, the most current research suggests that, as a group, individuals who will most likely serve the longest sentences – lifers – experience significantly lower rates of recidivism than the general release population. Unfortunately, because length of stay has changed greatly since the 1970s and 1980s, older research is not helpful in determining the current relationship between time served and recidivism. Given the contribution of longer prison sentences to the size of the prison population, more research on this issue is greatly needed to shed light on how and why long prison sentences impact recidivism, particularly since prison policy is aimed at protecting public safety.

Conclusion

The number of men and women incarcerated in the United States has reached unprecedented levels. Research suggests that America has surpassed the point at which incarcerating more people will further reduce crime. The amount of time served by people in prison also has an impact on the number of men and women in the prison system. Given this fact, one way to reduce the prison population is to decrease the amount of time served, particularly for those least likely to become re-involved with the criminal justice system.

Just as the use of incarceration impacts crime at an aggregate level, the nature and length of incarceration influences crime at an individual level. It appears that people who serve longer prison sentences may in fact be a group that has recidivism rates lower than the overall release population. The following chapter explores what is known about the long-term incarceration experience. This literature is couched within four criminological perspectives that help to explain why people who serve long prison sentences experience low rates of recidivism.

Chapter 2
Long-term Incarceration

While it appears people who serve the longest prison sentences are least likely to recidivate upon release, little is known about the factors that may facilitate this outcome. Do long prison sentences leave such an impact that individuals are fearful of committing crime upon release? Do they facilitate change within the individual as he or she is exposed to rehabilitative programming? Or, could it be that people who serve long prison sentences simply age out of their deviant behavior patterns? These questions remain unanswered despite recent research indicating that those who are incarcerated the longest are the least likely to return. During the 1980s and early 1990s, long-term incarceration was the subject of a fair amount of scholarship (see Flanagan, 1995; Bottoms & Light, 1987); however, since that time, this is a group that has, unfortunately, received little attention from researchers. Ultimately then, there is an explanatory gap in research regarding long-term incarceration, namely why do long sentences seem to prevent recidivism?

This chapter explores what is known about the psychological impact long prison sentences have on people in order to attempt to understand why individuals who serve long prison sentences experience some of the lowest rates of recidivism. By describing what is known about the effects of long-term incarceration, specifically the effects on psychological outcomes, the mechanisms through which incarceration works can be unpacked. The remaining sections of the chapter turn from descriptive research on long-term incarceration to explanatory work. The chapter reviews four criminological perspectives that might account for the relationship between long periods of imprisonment and lower recidivism rates. Taken together, these perspectives provide a series of possible explanations for empirical findings. This theoretical insight is critical

in understanding *why* people who serve long prison sentences are the least likely to recidivate and thus might be good candidates for release.

The Psychological Effects of Long-term Incarceration

A widespread belief about people incarcerated for long periods of time is that their psychological condition deteriorates. Specifically, it is believed that prisonization – the process of adopting the norms and values of prison (Clemmer, 1958) – occurs "after extended exposure to highly regimented, unisexual prison life with limited stimuli" (Flanagan, 1995a, p. 5). This belief is not surprising and is guided by the commonsensical assumption that the longer someone is incarcerated, the more likely they will be to adopt the behaviors encouraged by incarceration and the norms of the prison environment. One probable consequence of such psychological adjustment though is that those who have been incarcerated would have greater difficulty adapting to life on the outside. Clemmer (1958) argues that prisonization increases as time inside of prison increases. He suggests further that the most prisonized individuals have the greatest difficulty adjusting to outside life and reforming their behavior. However, Clemmer's original thesis has been refuted by a number of studies that indicate the process of prisonization actually begins to reverse as individuals get closer to release. In fact, the pattern of prisonization is U-shaped, with the most conventional norms documented at the beginning and end of the person's prison term (Wheeler, 1961; Glaser, 1964; Kassebaum, Ward, & Wilner, 1971). While people serving long prison sentences might experience prisonization during their incarceration, it appears they adopt more conventional attitudes and behaviors as their time in prison passes and they get closer to release. This seems to indicate that prisonization is not simply a result of incarceration but perhaps a coping strategy that individuals develop in order to deal with

incarceration. If this is the case, then it makes sense that those who are incarcerated would revise their behaviors and norms as release becomes more immediate.

Few quantitative studies have identified prisonization or other forms of psychological deterioration as concerns for people serving long sentences; instead, it is agreed: "no systematic or predictable effect of long-term imprisonment exists" (Flanagan, 1995, p. 5). According to Porporino (1990), research has yet to establish a consistent relationship between long terms served in prison and any type of "deterioration of mental state or emotional functioning, intellectual or cognitive abilities, physical condition, or social and interpersonal competence" (p. 36). It is important to note that long-term incarceration, as it is described here, is not synonymous with serving long periods of time in secure housing units (SHUs) or solitary confinement.[10] Unlike long periods of time in prison, lengthy periods in SHUs or solitary confinement have been correlated with serious psychological effects for both mentally healthy individuals and those suffering from mental illness (Arrigo & Bullock, 2007). For example, individuals housed in SHU experience social isolation, which is linked to clinical depression; moreover, those who already suffer from mental illness often exhibit psychosis, suicidal and self-mutilating behaviors when placed in solitary confinement (Arrigo & Bullock, 2007, p. 628). This clarification is essential given the extreme difference in the documented psychological effects of these specific experiences. With those differences in mind, research suggests that psychological effects of long-term incarceration should not be a factor of great concern during reentry.

Using a randomly selected sample of 60 men convicted of homicide and serving a life sentence, Sapsford (1978) explores the issue of institutionalization. The findings demonstrate that men do not lose interest in the outside world as time served increased; however, actual

[10] Commonly known as segregation, prison administrators across the country have increased their use of solitary confinement over the least three decades. Used as a means of discipline and management, 81,622 people were held in segregation in 2005 (Browne, Cambier, & Agha, 2011).

involvement with the outside world, especially with wives and girlfriends, does decline (Sapsford, 1978). The loss of such relationships ultimately impacts an individual's level of social capital (Wolff & Draine, 2004). That is, the loss of relationships reduces an individual's connectedness to other people; thus, their access to essential resources upon reentry decline. Such a deterioration of relationships should be expected given the financial and emotional tolls visitation can put on the family members of people who are incarcerated (Christian, 2005; Christian, Mellow & Thomas, 2006). Also important to note, Sapsford (1978) finds that despite serving a life sentence, individuals do not lose sight of release. This finding suggests that people who are incarcerated for long periods of time are still able to imagine a future outside of prison. As the research indicates then, prisonization and institutionalization are not all encompassing effects.

Another study from the late 1970s identifies the importance of outside relationships to people serving long prison sentences. Richards (1978) reports that individuals serving a sentence of at least 10 years become more concerned with maintaining relationships outside of prison as time passes. An exploratory study on men incarcerated in Britain, the findings suggest that individuals at different points of their sentences (beginning and ending stages) consider links to the outside world to be critically important. While men do not view prison as a threat to their mental health, the importance placed on outside relationships may in fact be a way to sustain mental health while incarcerated (Richards, 1978). The study was replicated to compare attitudes and perspectives of people serving long prison sentences in the United States to their English counterparts. Flanagan (1980) interviewed 49 men in five maximum-security facilities who had served at least five continuous years of confinement. Similar to those incarcerated in Britain, the men state that their greatest concerns are their deprivation of relationships in and with the outside

world. Despite their concerns, most do not see prison as a serious threat to their emotional well-being (Flanagan, 1980). Individuals serving long prison sentences for a murder conviction in England and Wales have even expressed that they had "mellowed" as the years passed and as they have gotten older, suggesting that incarceration helped them to mature (Michell, 1990). While valuable and insightful, these studies have relied exclusively on self-report measures. However, studies using more sophisticated tests and measures to determine psychological deterioration experienced by people serving long prison sentences have yielded similar results.

Using standardized instruments such as intelligence tests and the Minnesota Multiphasic Personality Inventory (MMPI), quantitative data support individuals' claims that their lengthy time in prison has had no negative impact on their mental health. In fact, some studies have found that people who serve long prison sentences experience increases in intelligence and decreases in hostility as time in prison passes. For example, Bolton, Smith, Haskin, and Banister (1976) administered tests of intellectual functioning to 154 men serving long prison sentences at two points in time. No signs of psychological deterioration were found. Instead, there was a significant improvement in verbal intelligence and a decrease in hostility between assessment and re-assessment (Bolton, Smith, Haskin, & Banister, 1976).[11] Collecting data at three points in individuals' sentences, MMPI results indicate that people serving long prison sentences develop more conventional sentiments and decreased psychopathology as time passes (Rasch, 1981). It could be, however, that incarceration impacts different people in different ways – positively, negatively, or not at all. Indeed, the relationship between time served and psychological outcomes could be more complex than some of the research suggests. For example, it could be

[11] This study, of course, precedes significant advancements in technology that occurred in more recent decades and continues today. While not a traditional measure of intelligence, the ability to use computers, the Internet, and other technologies are all but required in life today. Learning about these technologies will likely be a great challenge for individuals who have been incarcerated for decades, as many of those who entered prison in the 1980s and early 1990s may have never held a cell phone or accessed the Internet.

that people's experience of prison and its resulting effects are contingent on other factors like crime of conviction, criminal history, point in sentence, age at admission, classification level, or facility.

MacKenzie and Goodstein (1995, p. 69) examine four different groups of males serving long prison sentences – (1) traditional lifers who have little criminal history and previously lived stable lives, (2) "habitual offenders" who have a history of criminal justice system involvement with less stable and socially acceptable lifestyle prior to incarceration, (3) "early long-termers" (had served an average of 1.3 years of their sentence), and (4) "late long-termers" (had served an average of 10 years of their sentence). Their work provides further information on the relationship between long-term incarceration and mental health. Between these four groups, no signs of mental deterioration were found. However, men early on in their sentence, those who had served an average of 1.3 years at the time of the survey, report higher levels of anxiety, depression, psychosomatic illness, fear of those they are incarcerated with, and lower levels of self-esteem, suggesting the early stages of incarceration are particularly stressful for people serving long prison sentences (MacKenzie & Goodstein, 1995). Accepting the reality that one will be spending a significant portion of his or her life in prison along with adapting to a new environment could very well contribute to stresses early on in an individual's prison experience. Of course, this is also the kind of psychological effect that disappears as release date approaches.

As the findings of MacKenzie and Goodstein highlight, psychological outcomes could be related to factors other than sentence length or length of stay, including institution environment, point in sentence, and time to release (Bukstel & Kilmann, 1980). For this reason, individual and environmental factors beyond sentence length and length of stay must be considered when seeking to identify how long-term incarceration impacts psychological outcomes. There are

practical implications to understanding these processes. Psychological outcomes undoubtedly impact a person's reentry experience and the larger issue of public safety. A person who has been institutionalized or has adopted the norms and values of prison culture is not someone that most would want to encounter in free society. As Clemmer suggests, individuals socialized to prison life will likely have the most difficult time adjusting to the outside world. However, empirical research suggests that prisonization and psychological deterioration do not have a permanent or static impact on people serving long prison sentences. Instead, the experience of a long prison term seems to have a calming, even maturing, affect on people. Such findings help in the understanding of why long-term incarceration is correlated with lower recidivism as is discussed in the previous chapter.

Based on the research conducted on the effects of long-term incarceration to date, it appears that long prison sentences contribute to positive psychological outcomes and lower recidivism rates.[12] Put another way, from a public safety perspective, long prison sentences may in fact "work." That is, people who serve long prison terms experience some of the lowest recidivism rates. However, this body of research is not without its limitations, and these findings must be interpreted with some caution. Much of the research on this topic has been conducted in prisons outside of the United States. The prison population in the United States is larger and more diverse than other Western nations like the United Kingdom and Canada. It is likely that people with different backgrounds will respond differently to long-term incarceration (MacKenzie & Goodstein, 1995). Therefore, findings from studies conducted in other countries

[12] As previously discussed, long periods of solitary confinement can indeed have a negative psychological impact on individuals, particularly individuals with mentally illness. Concerns for the well-being of incarcerated individuals have made their way to Federal courts, which have ruled that prison officials must consider the possible mental health effects that could result from punishment, particularly when the individual is already suffering from a mental illness (*Madrid v. Gomez, 889 F.Supp 1146*). For those facing mental health concerns, long prison sentences, specifically those in solitary confinement or Special Housing Units, can, according to research, cause psychological harm.

cannot be generalized to the long-term population in the United States. Additionally, as discussed in the previous chapter, there are numerous definitions of "long-term" within the body of research. With no standard definition, drawing conclusions across studies is difficult, as each study defines "long-termer" differently. Finally, much of the literature on long-term incarceration is several decades old. This is an important factor to consider given the policy shifts discussed in the previous chapter, which have resulted in a long-term prison population that is larger and serving longer terms than ever before. Ultimately, there are several reasons why more current research is needed.

The present study seeks to empirically demonstrate the detailed relationship between long-term incarceration and recidivism. However, demonstrating that a negative relationship exists is expected as recent research on long-term incarceration suggests. Instead, it is important not only to understand the impact long-term incarceration has on an individual and ultimately public safety but also to identify how and why those who are incarcerated the longest have the lowest rates of recidivism. In this way, the present study aims to expand on existing research to identify specific factors that minimize the likelihood of recidivism. The identification of such factors could help discover the point – or points – at which people who are serving long prison sentences become good candidates for release.

The following section focuses on four criminological perspectives that explain how and why long-term incarceration results in lower recidivism rates. In asking why long sentences "work," we are ultimately inquiring into how long sentences function to minimize recidivism and, thus, we can then consider at what points long sentences fulfill their public safety value. There are real consequences of this approach. Asking these questions allows us to weigh

concerns about public safety alongside state and federal budget constraints in order to develop a guiding framework for responsible policy that insures public safety and minimizes costs.

Explaining How Long-term Incarceration Reduces Recidivism

In his final book, *Lifers: Seeking redemption in prison*, John Irwin (2009) outlines the path of redemption of 17 men incarcerated in San Quentin who served at least 20 consecutive years in prison for a homicide conviction. After getting to know these men and conducting long interviews with them, Irwin (2009) argues that most lifers "become completely different people" while incarcerated (p. 4). He identifies the transformation process that many undergo, beginning with the realization that "*their* actions have brought them to this disastrous end [long prison sentence]" (p. 66, emphasis original). Irwin calls this an "awakening" and notes that the timing of this moment can be influenced by several factors: level of maturity, degree immersed in the criminal belief system, and joining the "convict" social world (p. 66-67). Those who are young, ascribe to the criminal lifestyle, and adopt the prison lifestyle will be the ones mostly likely to experience a delay in their awakening process. But once the awakening moment occurs, the individual begins to accept full responsibility for the crime and starts to engage in and take advantage of available rehabilitation programs like vocational training, education, and self-help groups. The latter are perhaps the most transformative as they have been created by lifers themselves to help membership make "fundamental changes" in their worldviews (Irwin, 2009, p. 87). Lifer groups are not unique to San Quentin; they can be found in prisons all over the country, including New York prisons. Some of these groups focus their efforts beyond the prison gates, in some cases working towards reconciliation with crime victims. Ultimately, these groups serve as a site of organizing and activism within the institution.

Irwin's research provides a useful backdrop for identifying what factors may be at work in the relationship between long-term incarceration and recidivism. Understanding the effects of long-term incarceration on rates of recidivism is not the same as knowing how or why the relationship unfolds. In order to determine the how and why of the relationship, criminological theoretical perspectives must be consulted for possible explanations. In this way, both empirical research and theoretical frameworks inform research questions and statistical models in the present study. In this theoretical discussion, I aim to shed light on the complex story that is likely at work with regard to the relationship between long-term incarceration and recidivism. The remaining pages of this chapter explore four perspectives – deterrence theory, the relationship between age and crime, social learning theory, and desistance. All but one of these perspectives – deterrence theory – is alluded to in Irwin's findings. However, it is deterrence that is often cited by supporters of long prison sentences and therefore important to understanding the dynamics between time served and recidivism. These four perspectives provide distinct, and yet complementary, explanations of why an individual's risk of recidivism decreases after a long period of incarceration.

Deterrence theory. Given the reliance on deterrence to justify and uphold the need for long prison sentences, an understanding of this theory's conceptual underpinning and empirical support is important. At the core of classical and modern deterrence theory are the principles of certainty, severity, and celerity (swiftness) of punishment. Based on the notion of rational choice, the premise of deterrence theory is that individuals choose to commit crime. More specifically, people calculate the risk: does the reward of crime out way the potential pain of punishment? If one concludes, "yes," crime is a likely outcome. Put more bluntly, people commit crime when it pays (Pratt, Cullen, Blevins, Daigle, & Madensen, 2006).

Following this logic, deterrence theorists argue that harsher punishments, specifically longer prison sentences, will increase the perceived risk of committing crime. Yet, as discussed in the previous chapter, increases in sentence length are associated with a limited impact on crime rates (see Durlauf & Nagin, 2011) and seem to have little macro-level deterrent value. However, at the individual level, deterrence theory might help to explain lower rates of recidivism for people serving long prison sentences. The most recent recidivism research presented in the previous chapter indicates that people who serve longer prison sentences are the least likely to recidivate upon release. Perhaps, then, there is a specific deterrent effect of long prison sentences. Research exploring the relationship between perceived severity of punishment and criminal behavior helps to identify whether long prison sentences have a deterrent value on individuals.

Deterrence theory has received a significant amount of attention from the academic community, and studies assessing individuals' "perceived certainty and severity of punishment on the likelihood of offending" are numerous (Pratt, Cullen, Blevins, Gaigle, & Madensen, 2006, p. 368). Interestingly, experimental literature suggests that severity has very little impact – if any – on offending. For example, Ward and colleagues' (1994) research, which uses cheating as a measure for offending, finds that cheating among participants in a computer game is impacted by perceived punishment severity (in this case a monetary penalty) and the likelihood of punishment (certainty). However, punishment certainty had the greatest impact (Ward, Stafford, Gray, & Menke, 1994). This finding is echoed in other empirical accounts of punishment severity. Using a 2x2 experimental design, Nagin and Pogarsky (2003) report that the prevalence of cheating among undergraduate students is lower when punishment is more certain *not* more severe. Such studies, while useful in understanding how individuals react to deterrent variables in terms of

cheating, suffer from the issue of generalizability, especially to people serving long prison sentences. That is, undergraduate students likely differ across a variety of characteristics (i.e. education level, social economic status, access to resources, etc.) from individuals who are part of the offending population. Indeed, there may be unique patterns among an offending population's reaction to deterrent variables and future criminal offending.

Other research has used criminal justice involved populations and, much like those using non-offending populations, these studies indicate that punishment severity, often operationalized as length of punishment, has little impact on offending. For example, Decker and colleagues (1993) report that individuals who are actively offending are most concerned with the certainty of punishment.[13] In fact, only two factors were significant in the decision making process: risk of being caught and the likelihood of increased gain from the crime (Decker, Wright, & Logie, 1993). Looking specifically at recidivism and harsher punishment, Dejong (1997) reports that longer periods of incarceration are associated with longer periods of time before re-arrest for individuals who have had previous arrests. The experience of incarceration does not, however, keep them from engaging in criminal behavior (Dejong, 1997). This finding indicates that incarceration, specifically longer periods of incarceration, may delay criminal behavior but does not deter it. Harsher punishments may not lead to desistance, the cessation of criminal activity, but instead contribute to intermittency. The concept of intermittency refers to a break in offending which is followed by an eventual return to criminal activity (Piquero, 2004). Ultimately, this research raises questions about the utility of increasing sentence length as a public safety measure.

[13] These individuals, referred to as "active residential burglars" in the study, had extensive involvement in crime and had not been arrested for recent offenses (Decker, Wright, & Logie, 1993, p. 136).

The research on the effect of punishment severity and certainty on individual-level offending has also been the focus of multiple literature reviews. In the 1980s, Paternoster (1987) found that early deterrence research did not reveal that punishment severity has a significant effect on offending. While riddled with methodological concerns, these studies did indicate an association between certainty of punishment and offending (Paternoster, 1987). This association, Paternoster argues, is likely the result of the experiential effect. Experience with crime impacts a person's perceptions of certainty and severity of punishment, not that perceptions of certainty and severity influence offending (Paternoster, 1987). Put another way, a person's experience, not their perceptions, influences offending. Ten years later, another review also found that punishment certainty has a greater deterrent value than severity (Nagin, 1998). Most recently, Pratt and colleagues (2006) conducted a meta-analysis to determine "the empirical status of individual-level tests of deterrence" (p. 369). From 200 effect size estimates, Pratt et al. (2006) find the effects of deterrent variables on offending "are, at best, weak" (p. 370). This is particularly true for the effects of severity estimates, which "even when statistically significant, are too weak to be of substantive significance" (p. 379). Taken together, these findings indicate that harsher punishments do not impact the behavior of people who commit crime in the way they are intended to. While this finding may be counterintuitive, it is consistently demonstrated in the deterrence literature.

The fact that the severity of punishment has little – if any – influence over the likelihood of offending is critically important to the discussion of long-term incarceration, particularly in terms of its justification. Proponents of long prison sentences often point to deterrence as one of the reasons to support and advance policies that increase length of punishment. Long prison sentences remove – or incapacitate – people for long periods of time, thus preventing further

harm to society. They also, according to supporters, deter criminal behavior upon release. However, based on the empirical evidence on the latter assumption, researchers suggest that the "continued vitality of the deterrence perspective will hinge on the ability of scholars to integrate it into other – perhaps more comprehensive and empirically robust – theoretical frameworks" (Pratt, Cullen, Blevins, Gaigle, & Madensen, 2006, p. 370). In other words, if severity is not a robust explanation, deterrence theory must reach beyond a focus on severity in order to explain future criminal behavior. What is useful about deterrence theory is that it forces a real consideration of the effects of punishment on behavior, which is important both in crafting fiscally responsible policy and in preserving public safety. Yet, the lack of evidence that punishment severity deters crime at the individual level requires understanding the relationship between long-term incarceration and recidivism using other criminological perspectives.

Age, crime, and the age-graded theory of informal social control. One of the most well documented relationships in criminology is that between age and crime. Since individuals serving long prison sentences are much older upon release than at the time of conviction, an analysis of people serving long prison sentences, by default, considers the effects of aging. For the last 170 years, empirical data has consistently found that age is one of the most significant factors when predicting crime. Generally, criminal activity peaks in the teenage years and then begins to decline, at first quickly and then more gradually (Farrington, 1986). Recent research by Blumstein and Nakamura (2009) suggests that age is a factor when assessing the likelihood of re-arrest. In their research exploring the point at which a person with a criminal history experiences no greater risk of re-arrest than a person without a criminal history, Blumstein and Nakamura find that individuals who are younger at arrest need to stay clean (i.e. abstain from crime) longer before their risk of re-arrest intersects with an individual who has no criminal history (see also

Kurlycheck, Brame, & Bushway, 2006). Given this well-documented relationship between age and crime, the age-crime curve provides an appropriate framework to analyze the effects of long-term incarceration on public safety risk.

Though widely accepted within the field of criminology, the particular dynamics of the age-crime relationship are subject to debate. Most notably, Gotfredson and Hirschi (1983) contend that the relationship between age and crime is invariant across a number of factors including time, place, sex, and types of crime. Specifically, they argue the relationship between age and crime rapidly increases during adolescence, peaks in the late teenage years, and then begins to decline in the early adult years. They believe this curve remains unchanged, regardless of individual characteristics and circumstances. However, others argue that age-crime curves vary "substantially" across factors like time, sex, and offense type (Farrington, 1986, p. 191). Peaks and declines, they claim, occur at different points for different types of people in different situations (Farrington, 1986; Blumstein, Cohen, & Farrington, 1988). For example, Blumstein (1995) shows that individuals arrested for robbery and burglary tend to start their careers earlier and peak around the age of 17. The relationship between age and crime for burglary is different than for other crimes, especially murder. Using 1985 arrest data, Blumstein (1995) reports that the age-crime curve for murder has a flat peak from age of 18 to 24. A similar curve was found for the years of 1960 and 1970. However, 1992 arrest data indicates a much sharper peak at the age of 18. Blumstein (1995) attributes this difference to four factors. First, there was a general increase in murder arrests between 1965 and 1970. Second, the arrest rate for 18-24 year-olds varied little from 1970 to 1985. Third, murder arrests for 24 year-olds and beyond might have actually decreased between 1970 and 1992. Finally, the murder arrest rate for 18 year-olds experienced a 100 percent increase between 1985 and 1992 (Blumstein, 1995, p. 18-19). Such

findings stand in stark contrast to Gotfredson and Hirschi's (1983) claim that the age crime curve is constant. By contrast, Blumstein and colleagues argue in the context of their discussion of the age-crime curve that researchers can "isolate the effects of different factors on different aspects of criminal activity" (Blumstein, Cohen, & Farrington, 1988, p. 72).

The relationship between age and crime is particularly important for the present research on long-term incarceration. Individuals who serve long prison sentences in New York are most likely to be convicted of violent crimes such as murder. Given the age-crime curve for murder indicates a more gradual period of decline after the peak, it is logical to anticipate a longer aging out process for these individuals. The period of time that it takes someone who committed murder to age out of crime, as compared to other offenses, is an important factor to take into account in terms of sentence length.

While the age-crime curve illustrates a relationship between age and crime, it does not tell us why or how the relationship exists. The age-crime curve is descriptive; it is not explanatory. However, a significant body of theoretical work explores the specific and nuanced impact of age on one's criminal activity. Known as developmental or life-course approaches, these theories seek to explain what "produces the age-crime relationship" (Akers & Sellers, 2004, p. 284). Developmental and life-course theories address a number of questions, most notably "Why do people stop offending?" (Farrington, 2006, p. 335). This body of literature addresses this question and range of other issues using varied explanatory factors including biology, family structure, and cognitive deficits (Moffit, 1993). Developmental and life-course theories also vary in terms of their scope. For example, some explain anti-social behavior from infancy to mid-life (Moffitt, 1993), while others focus on specific groups like lower-class men (Farrington, 2005). The most well known of these theories, Sampson and Laub's age-graded

theory of informal social control (introduced in 1993 and revised in 2003), seeks to explain anti-social behavior across the entire life course.

Sampson and Laub's age-graded theory of social control is intended to explain anti-social behavior and crime in childhood, adolescence, and adulthood. One powerful feature of this approach is that it allows researchers to consider how social control and social capital distinctly shape specific periods in the life course which moderates criminal behavior. For example, Sampson and Laub (1993) argue that it is strong social bonds that explain criminal desistance in adulthood. These controls stem from interaction with social institutions and experiences like marriage and employment that facilitate the formation of social capital (Wolff & Draine, 2004).

However, incarceration, particularly long-term incarceration, is a turning point in an individual's life that could actually break an individual's bonds to society. Indeed, the more time an individual is incarcerated, the weaker his or her social bonds become (Orsagh & Chen, 1988; Wolff & Draine, 2004). Citing the difficulty of maintaining relationships due to barriers impacting communication (i.e. expensive collect calls) and visitation (i.e. physical distance to facility and travel costs), Mauer (2007) argues that longer prison terms erode family and community ties, and the deterioration of these relationships likely increases the longer a person is incarcerated (Orsagh & Chen, 1988). To use the words of Wolff and Draine (2004), "With longer periods of incarceration, individuals are likely to become less like they were in the community, less like the people they knew in the community, and more like the prisoners with whom they live" (p. 462). This tendency, Wolff and Draine argue, further divides those who offend from those who do not and fuels the stigma that accompanies the experience of incarceration. Therefore, age-graded theory's emphasis on social control and social capital explains why age typically results in decreased criminal behavior, but if social control and social capital are

driving these changes, one reasonable explanation is that people who serve long prison sentences would have difficulty adjusting to life upon release and may therefore be prone to returning to criminal lifestyles. While this assumption is logical, such a claim stands in contrast with findings presented in the literature on long-term incarceration.

While the age-crime curve could be employed to argue that people who serve long prison sentences are good release risks, developmental and life-course perspectives do not provide a solid explanation for why this is the case. Individuals who serve long prison sentences are removed from the mainstream of society for significant periods of time. While it is possible for people incarcerated to maintain and develop relationships with people on the outside, an extended prison stay is a huge barrier and as the research suggests, relationships with individuals on the outside deteriorate for people serving long sentences which inevitably reduces their social capital (Sapsford, 1978).[14] Therefore, social control and social capital may not be the "important causal mechanisms" in changing behavior for those serving long prison sentences as opposed to those aging on the outside (Farrington, 2006, p. 321). Indeed, returning to Irwin's work on lifers in San Quentin, in-prison programming, including peer-led self-help groups, seem to play an important role in the transformation process. Perhaps then, prison programs help individuals learn new behaviors and adopt more pro-social attitudes and worldviews. The tenets of social learning theory are helpful in identifying the mechanisms that facilitate such a change.

Social learning theory. Social learning theory posits that criminal behavior is influenced by relationships with others (Akers, 1998). This perspective, which is built on Sutherland's theory of differential association, suggests that "the probability that persons will engage in

[14] While some incarcerated individuals are able to maintain relationships with family members on the outside, a great deal experience very little, if any, contact with family members while incarcerated. For instance, research suggests that over half (57 percent) of incarcerated fathers have never had a personal visit with their children since their admission to prison (Mumola, 2000). Meanwhile, 38 percent have no contact of any kind (i.e. phone call, mail, or visit) with their children (Mumola, 2000).

criminal and deviant behavior is increased and the probability of their conforming to the norm is decreased when they differentially associate with others who commit crime" (Akers, 1998, p. 50). In fact, Warr (2002) contends that associations with deviant peers are the most significant factor in predicting an individual's criminal behavior. Social learning theory is built upon four major concepts: differential association, pro-deviant definitions, differential reinforcement, and imitation. As described by Akers and Jensen (2006), "Differential association refers to direct association and interaction with others who engage in certain kinds of behavior or express norms, values, and attitudes supportive of such behavior, as well as the indirect association and identification with more distant reference groups" (p. 38). Put another way, if one's differential associations are with those who engage in deviant behaviors and hold norms, values, and attitudes that are supportive of deviant behavior, then one will be more inclined to engage in deviant behavior (Akers, 1998). Key to differential association is that an individual engages in criminal activity because he or she has an excess of definitions that are favorable towards deviant behavior. Definitions, Akers (1998) states, are attitudes and perspectives that determine whether an individual believes certain actions and behaviors to be right or wrong. Differential reinforcements refer to the rewards or punishments associated with or following an individual's behavior. More specifically, an individual will choose to engage in crime or not based on previous rewards or punishments they expect to receive. Akers (1998) suggests that reinforcement, specifically one's relative experience of rewards versus consequences, is the moment in the process in which the most "learning" occurs. The final concept is imitation, which is the engagement in behavior after observing similar behavior by others (Akers & Jensen, 2006, p. 40).

Taken together, the concepts of social learning theory describe the ways in which an individual's behavior and attitudes are influenced by the behavior and attitudes of others. While research on social learning theory, particularly peer influence (see Warr, 2002), has largely focused on explaining behavior in juveniles, social learning concepts are relevant to understanding and predicting behavior later in life. Indeed, many of the behavioral concepts presented in the theory are used in correctional treatment programs for adults (Akers & Sellers, 2004; Akers & Jenson, 2006). In terms of its empirical status, social learning theory enjoys decades of support, with much of the research revealing "strong to moderate relationships in the theoretically expected direction between social learning variables and criminal delinquent and deviant behavior" (Akers & Jenson, 2006, p. 49). Compared to other core criminological theories (i.e. social control and strain theory), social learning models often account for greater variance between explanatory variables (Akers & Sellers, 2004). In other words, social learning models explain a higher percentage of the relationship between variables than other criminological theories. Furthermore, critiques of other theories often include references to the role of social learning principles. For example, a critique of the age-graded theory of informal social control is that activities that strengthen social bonds (i.e. marriage and employment) ultimately reduce exposure to negative peer associations, thereby explaining desistance from crime (Warr, 2002). This is an explanation that makes reference to ways individuals learn new definitions in response to new associations. In this way, social learning theory fills in gaps of other theoretical perspectives.

Interestingly, the implicit assumption in social learning theory is that deviant behavior is learned from other "deviants." As suggested by Wolff and Draine (2004), the longer individuals are incarcerated, the more likely they are to become like their incarcerated peers than their peers

on the outside. Yet, if people serving long prison sentences, once released from prison, are less deviant than before, they have learned alternative attitudes and thought processes than they held prior to incarceration. These individuals have learned these new behaviors and attitudes and perhaps have learned them from others who are in a situation similar to themselves – others who are incarcerated. Recall that Irwin (2009) highlights the importance of in-prison programming and peer-led self-help groups in lifers' transformation process. This is ultimately an unexpected process of social learning.

Treatment programs are based on the idea that it is "possible to modify behavior to the extent that one is able to manipulate those same processes or the environmental contingencies that impinge on them" (Akers, 2004, p. 101). The long-term population is likely to have been exposed to a wide variety of correctional programming during their time in prison, including education programs. Moreover, many people who served long prison sentences and have been released over the last several years were imprisoned during a time in which higher educational programming flourished in state prisons. Therefore, the documented relationship between participation in college programming and recidivism provides a useful backdrop for understanding the effects of the prison experience upon release (Wilson, Gallagher, & MacKenzie, 2000). While not programming purposefully targeted at changing behavior, higher education exposes individuals to new ideas and concepts, improves communication skills, and challenges students' ideas about how the world works. These, undoubtedly, are profound and transformative experiences that create human capital for individuals who perhaps never believed college was in their future.[15] Important to note is the majority of lifers included in Irwin's study were participants or graduates of the college program in San Quentin.

[15] Human capital refers to knowledge and capabilities that individuals possess that enhance their ability to do productive work (Schultz, 1961).

This research on learning in the prison context demonstrates that some individuals are released from prison and refrain from committing future crime, thus pushing social learning theory to explain how a "deviant" person who is surrounded by other "deviant" people can learn new definitions and experience reinforcements that influence pro-social behavior. This is particularly the case for people serving long prison sentences given their participation in the creation and maintenance of peer-led groups and lifer organizations. If we accept the core tenet of social learning theory – deviant behavior is learned from peer associations – we must be willing to consider that people who serve time in prison, particularly those who serve long prison sentences, can be positive influences on each other. Ultimately, this opens up a critique of beliefs that prisons are places in which people become better criminals, that prisons are "universities of crime." Perhaps it is people serving long prison sentences who can have the greatest impact on their incarcerated peers. However, if this is the case, the question remains – what shifts occur in a person during their prison sentence to lead them to desist from crime? And most relevant to this research, what factors are associated with these shifts and when do they occur in a person's prison experience?

Desistance narratives. As the discussion above suggests, desistance, or the cession of criminal activity, is a process that has yet to be fully understood by criminologists (Laub & Sampson, 2001). In fact, if we knew what precisely leads people to desist from offending, a significant amount of criminal justice research, including the present research, would not be needed. Maruna (2002) lays the foundation for a new understanding of desistance from crime through the examination of personal narratives. Narrative psychology represents a perspective in the field of psychology that is interested in how individuals process experiences through the telling of and listening to stories (Hevern, 2004). Prior to Maruna's work utilizing personal

narratives, the "person" or transformation mechanism of desistance was absent from criminal justice literature (Maruna, 1999; Laub & Sampson, 2001). The personal narrative framework provides researchers with the ability to understand who a person is by listening to the person's life story. It allows for a more nuanced understanding of how a person who has internalized a deviant label (i.e. criminal) is able to transform his or herself and create a new self-identity (Maruna, 1999).

Though desistance is a not a new concept, the rise of life-course criminology in the 1990s, and its continued popularity today, has increased the interest in desistance research (Farrall & Maruna, 2004). Using data collected for the Liverpool Desistance Study (LDS), Maruna (2001) provides an in-depth understanding of desistance through the use of personal narratives. In speaking with 65 men and women who are either actively committing crime (persisters) or who are living a criminal life but are desisting (desisters), Maruna identifies the process of developing a new pro-social identity. In his comparison, he finds that the development of a new self, a pro-social identity, is the common thread among those desisting, a finding consistent with other desistence studies (see Burnett, 1992).

The narrative perspective considers the individual – his or her attitudes, emotions, and self-concepts – and thus approaches the individual as an active agent in criminal behavior (Maruna, 1999). In his research, Maruna (2001) identifies a "redemption script" (p.87). The redemption script is a person's recovery story. The basic outline positions the individual as a good person who fell victim to drugs and crime, who became more involved in deviant behavior, and became trapped in the cycle of incarceration. At a climactic point in the individual's narrative, someone steps in and helps the individual accomplish "what he or she was always meant to do" (Maruna, 2001, p. 87). Maruna also identifies three major themes that distinguish

desisters from persisters. First, in their personal narrative, desisters establish a core set of beliefs. These beliefs help the individual establish a solid sense of self. Second, desisters are optimistic in their ability to control their destiny, essentially regaining their autonomy. And third, desisters often express a desire to give back to their community (Maruna, 2001, p. 88). These themes, Maruna argues, help desisters find meaning in lives that have often been shaped by failure and shame.

While the purpose of the current project is not to analyze the life narratives of the men and women serving long prison sentences, a discussion of narrative analysis is informative, particularly given Irwin's work that explores the process of transformation of lifers in San Quentin. The "redemption script" and narratives of transformation provide a useful lens through which to make sense of the implications of the empirical contributions of the current study. In his research, Maruna (2001) finds the development of a pro-social identity to be a key part of the desistance process, Important, too, is the belief that even an individual with the most shameful past can become a positive and contributing member of society (Maruna, 2001). Similarly, Irwin (2009) talks about a moment of "awakening" during lifers' prison experiences in which they take responsibility for their crimes and work to change their attitudes and behaviors that led to their life sentence. This moment of awakening and when it occurs in the person's sentence is dependent on a number of factors, including maturity level. Maturity, it is often believed, increases with age.

New found pro-social identities and in-prison activism might contribute to the development of an in-prison redemption script, thus providing insight into why we do not see high rates of recidivism among those who have served long sentences. As Irwin (2009) points out, many of these individuals become leaders in their prison community and are active

participants in lifer organizations. Becoming involved in these groups and organizations might serve as a moment in the redemption script. Interestingly, members of these groups might be the ones to help other incarcerated individuals accomplish personal transformation. While it is beyond the scope of the current research to quantitatively explore the concepts discussed by Maruna and Irwin, this work provides an incredibly helpful framework in understanding why individuals who serve such long periods of time may in fact be good candidates for release. Perhaps most important to note is that desistance narratives show how multiple theoretical concepts (in this case, age, informal social control and social learning) tangibly influence the desistance process of people incarcerated for long periods of time.

Conclusion

The purpose of this chapter is twofold: to summarize what is known about the impact long-term prison sentences have on people and to explain why individuals who serve long prison sentences experience some of the lowest rates of recidivism. While understanding the multifaceted effects of long prison sentences could help explain why people who serve long prison sentence have lower rates of recidivism, the majority of research on long-term incarceration has focused simply on the psychological effects of these sentences. Research suggests that lengthy sentences have no negative impact on psychological outcomes, nor do they increase the likelihood of prisonization. This body of research suggests that long prison sentences do not produce people who we should expect to be unable to adjust to life outside of prison. In some cases, these individuals might even experience improved functioning.

While the research on long-term incarceration does shed light on a person's ability to successfully transition from prison to the community, it does not explain *why* people who serve long prison sentences are the least likely to recidivate. To understand this, we turn to

criminological perspectives that help explain how and why long-term incarceration functions to minimize recidivism. The four perspectives discussed in this chapter – deterrence theory, the relationship between age and crime, social learning theory, and desistance – provide distinct, yet complementary, explanations of why an individual's risk of recidivism decreases after a long period of incarceration. However, these perspectives are not without their limitations. Research on deterrence theory demonstrates that it is not the severity of punishment that is significant in predicting future offending; rather, it is the perceived certainty that punishment will actually be given. While the age-crime curve is descriptive, it is does not explain why the relationship between age and crime exists. Comparatively, developmental and life-course theories are explanatory; however, the emphasis on social bonding is difficult to apply to the issue of people serving long prison sentences given that long prison sentences are more likely to break social bonds with those outside of prison than not. Yet, relationships in prison might flourish. Ironically, this is precisely what makes social learning theory so compelling. However, in order to explain the low rates of recidivism among those serving long-term sentences, social learning theory must be reconceptualized in order to highlight how incarcerated people can be agents of change. This perspective challenges commonly held assumptions that people who are incarcerated are intrinsically bad, incapable of change, and ultimately create institutions where people learn to be better criminals. Finally, desistance narratives provide a more nuanced understanding as they are able to demonstrate how multiple criminological principles are perhaps at work in the desistance process of people incarcerated for long periods of time. Most specifically, the desistence perspective demonstrates how age and social learning principles converge to decrease the likelihood of recidivism among people who serve long prison sentences. Yet, a more nuanced framework has only recently been applied to the long-term

prison population. Irwin (2009) only began to scratch the surface of the desistance process for people serving long prison sentences.

The goal of the present research is not to merely demonstrate that a negative relationship exists between long-term incarceration and recidivism. Such a finding will not meaningfully contribute to the field. Instead, the present study seeks to identify the factors that contribute to reductions in recidivism and to empirically demonstrate the point – or points – at which people serving long prison terms can be released without an elevated public safety risk. Since many individuals presently serving long prison sentences will be released by way of a discretionary parole board decision, the models used in this study have been partially informed by research on parole decision making. Using this research as a guide in model construction will help determine if the factors which impact releasing authorities' decisions are significant in predicting recidivism among people serving long prison sentences. The following chapter examines the literature on parole decision-making to better understand what factors are typically considered during this process.

Chapter 3
Parole Release Decisions

People serving long prison sentences typically represent individuals who have been convicted of what are considered the most serious and violent crimes. There are, however, other circumstances that result in long prison terms, including recidivist statutes (three-strikes laws), consecutive sentences on a set of crimes, or unusual drug cases or serious property crimes (Clear & Lam, 2006). Though not everyone serving a long prison sentence has been convicted of the most violent crimes such as homicide, individuals receive long sentences because they cause great harm to society. In some cases, it was just one instance in which they have caused significant harm while others have consistently engaged in criminal behavior. Given the level of threat associated with this group, people who serve long prison sentences are often considered as high "stakes" releases (Gottfredson & Tonry, 1987; Clear & Lam, 2006). Should the individual commit a crime upon release, the releasing authority is often held politically accountable, after the fact, for releasing a dangerous person (Clear & Lam, 2006). In the case of men and women serving long terms, parole boards are frequently the entity charged with determining the extent to which these individuals threaten public safety and whether they are ready to return to the community. Adding to the political risk, the majority of parole board members are political appointees of the governor of the state (Caplan & Paparozzi, 2009). Therefore, decisions made by parole boards are ultimately the decisions of the state, and the governor will likely be implicated if something goes awry.

The issue of parole release is an important one to consider when discussing long-term incarceration. Indeed, as will be demonstrated in Chapter 4, parole release – or lack there of – for people convicted of violent crimes has played an important role in the story of long-term incarceration in New York. Parole board release decisions are guided by multiple factors, many

of which are considered to be indicators of future crime. This chapter discusses the factors that are most likely to result in positive release decisions. Put another way, this chapter seeks to identify the factors that parole boards consider to be indicators of good release candidates. The chapter begins with an overview of discretionary release and addresses its current role in the criminal justice system. The second section identifies the factors most significantly associated with release. Within this discussion, particular attention is paid to which factors are those that an individual can change (dynamic) and those they cannot (static). The chapter concludes with a discussion of the role victim input has in parole board release decisions. This issue is particularly relevant to people serving long terms as they have caused significant harm and loss to their community.

Parole and Discretionary Release

A part of the indeterminate sentencing framework, parole is "based on the premise that the rehabilitation of offenders is a primary goal of corrections and that factors affecting inmates, such as release and community re-integration, should be tailored to them on an individual basis" (Caplan, 2008, p. 10). In theory, the indeterminate framework requires that criminal justice policies and authorities consider each person on a case by base basis. Unlike the determinate structure, release is not a function of a date that is automatically generated based on a maximum sentence less any good time the individual may have earned. Instead, release decisions are made at a hearing at which members of the parole board and the incarcerated individual are present and circumstances related to the crime and factors specific to the individual are presented.

There are a range of sentencing structures and practices utilized throughout the United States; thus, parole authority and practice vary from jurisdiction to jurisdiction. Typically, there are two arms of parole: (1) a releasing arm and (2) a supervision arm. Under the latter, parole

officers work directly with individuals who have been released from prison, providing supervision, opportunities for rehabilitation, advocacy, and referrals in the community. The former arm, however, is more relevant to the current research. The authority to release individuals from prison is a responsibility that typically falls on a parole board, regardless of sentencing practice and policy (Thigpen, Beauclair, Keiser, & Banks, 2010). However, the way in which the decision to release is made has shifted from discretionary to mandatory in most places. Under discretionary parole, a parole board has the authority to conditionally release an individual from prison because he or she has reached his or her eligibility date (Thigpen, Beauclair, Keiser, & Banks, 2010). This type of release is often associated with indeterminate sentencing and is known as discretionary release (Caplan, 2008; Tonry 1999b). Mandatory parole, on the other hand, refers to a type of release that is associated with determinate sentencing structures. Under this framework, a parole board conditionally releases an individual after he or she has served a specified portion of his or her sentence less any good time (Thigpen, Beauclair, Keiser, & Banks, 2010). Sentencing law dictates the portion of the sentence an individual must serve before mandatory release.

As discussed in Chapter 1, during the 1980s and 1990s, many states and the federal government abandoned indeterminate sentencing structures in favor of determinate structures. As a result, the way in which people are released from prison shifted from discretionary parole board decisions to mandatory release. For example, prior to 1975, all 50 states and the federal government gave parole boards broad discretion when determining release decisions. By 2002, only 16 states gave full releasing authority to parole boards (Petersilia, 2003). Looking specifically at release data, the changes in type of prison release were dramatic. In the 1970s, over 70 percent of individuals were released as a result of a discretionary decision made by a

parole board. By 1995, that percentage had been reduced to 50 percent and then dropped further to 39 percent in 2002 (Travis, 2005). During this time, there was a corresponding increase in the percentage of mandatory releases. Between 1995 and 2002, the percentage of mandatory releases increased from 45 percent to 52 percent (Caplan, 2008, p. 13).

However, many people serving long prison sentences are still released as a result of a discretionary decision made by a parole board. Many individuals who are currently serving a long prison sentence or were recently released after serving a long sentence entered the system during the years of indeterminate sentencing; thus, these individuals are grandfathered in under indeterminate sentencing laws. For example, a person who served 25 years in prison and was released in 2008 first entered prison on his or her sentence in 1983, a time at which many states still employed indeterminate sentencing. Moreover, some crimes that result in long prison terms are still subject to an indeterminate sentence. In New York, for example, people convicted of class A-1 violent felonies receive an indeterminate sentence of 15 years to life. Therefore, a decision by a parole board determines if and when an individual serving a long prison sentence will be released from prison even in jurisdictions that no longer have an indeterminate sentencing structure.

Typically, when sentenced under an indeterminate framework, an individual must reach a minimum term before he or she can appear before the parole board. The person is not given a fixed release date. Instead, the individuals must continue to appear before the board until he or she has been granted release or reached his or her maximum sentence. Incarcerated for a long term himself, Kummerlowe (1995) argues that the lack of a firm release date is one of the hardest adjustments to make to prison life. He even challenges the research on the psychological effects of long-term incarceration (as discussed in Chapter 2) when he states the following: “An

optimum release time exists for the majority of confined individuals. When discharged beyond that optimum time, their anxiety increases, despair and depression grow, and hostility and fear fester" (p. 42). This claim may at first glance appear to stand in contrast to the quantitative data indicating that long-term incarceration does not negatively impact a person's psychological state. However, Kummerlowe takes the issue of lengthy prison stays in a different direction. His comments speak to the difficulties of adjusting to the unknown. This is likely a common experience for those who have no idea of when they will be released from prison, a consequence of indeterminate sentencing. Moreover, there is heavy disappointment that results from appearing before a parole board and being denied release (Marquez, et al., 2006). When a person is denied parole, he or she must wait a certain period of time before making another appearance. Known as a "hit," denial in New York means another two years before re-appearing before the Board of Parole. Kummerlowe's statement raises questions about the impact that parole eligibility dates play in an individuals' prison experience. Specifically, do people who serve well beyond their parole eligibility date experience negative consequences, resulting in higher rates of recidivism?

Parole Board Decision Making

Given that parole boards are often the authority charged with determining when an individual serving a long sentence will be released from prison, it is important to understand what factors are most influential in this decision-making process. Caplan (2008) notes it is not a parole board's role to determine whether an individual has been punished enough for his or her crime. Indeed, guidelines have been adopted in every jurisdiction to help prevent "subjective, punitive-based, and discriminate decision-making by parole board members" (Caplan, 2008, p. 27). Instead, parole boards are charged with maintaining public safety. They must determine

whether an individual, if released, poses harm to society. When an individual appears before a parole board, board members conduct interviews and review reports and case notes. These sources contain information about the individual and are used to inform release decisions. Several decades of research on parole decision-making has identified the pieces of information that are most relied upon by board members when making release decisions. In a review of the literature, Caplan (2008) identified institutional behavior, crime severity, criminal history, incarceration length, mental illness, and victim input as factors that have the greatest influence on parole release decisions (p. 29).

Factors significant in release decisions. There are factors included in the list above that can be changed or improved by the individual. Known as dynamic factors, these can change over time and often reflect steps an individual has taken to rehabilitate him or herself. Institutional behavior, a factor included on the list above, is an example of a dynamic factor. While an individual's behavior is recorded in prison files, and past behavior cannot be changed, an individual's behavior in prison can improve or worsen over time. On the other hand, there are factors included in the above list that cannot be changed. For example, crime severity and criminal history are two factors that will stay the same no matter what an individual does to improve him or herself. Known as static factors, they do not change over time. Individuals who serve long terms have often been convicted of the most serious and violent crimes; therefore, the weight static factors have in the decision-making process are particularly important for this group. Due to the severity of their crime, people who serve long prison sentences can find themselves appearing before a board that is more interested in discussing the details of the past than the present (Marquez, et al., 2006).

Yet, the seriousness of the crimes committed by these individuals cannot be overlooked. It is most certainly the case that parole board members are faced with making significant decisions in these circumstances. In fact, parole board members report that the most serious problem they face when making decisions is a lack of public support, believing they are often held solely accountable for decisions (Burns et al., 1999). Releasing an individual from prison – especially one who committed a violent offense – is a political risk. It is also a decision that causes fear and anxiety in the public. Should that person commit a new crime upon release, there will be public backlash. This issue further underscores the importance of identifying factors associated with lower rates of recidivism among people who serve long prison sentences. Identifying the point – or points – at which people become good release risks, and identifying the factors associated with these "turning points," could help redirect the attention of parole boards from the past to the present.

Research on the factors that influence parole decisions has been conducted for decades. Across time, the factors found to be most significant have not varied. Current research suggests that factors related to criminal history and in-prison conduct are the most significant predictors of parole release (Caplan, 2008). The same is true for parole decisions made in the 1970s and 1980s, and for people serving long prison sentences. For example, Banister, Heskin, Bolton, and Smith (1974) provide an understanding of what factors board members were most concerned about in the 1970s. In the study, 200 individuals (men serving a determinate sentence of at least 10 years or an indeterminate life sentence) were tested on a number of psychological, social and criminological variables. Retests were given about 19 months after the original assessment. Within the test/retest time, 36 individuals had been released from prison and 134 had been considered for parole but had not been released. From the 134, 84 were selected and matched

with the released group by age and type of current offense. Using the comparison, Banister and colleagues (1974) report that individuals who were released had significantly better marital relationships, less serious previous convictions, smaller number of previous convictions, were older at first conviction, had a better behavior record in prison, were incarcerated in more preferable prisons, had more interesting jobs in prison, and were more mature and better adjusted than those not released. Banister et al. (1974) identified multiple factors that do not appear in more recent research (i.e. marital relationships, where incarcerated, type of prison job, and psychological measures like adjustment and maturity). However, they do identify issues related to institutional behavior and criminal history (less serious previous convictions and smaller number of previous convictions), demonstrating that parole boards in the 1970s, like those today, were concerned with static factors related to individuals' criminal histories.

The importance of institutional behavior and criminal history is documented throughout research on parole release decisions. For example, consider two studies conducted in Pennsylvania. The first study, using data from 1977 and 1978, reveals that institutional behavior was the most significant factor predicting release as it is seen to be a way for parole board members to judge the likelihood of a person's future offending (Carroll, Weiner, Coates, Galegher, & Alibrio, 1982). The second study, conducted in 1990, reports that parole boards in Pennsylvania are primarily concerned with prison conduct, sentence length, program participation, and criminal history (Carroll & Burke, 1990).[16]

More recent research continues to document the important role static factors play in release decisions. Turpin-Petrosino (1999) states that the type of crime the individual was incarcerated for is the most significant factor in parole release decisions made by the New Jersey

[16] Important to note is that Caplan and Burke (1990) state that criminal history – a static factor – served as the proxy for predicting future criminal behavior. The emergence of actuarial risk assessments highlights the role of both static and dynamic factors in predicting recidivism.

State Parole Board. A study on parole decisions for people convicted of violent crimes in Alabama reports that length of original sentence and the number of felonies for which the person is serving time are among the most significant factors for release (Morgan & Smith, 2005). Indeed, research findings continually underscore the importance parole board members place on static factors when making parole release decisions.

Given the general agreement among research findings on parole release decisions, it is not surprising that parole board members themselves identify current crime, criminal history, and institutional behavior as the most important factors for release (Burns, Kinkade, Leone, & Phillips, 1999). Yet, parole board members also claim to consider individuals' attitudes toward their victims and their understanding of the causes of his/her past criminal activity (Burns et al., 1999). These factors, of course, are dynamic and represent the ability to change, suggesting that parole board members are looking for characteristics that indicate empathy and transformation among the men and women that come before them for release.

Looking at parole decisions from the perspective of individuals who had been denied release, West-Smith, Pogrebin, and Poole (2000) find that incarcerated people believe – and are often told by case managers – that good institutional behavior and program participation will lead to a positive release decisions once they are eligible for parole. However, in practice, institutional behavior is only a factor when the individual's disciplinary record is not clean and is considered mainly to deny release (West-Smith, Pogrebin, & Poole; Caplan, 2008). Though incarcerated individuals assume that program participation will be considered at the time of their hearing, in Colorado, individuals appearing before the parole board are not even asked about their program participation (West-Smith, Pogrebin, & Poole, 2000). Moreover, participation in rehabilitative programming is viewed more as an indicator of prison adjustment than a factor to

consider for release (West-Smith, Pogrebin, & Poole, 2000). Caplan (2008) suggests that while program participation does increase the odds of being released, it is not a significant release factor.

Given that rehabilitation is a core value of indeterminate sentencing, it is interesting to note that, in practice, in-prison program participation is rarely identified as a significant release factor. Returning to the work of John Irwin (2009), the participation in in-prison programming plays a key role in lifers' transformation process. Therefore, factors related to program participation may in fact serve as significant indicators that people who serve long prison sentences are good candidates for release.

Victim input. Another factor important to consider regarding the release of those serving long prison sentences is victim input. The role of victim input is important to consider given that many people who serve long prison sentences have engaged in behavior that resulted in the loss of a life. Indeed, it would be understandable that the surviving family members and friends would have a great interest in whether or not the individual is released and would want to voice their feelings and opinions. While it is unknown whether those serving long sentences are the group most likely to receive victim input on their parole cases, longer lengths of incarceration, which are associated with more serious crimes, is a factor that increases the likelihood of receiving victim input (Caplan, 2008).

According to Kinnevy and Caplan (2008), 44 state parole boards allow victim input to be considered in release decisions. In New York, victims can meet face to face with board members prior to the hearing or submit a written victim impact statement if they choose (New York State Division of Parole, n.d.). In other states, such as New Jersey, victim input must be considered in the cases of people convicted of first-degree crimes who serve sentences of 10-20 years (Caplan,

2008). The only way is it not considered is if victims choose not to participate in the process (Caplan, 2008).

Overall, the literature on parole release decisions suggests that victim input has a significant impact on release decisions. Most specifically, negative input is likely to yield a decision not to grant an individual parole (Parsonage, Bernat, & Helfgott, 1994; Smith, et al., 1997; Proctor, 1999). For example, Parsonage, Bernat, and Helfgott (1994) identify four variables highly significant in explaining a board's refusal to grant parole: poor institutional behavior, the presence of victim injury, criminal history, and victim input. Of these four factors, victim input had the greatest effect (Parsonage, Bernat, & Helfgott, 1994). Research indicates that the chance of parole denial increases as the number of letters expressing opposition to a person's release increase (Smith, Watkins, & Morgan, 1997). Also influential is the way in which the input is presented to the board. The physical presence of victims at parole hearings has a greater impact than letters (Smith et al., 1997; Caplan, 2008) or if there are no victims present at all (Weisberg, Mukamal, & Segall, 2011). Ultimately, greater victim presence and opposition for release often results in parole denial.

However, more recent research suggests that, when controlling for other release factors, victim input is not a significant predictor of parole decisions (Caplan, 2008). Analyzing administrative records of 805 cases that appeared before a parole board in 2004 in New Jersey, Caplan identified the following significant predictors of release decisions: institutional behavior, crime severity, and criminal history. While previous research has also identified these factors as significant in release decisions, Caplan's finding that victim input is not significant is a deviation from previous research findings. This, he argues, can be explained by his sampling methodology.

Specifically, before designing a sampling strategy, Caplan conducted a pilot study in New Jersey to determine the availability of variables in New Jersey State Parole Board administrative data.

In studies prior to Caplan's, researchers used samples comprised of individuals convicted of violent crimes because it was assumed that people convicted of violent crimes would be more likely to have victims who would provide input (Caplan, 2008). However, during Caplan's pilot study, it was revealed that people convicted of violent crimes in New Jersey were no more likely than people convicted of non-violent crimes to have victim input. Therefore, Caplan concluded that the most appropriate group to over sample in New Jersey would be those who had registered victims. This, he argues, provides a sample with adequate "variability of input sources, types and orientations;" however, it resulted in a sample that was comprised mostly – 85.3 percent – of people convicted of non-violent crimes (Caplan, 2008, p. 88).

The discrepancy in findings suggests that the value parole boards place on victim input may in fact vary across offense type. In both cases – results that identify victim input as a significant factor and those that do not – different types of crimes are overrepresented, violent in the former and non-violent in the latter. Due to different sampling strategies, earlier research may over emphasize the importance of victim input in parole decisions and Caplan's research may under emphasize its importance. Ultimately, what these conflicting findings indicate is "that the impact of input on parole release is not generalizable to different types of offenders (i.e. non-violent offenders) or among different paroling jurisdictions" (Caplan, 2008, p. 142). Put another way, findings from studies conducted using data on people convicted of violent offenses cannot be applied to people convicted of non-violent offenses and vice-versa. Therefore, in order to better understand how victim input impacts parole decisions, especially for those convicted of violent offenses and serve long prison terms, these questions should be addressed using samples

comprised of specific subgroups of the parole eligible population, stratified by crime of conviction. Such a strategy would allow for comparisons across crime type to determine if parole boards place more weight on input received for more serious crimes.[17]

Conclusion

Many people currently serving long prison sentences will be released as a result of a decision made by a parole board. This is due to the fact that people who have spent long terms in prison and are currently eligible for release likely entered prison during a time in which indeterminate sentencing structures were in place. Additionally, in some jurisdictions, indeterminate sentencing structures are still used, particularly for serious and violent crimes. An integral part of indeterminate sentencing, parole release is based on the idea that people have bettered themselves during their time in prison. Under the parole framework, individuals have the opportunity to show board members that they have taken steps to rehabilitate themselves. However, research suggests that parole board members are more concerned with factors that an individual cannot change about him or herself. Indeed, research has continually highlighted the importance static factors have on release decisions.

Criminal history is the factor that has been consistently cited by researchers as significant in release decisions. This is true for research conducted in the 1970s as well as the 2000s. Therefore, it is clear that past behavior is always present in the minds of decision makers. This proves to be critically important for people serving long sentences. If people serving long sentences are solely judged on past behavior, the likelihood of being released, especially when they have reached the minimum sentence, is slim. Research does suggest that other factors play a significant role in release decisions; however, type of offense and length of sentence are two

[17] For example, is victim input received in a case for which the parole eligible person was convicted of murder treated differently than instances when a parole eligible person was convicted of armed robbery?

factors beyond the control of the individual. They are static factors. In fact, the only dynamic factor that has been consistently identified as significant is institutional behavior. Yet, it appears that this information is most often used to deny release. Put another way, good behavior is not rewarded through release decisions.

As discussed earlier, those with the most violent criminal histories – and likely serving the longest prison sentences – are often considered to be individuals that carry with them a great deal of political risk. If they are released and re-offend, releasing authorities face anger and questions from the public as to why someone so violent was released into the community in the first place. Equipping releasing authorities with research that identifies significant factors that contribute to a reduction in recidivism for those serving long sentences would assist parole board members in making such politically risky decisions. Moreover, identifying the point – or points – at which people serving long prison sentences can be released without a heightened risk to public safety would demonstrate to parole board members that continually denying release past these points has little impact on recidivism. As will be demonstrated in the following chapter, parole release practices play an important role in the increase of long-term incarceration in New York.

Chapter 4
Long-term Incarceration in New York

Long prison sentences are one of the major factors contributing to the increase in the number of people currently incarcerated in the United States. Public sentiment supporting lengthy prison sentences for people convicted of violent crimes has led to mandatory sentencing and "habitual offender" laws in jurisdictions across the country (Coughlin, 1990). New York has been no exception. Laws passed over the last 40 years, coupled with recent parole release practices, have contributed to an increase in the number of people serving long prison sentences in New York. In the context of this project, it is important to note that while prison sentences have increased, little is known about the effects long prison sentences have on a person's reentry experience.

This chapter begins with a summary of the changes made to New York Penal Law with regard to people convicted of violent felony offenses, crimes that are considered the most violent and serious. Parole release practices for this population are also explored. Next, reports from the New York State Department of Corrections and Community Supervision (DOCCS) are analyzed to determine how changes in Penal Law between 1973 and 1998 and release practices have resulted in a greater number of people serving long prison sentences in New York. Average length of sentence, time served, and rate of return to prison for a new conviction or parole violation are all examined. The information culled from these reports provide a powerful illustration of how people in New York serving long prison sentences are collecting within the prison system despite being the group exhibiting the lowest rates of return to prison.

Changes in Sentencing Law

The designation "long-term" refers to those sentences characterized by 15 consecutive years in prison. In New York, the majority of individuals who meet this criteria fall primarily in

the class A-1 violent felony category,[18] which carriers an indeterminate sentence of 15 years to life (Penal Law 70.0). However, the average time served by people convicted of other violent felonies in New York is rapidly approaching this project's definition of long-term. Since the 1970s, sentencing reforms have dramatically altered sentencing laws regarding violent felonies. In particular, four significant changes made to Article 70 of New York Penal Law, which establishes sentence lengths for crimes, have resulted in a greater number of people serving long – and longer – prison sentences in New York.

The first significant change occurred in 1973 when the legislature enhanced sentences for people convicted of a second violent felony.[19] The Second Felony Offender Law established mandatory and longer prison sentences for individuals convicted of a second felony within 10 years of the first (Laws of 1973, chapter 277). The Violent Felony Offender Law, passed in 1978, expanded the definition of "violent felony" and created mandatory sentences for these offenses (Coughlin, 1990). Crimes considered violent felonies under the Violent Felony Offender Law include kidnapping, arson, manslaughter, rape, and burglary (Laws of 1978, chapter 481). Prior to the Violent Felony Offender Law, individuals convicted of a violent felony for the first time received a minimum sentence that was one-third of the maximum sentence. After 1978, people convicted of a violent felony for the first time received a minimum sentence that was one half the maximum sentence (Silver & Ferrell, 1998).

In the early 1990s, New York began to experience a decline in violent crime. Between 1990 and 1996, violent crime dropped 37.8 percent across the entire state and 43.5 percent in New York City (Silver & Ferrell, 1998). During this same time, Governor Pataki signed the

[18] Crimes include first and second-degree murder, first-degree kidnapping, first-degree arson, and first-degree conspiracy.
[19] The Rockefeller Laws were also passed in 1973. Considered some of the toughest drug laws in the country, the Rockefeller Drug Laws significantly increased the penalty for drug crimes in New York.

Sentencing Reform Act of 1995, introducing a determinate sentencing framework for certain offenses and creating even longer sentences for people convicted of violent felonies (see Table 4.1). Additionally, the reforms established four violent offense categories: (1) first-time felony, (2) second-time felony/first-time violent felony, (3) second-time violent felony offender, and (4) persistent violent felony (three or more violent felony convictions) (Silver & Ferrell, 1998, p. 10).

Under the Sentencing Reform Act of 1995, more people convicted of felonies in New York, especially those convicted of violent felonies, became subject to longer prison sentences. For example, before the Sentencing Reform Act of 1995, only 35 percent of people convicted as "persistent violent felons" received minimum sentences of ten years or more (Silver & Ferrell, 1998, p. 10). After the Sentencing Reform Act, *all* people convicted as "persistent violent felons" received minimum sentences of 10 years or more (Silver & Ferrell, 1998). Oftentimes, harsher sentencing structures are adopted to help reduce high crime rates. Interestingly, this overhaul of sentencing for violent felonies took place during a time when violent crime rates were already on a decline, which raises questions about the philosophy guiding policy aimed at increasing prison sentences. Given that violent crime rates were declining, it does not follow that longer prison sentences were needed to increase public safety.

Three years later, the legislature passed and Governor Pataki signed the Sentencing Reform Act of 1998, more commonly known as Jenna's Law. Named for a nursing school student murdered in Albany, NY (Nieves, 1998),[20] Jenna's Law established determinate sentences for people convicted of a violent felony for the first time; the one exception being

[20] A neighbor, Nicholas Pryor, who had been released on parole after serving time for a stabbing conviction, murdered Jenna Grieshaber. Mr. Pryor served nearly five years of a three and a half to seven year sentence (NY Times, 1998).

those convicted of class A-1 violent offenses.[21] Jenna's law introduced longer periods of incarceration for people convicted of class B through E violent felonies, mandating they serve at least six-sevenths (85 percent) of their determinate sentences (NY Division of Criminal Justice Service, n.d.). The law also eliminated discretionary release for people convicted of class B through E violent felonies (NY Division of Criminal Justice Services, n.d.). Finally, the law requires that all people convicted of violent felonies serve a separate period of post-release supervision (see Table 4.2).[22] Individuals convicted of a second felony that is violent must complete a five-year period of post-release supervision.

The sentencing reforms of the last 40 years have established longer sentences for a larger pool of people, therefore contributing to the increase in New York's long-term prison population. However, these changes are not solely responsible for the increase in the number of men and women serving long prison sentences. The size of the long-term population is a result of two factors: (1) the number of people entering the system facing long sentences and (2) the rate at which people are released. The next section focuses on this second factor.

Parole Release Decisions

An individual convicted of a violent felony can be released from the New York prison system through several paths. First, he or she can be released due to sentence expiration. Often referred to as "maxing out" or "mandatory release," this form of release occurs when a person "has served the maximum amount of time on the initial sentence, minus reductions for good-time credits" (Gaines & Miller, 2007, p. 470). The second and more common way is conditional release. A conditional release requires the individual be supervised in the community for a stated

[21] Class A-1 violent offenses include first and second-degree murder, first-degree kidnapping, and first-degree arson.
[22] Under Jenna's Law, after an individual "has served at least 85 percent of his or her sentence and has maintained a good institutional record while in prison, he or she can be released for a period of post-release supervision" (NY Department of Criminal Justice Services, n.d.).

period of time. This release is either a function of sentencing law (i.e. an individual is released after serving a certain portion – 85 percent – of his or her sentence) or a discretionary decision made by a parole board at a parole hearing (Gaines & Miller, 2007). While discretionary release has been eliminated for some, there is still a portion of the New York prison population that will be released by a parole board decision. Included in this group are people sentenced prior to Jenna's Law, which eliminated discretionary release for people convicted of violent crimes, as well as people convicted of a class A-1 violent felony. Throughout all the sentencing reforms in New York, sentences for class A-1 violent felonies were never modified. Therefore, these individuals are still sentenced to an indeterminate sentence of 15 years to life, representing the second-most serious sentence that can be received in New York.[23]

The reforms of the 1970s and 1990s have impacted both sentence length and how people are released from New York prisons. Data from the Office of Policy Analysis (as cited in Caher, 2006) indicates that beginning in the late 1990s there was a drop in the number of people convicted of violent felonies released as a result of a decision made by the Board of Parole. Therefore, while conditional releases have increased due to sentencing law, there has been a corresponding decrease in discretionary releases for people convicted of violent felonies. Between 1999 and 2003, the percentage of individuals convicted of a violent felony released by the Board of Parole was 30.7 percent; by 2003 it was 15.3 percent (Lane, 2004). Conditional releases increased from 66.3 percent to 79.3 percent, and releases due to maximum expiration increased three percent to 5.3 percent (Lane, 2004).

Furthermore, between fiscal year (FY) 1992-1993 and FY 2004-2005, the percentage of Board of Parole interviewees convicted of class A-1 violent felonies were granted parole

[23] New York does have the option of life without the possibility of parole, which can be given for the crime of murder. Individuals that receive this sentence do not become eligible for parole or conditional release.

dropped 20 percent, from 23 percent to 3 percent (Office of Policy Analysis as cited in Caher, 2006). The greatest drop – 11 percent – occurred in the same year of the Sentencing Reform of 1995 (Caher, 2006). A similar trend exists with regard to interviewees convicted of other classes of violent felonies. In FY 1992-1993, 51 percent of interviewees were granted parole (Office of Policy Analysis as cited in Caher, 2006). By FY 2004-2005, only 16 percent of interviewees were released by the Board of Parole (Office of Policy Analysis as cited in Caher, 2006). A 13 percent drop occurred after the New York legislature passed Jenna's Law in 1998 (Office of Policy Analysis as cited in Caher, 2006).

In New York, when a person is denied parole, he or she must wait two years before appearing before the Board of Parole again. Whether released conditionally or by a discretionary decision by the Board of Parole, the common experience of people convicted of violent felonies in New York is that they are spending more time in prison than ever before. The following section utilizes data culled from reports published by DOCCS to illustrate the effects of these policies and practices, namely the ever-expanding long-term prison population in New York.

The Long-term Population

Today, individuals convicted of violent felonies, and New York's prison system, feel the effects of legislative actions taken in the 1970s and 1990s as well as Board of Parole releasing practices. Between 1985 and 2010, the number of people serving a minimum sentence of 15 to 20 years increased by over 150 percent – from 1,671 to 4,239 – and people serving a minimum of 20 years or more increased by 258 percent – 2,409 to 8,636 (Donnelly & Bala, 1993; Bernstein, 2010). The growth of New York's long-term population has occurred despite a decline in the overall state prison population (see Table 4.3).

As stated earlier, the growth of the long-term population is the result of both the number of people entering the system serving long sentences and the rate at which people are released, rather than an increase in violent crime. In fact, the number of people convicted of violent felony offenses and newly committed to DOCCS custody has been decreasing over the last 15 years (see Figure 4.1), with a significant decrease occurring between 1993 and 1998. In 1993, 8,661 people newly committed to DOCCS custody had been convicted of a violent felony (Fisher & Chapman, 1997). By 2000 it has decreased to 5,077 (Fisher, Chapman, & Davis, 2009). Over the next nine years, the number of new violent felony commitments hovered around 5,000. A drop also occurred in the number of new commitments convicted of class A-1 violent felony offenses, from 561 in 1995 (Fisher & Chapman, 1997) to 171 in 2009 (Maruniak, 2010). While the combination of sentencing law and release practices has created New York's long-term prison population, fewer people are entering the system with violent felony convictions. Thus, the reduced, or slower, rate at which people are being released appears to be having a greater impact on the size of the long-term population as opposed to the expanded definitions of violent felonies and increased sentence lengths. Essentially, men and women, who in previous decades would have been released, are collecting in the system, creating a larger long-term population.

Increase in sentence length and time served. Over the last two decades, people convicted of violent felonies have experienced an increase in sentence length. This, of course, is due in part to the sentencing reforms discussed earlier in this chapter. Importantly though, people have also experienced an increase in time actually served due to transformations in discretionary release practices. This is an additional significant factor in understanding the expansion of New York's long-term prison population. Reports released by DOCCS indicate that from 1992 to 2003, the average aggregate minimum sentence for people convicted of a class A-1 violent

felony offense increased by three years and the average time served increased by nearly six and one half years. The most recent release report from DOCCS shows that 218 people convicted of class A-1 violent felonies were released for the first time on their conviction in 2009 (Kim, 2010). The average time served by these individuals was 22.5 years, approximately two and one-half years longer than the average prescribed minimum sentence – just under 20 years (Kim, 2010). This is a startling figure when compared to the average time – 15.5 years – served by a person convicted of a class A-1 violent felony 17 years earlier (Donnelly & Chapman, 1994) and represents a 53 percent increase in time served. Put more bluntly, people convicted of the same crimes currently serve significantly longer sentences compared to previous decades.

When considering the records of released individuals, it becomes clear that the amount of time being served for other violent felony offenses (that is, those that are not class A-1 offenses) has also greatly increased since 1992. Crimes that have consistently carried the longest sentences in New York other than murder include first-degree manslaughter and first-degree rape, both of which are class B violent felonies. In 1992, people convicted of first-degree manslaughter released to parole supervision served an average of six years in state prison (Donnelly & Chapman, 1994). By 2009, there was a 125 percent increase – 13.5 years – in the average time served for first-degree manslaughter (Kim, 2010). People convicted of rape also experienced a dramatic increase in the average time served, from just over five years in 1992 (Donnelly & Chapman, 1994) to 10.5 years in 2009 (Kim, 2010), an increase of 93 percent. In short, the types of offenses that yield long-term sentences are also expanding as sentences for some non-class A-1 violent felonies are rapidly approaching the current project's definition of long-term.

Often, the rationale behind longer prison sentences is that harsher punishments will deter future criminal behavior, particularly for individuals who experience long prison sentences.

Under this logic, one would expect rates of return for people convicted of violent felonies in New York to have decreased over the past two decades as time served increased. However, that has not been the case in New York. As this next section highlights, overall rates of return have remained relatively stable for the violent felony population since 1986. Given this fact, it is important to ask what rationale guides sentencing policy and release practices.

Re-incarceration Rates

Between 1985 and 2005, the overall three-year return rate for individuals released from DOCCS remained fairly constant (particularly within the last 10 years) – hovering around 40 percent (see Figure 4.1), a rate that is slightly lower than the national average.[24] The rates that changed quite dramatically were the types of return: return on new commitment and return on parole violation. The percent of return on a new commitment dropped from just over 24 percent in the early 1990s to 11 percent. At the same time, return rates for parole violations increased from 22 percent to 30 percent (Staley & Kim, 2010).

Since the mid-1980s, the reason for which people return to a New York prison has shifted (see Figure 4.2). In 1985, approximately 22 percent of individuals returned to DOCCS custody within three years of release due to a technical violation of parole. By 2005, this number had risen to over 30 percent. At the same time, the percentage of individuals returning for a new crime dropped from 19 percent to 11 percent. These changes, however, cannot be interpreted to mean that the decline in new commitments is the result of lower re-offending rates. Simultaneously, the rise in technical violations cannot simply be attributed to changes in community supervision strategies. The relationship between these two phenomena is a bit more complex. While a violation of one's supervision conditions is one reason a person might be

[24] Langan & Levin (2002) report that over 50 percent (51.8) of people released are re-incarcerated for a new crime or parole violation within three years.

returned to prison, another reason is for behavior that could have been prosecuted as a criminal offense. However, instead of opening a new case and pursuing a new conviction, authorities can choose to violate the person's parole. Violating someone's parole is a much easier way to send someone back to prison; nevertheless, a new crime did occur. Additionally, removing someone from the street due to a technical violation might have an incapacitation effect. Put another way, the decision to violate a person's parole might result in the prevention of crime committed by that individual. Thus, the combination of low new commitment rates and high technical violation rates does not necessarily mean that those currently being released from DOCCS have lower re-offending rates than in previous decades. Indeed, the way in which their offenses are dealt with might have changed. Yet, looking at data from DOCCS in more detail, it is clear that people who serve the longest sentences in New York State are a group that experiences significantly lower return rates than the overall release population.

Unfortunately though, reports published by DOCCS do not breakdown return rates by class A-1 violent felonies versus other violent felonies. Many crimes within the violent felony category are lumped together or identified as "other." Within the violent felony category alone, return rates vary from 7.3 percent to 58 percent (Staley & Kim, 2010). However, these data do report the rate of return for the crime of murder, one of the class A-1 felonies and the crime that traditionally carries the longest sentence. The average return rate for individuals released for murder – 19.7 percent – was drastically lower than the overall average return rate – 41.5 percent – and the return rate for people convicted of non-class A-1 violent felonies – 42.3 percent – between 1985 and 2005 (Staley & Kim, 2010). Currently, however, it is difficult to distinguish the differences between all class A-1 and non-class A-1 categories of violent offenses in relation to re-incarceration.

As discussed in the previous section, sentence length and length of time served have increased for individuals convicted of class A-1 violent felonies. Moreover, the majority of people whose sentences meet this project's definition of long-term have been convicted of class A-1 offenses. People convicted of the most serious class A-1 violent felony – murder – in New York are now serving longer prison sentences than their 1980s counterparts; however, the rate of return for those most recently released from DOCCS custody looks fairly similar to the rate of return for those released 15 years ago. Put another way, the length of stay for people convicted of murder in New York has increased substantially over the last 20 years; however, rates of return for this population have remained similar.

It is critical to note that the overwhelming majority – 17 percent of the 19.7 percent – of people convicted of murder who returned to DOCCS custody did so because of a technical violation of parole supervision (Staley & Kim, 2010). In other words, the overwhelming majority of people who served a long sentence for murder are not necessarily returning to prison for committing a violent offense upon release. Moreover, their return rates have remained lower than the overall return rate for people convicted of other violent felonies (see Figure 4.3). This suggests that, in particular, people serving the longest sentences in New York are the least likely to return to prison. It is important to note, however, that this analysis does not control for any factors that might also influence the likelihood that an individual would recidivate. Characteristics such as age at release, institutional behavior, or program participation are not taken into account. Therefore, these data cannot tell us anything about why this population experiences lower rates of return.

The return rate by sentence length provides some insight as to the effect of long prison sentences. Between 1985 and 2001, individuals released who received an aggregate minimum

sentence of 15 to 20 years were less likely to return to prison for a new conviction or a parole violation than others, 19.8 percent return rate compared to an overall return rate of 41.9 percent (Kellam, n.d.). Just over 21 percent of those who served more than 20 years returned to DOCCS custody.[25] The question remains, however, whether these lower rates of return are achieved at an earlier point – or points – during a person's long sentence.

Conclusion

Several key factors have contributed to the increase in the number of men and women serving long prison sentences in New York. First, sentencing reforms of the 1970s and 1990s impacted minimum sentence lengths. Secondly, the ways in which people convicted of violent felonies are released from prison are shifting. In particular, Board of Parole release practices experienced significant changes in the mid-1990s. The practice of granting parole for fewer and fewer people convicted of violent felonies continued into the following decade.

The information provided by DOCCS reports offers insights about what violent offenses are yielding long-term sentences, how delayed release is contributing to the growing long-term population, and that people serving long-terms are the least likely to return to prison in New York. People convicted of violent felonies, including murder, are serving more time than ever before. Interestingly, people convicted of murder are the individuals who are least likely to return to DOCCS custody within three years of release. Much remains unknown about how this dramatic transformation in length of sentence and time served is shaping the reentry experience. This is critically important given that while individuals are serving longer than ever before, they are ultimately released back into their communities. Questions remain unanswered as to how an individual's disciplinary record, program participation, age at release, and other incarceration

[25] Unfortunately, the most recent recidivism reports released by DOCCS do not include an analysis of return by sentence length. The report on the 2001 release cohort (Kellam, n.d.), therefore, provides the most recent information available.

experiences impact reentry, and most importantly, what factors contribute to a successful reentry for those who have served long-term sentences.

The duration and nature of incarceration, and the ways in which these factors influence a successful transition to society, need to be considered in order to make informed sentencing and releasing decisions. Moreover, New York, in addition to states across the country, is under significant pressure to save money, using funds in ways that are most efficient. Therefore, a full understanding of the effect long prison sentences have on public safety is particularly timely. Given that long-term sentences cost states important dollars, it is essential to understand if these sentences impact public safety in the ways policymakers imagine. The following chapters discuss the methods and findings of research that seeks to explore the impact long prison sentences have on the public safety outcomes of men and women being released from New York prisons in order to assess the utility of long-term sentencing.

Chapter 5
Research Design and Methods

The goal of the present study is to explore the impact long-term incarceration has on an individual's public safety outcomes. While recidivism rates indicate individuals who serve long prison terms are the least likely to return to prison, the point in their incarceration at which recidivism rates begin to decline is unknown. This research seeks to determine when lower recidivism rates are achieved at earlier points in individuals' sentences and to identify factors that influence the relationship between time served and recidivism.

To explore these questions, a quantitative study was designed using administrative data from two criminal justice agencies in New York, the Department of Corrections and Community Supervision (DOCCS) and the Division of Criminal Justice Services (DCJS). All individuals who were released from DOCCS custody between January 1, 2000 and December 31, 2004 were included in the sampling frame (N = 77,742), ensuring that a sufficient number of people who served 15 years or more appeared in the sample. At the time of data collection, DOCCS could provide a two-year follow up period for all individuals in the sample. Therefore, this study measures recidivism that occurs within two years of release. DOCCS provided data relevant to the individual's prison experience, release, and return (re-incarceration). DCJS provided criminal history data, including post-release arrest information.

The present study is a component of a larger research project that sought to understand the impact that long-term incarceration has on individuals' reentry outcomes. This larger research project was the effort of the Prisoner Reentry Institute at John Jay College of Criminal Justice and The CUNY Graduate Center. It was conducted under the leadership of Debbie Mukamal (former director of the Prisoner Reentry Institute); Todd Clear, Ph.D (former distinguished professor at John Jay College of Criminal Justice); and Michelle Fine, Ph. D

(distinguished professor at CUNY Graduate Center). The sampling design and database construction was a collaborative effort between the Division of Program Planning, Research & Evaluation at DOCCS and individuals affiliated with the project through CUNY, including myself. This research was approved by DOCCS, DCJS, and John Jay College of Criminal Justice's Institutional Review Board.

Working directly with DOCCS on the sampling design enabled the research team to identify a strategy that would yield sufficient sample sizes as well as accurate data matching for the individual cases. Moreover, the collaboration with DOCCS also ensured that confidentiality could be maintained at the highest level as DOCCS research staff provided DCJS staff with the selected database to match criminal history information for each individual in the final sample. Therefore, the final database provided to the CUNY research team was void of any personal identifiers.

The remainder of this chapter discusses the research design and methods employed in the current study. It begins with an overview of the sampling design used, including a detailed discussion of the sampling frame and strategy used. A brief discussion about the generalizability of the findings is also included. Next, data sources and variables are outlined and detailed. The chapter concludes with a summary of the statistical analyses that were conducted. Here, the four research questions are identified and discussed.

A Note On Women

Before moving on to sampling design, it must be noted that women offered a challenge in terms of the original definition of "long-term" that was adopted by this study. The number of long-term (served 15 years of more) women released during the sampling frame was few. Only 22 women released between January 1, 2000 and December 31, 2004 had been convicted of

violent crimes and served more than 15 years in prison. Within the sampling frame, a total of 5,577 women were released. Of those, 319 had served a sentence of five or more years, and 126 served eight or more years. Of the 319 who served a sentence of five or more years, 200 served time for a violent felony. Ninety-two women had served eight years or more for a violent felony.

Because so few women met the criteria for "long-term," a separate "long-term" definition was adopted for women. Long-term women are defined as those who served eight years consecutive years or more. The cutoff of eight years was selected without any guidance from the literature as the research on long-termers is dated and has largely focused on men. However, looking at average time served by women in DOCCS custody who were released in 2005 provided some guidance. Women with a maximum sentence of life served an average of 4.5 years while women with a maximum sentence of 180 months or more served an average of 10.5 years (Staley, 2008). These sentences are the most serious given by NYS and will likely be received by women convicted of class A-1 felonies. The eight-year cut off falls between these two measures. Furthermore, eight years is arguably a long time to be removed from society, separated from family and children.

Sampling Design

The database utilized for this study is comprised of people who served five years or more in NYS DOCCS and were tracked for 24-months after release. The database is a sample of all releases between January 1, 2000 and December 31, 2004. The sampling design used was the result of a collaborative process between the research department at DOCCS and the CUNY research team.

After several conversations between DOCCS research staff and the CUNY research team, it was decided that the sample should include *all* male cases released after serving 15 years or

more (n = 903). Then, for the purposes of comparison to men who served long-terms, a random sample of men released after serving at least five years for a violent felony was taken, stratified across three time served groups – five to eight years, eight to 10 years, and 10 to 15 years. This produced a sub-sample of men convicted of violent felonies who served at least five years in DOCCS custody (n = 3,389). Next, and also for the purposes of comparison, a random sample was taken of men convicted of non-violent felonies, stratified by felony type – "other coercive", "property and other," and "drug offenses." This produced a sub-sample of men convicted of non-violent felonies who served at least five years in DOCCS custody (n = 1,801). The entire male sample includes 5,190 cases. All women who served five years or more, regardless of crime type, were included in the database (n = 319). This ensured that there were enough women in the database to provide for a meaningful analysis. The final database is comprised of approximately 5,500 cases (N = 5,509). The creation of sub-samples across times served groups as well as felony type (violent and non-violent) allowed for two different comparisons for those who served long-terms in DOCCS custody: (1) how these individuals compare to individuals who experienced shorter lengths of stay for violent crimes and (2) how men and women who served long-terms for a violent felony compare to those who experienced longer lengths of stay for a non-violent felony.

While an alternative strategy was presented to DOCCS for consideration,[26] the current strategy was selected as it resulted in a database that was more manageable and increased the

[26] The alternative sampling strategy presented to DOCCS called for including all individuals convicted of violent felonies (excluding youth and juveniles cases). This would have resulted in approximately 22,000 cases in the base sample. Then, a 10 percent random sample (about 5,500) of the remaining non-violent cases would have been selected. This strategy would have resulted in a significantly larger database of about 27,000 releases. The main advantage of having such a large sample was precision in the ability to model, with appropriate controls, the effect of time served. However, due to its size, this database would be difficult to manage given that the resources DOCCS could provide to this project. Moreover, working with a database this large, it would be more difficult for DOCCS research staff to ensure accuracy when matching institutional variables to cases.

likelihood of DOCCS' ability to accurately match the correct institutional records to each individual. Additionally, because the focus of the project is on individuals serving long prison sentences, the CUNY research team agreed to exclude a sub-sample of individuals serving less than five years. This exclusion, however, becomes a limitation of this database – from it we cannot say anything about the effects short sentences have on recidivism. Moreover, it cannot be determined how individuals serving shorter sentences (less than five years) compare to those serving long-terms with regard to recidivism rates.

A number of institutional variables were selected for inclusion in the analysis (see Table 5.1 for the complete list of variables included in the analysis). In addition, criminal history data was matched with each case. In order to match the cases between the two agencies without compromising confidentiality, DOCCS research staff provided DCJS with the selected database with New York identification (NYSID) numbers. Once matched, the DCJS provided the CUNY research team with the database sans NYSID numbers.

Exclusions and missing data. Specific data exclusions were determined based on the statistical method used and are discussed further in Chapter 6. With regards to missing data, no issues were present for most of the variables included in the database. Missing data, however, was a problem for rehabilitative programming variables. Specifically, variables identifying rehabilitative needs at intake and whether the needs had been met at release were missing data for a significant portion of the cases. For some variables, nearly half of the cases in the sample did not have data. However, two variables included data for enough cases to be included on in the analysis. These variables provide scores for math and reading at release. Due to missing data, the remaining rehabilitative needs variables had to be excluded from the analysis.

Generalizability. This study utilizes data from only one state: New York. While it could be that prison and reentry experiences differ greatly in New York than in other states, there is no reason to assume this is the case. However, other states do utilize long-term incarceration to punish individuals with extensive criminal histories, most notably is California's three-strikes law (discussed in Chapter 1). Because New York does not have, nor has ever had, a three-strikes law, the majority of people included in this study served a long term for a violent offense. Therefore, the findings from this study can only be applied to those who served a long prison sentence due to a conviction of a serious and violent crime. These findings cannot be applied to recidivist statutes that result in long sentences. This study does, however, provide a useful framework to evaluate the effect that recidivist statutes that result in long prison sentence have on the likelihood of recidivism.

Data Sources and Variables

The database utilized for this study is comprised of people who served five consecutive years or more in DOCCS. Included in the database are a number of demographic and institutional variables provided by DOCCS, as well as criminal history data provided by DCJS (see Table 5.1).

Statistical Analyses

This research is intended to determine the effect that long-prison sentences have on public safety outcomes. Specifically, its primary goal is to determine when lower recidivism rates are achieved at earlier points in individuals' sentences and to identify the factors that influence this. To do so, four research questions are addressed, all of which are outlined in the following pages along with the statistical methods that were used to answer them. As previously discussed, the definition of long-term was modified to eight years for women. The following

questions apply to both the male and female populations; however, separate analyses were run for men and women.

Question 1. *What is the impact of each month served on the likelihood of an individual becoming re-involved (re-arrest or re-incarceration) with the criminal justice system upon release?*

The primary research question of this study, Question 1 seeks to determine the point – or points – at which people who serve long prison sentences experience a decline in their likelihood of recidivism. Modeling the effect of each additional month of incarceration has on recidivism rates will allow for the identification of a linear or curvilinear effect, as well as the identification of "turning points" on any curves that were found. It is these turning points that identify the point – or points – at which recidivism rates decline. The analysis will look at both definitions of recidivism adopted by this study – re-arrest and re-incarceration.

The analysis, a logistic regression model, controls for a number of factors: crime type, criminal history, institutional behavior, age at release, and race/ethnicity. The first four factors have been identified by previous research as impacting parole board release decisions (see Carroll & Burke, 1990; Parsonage, Bernat, & Helfgott, 1994; Turpin-Petrosino, 1999; West-Smith, Progrebin, & Poole, 2000; Caplan 2008). Education level at release is also included to determine the extent to which improved education outcomes are influential in individuals' post-release experience. The latter two – age and race – are demographic characteristics that are often linked to criminal justice system involvement (see Blumstein & Cohen, 1987; Blumstein, Cohen, & Farrington, 1988; Western, 2006).

Logistic regression was selected for three reasons: (1) it predicts a discrete outcome (recidivate yes/no) from a "set of variables that may be continuous, discrete, dichotomous, or a

mix;" (2) it is a flexible method that does not require predictor variables to be "normally distributed, linearly related, or of equal variance within each group;" and (3) it predicts the probability of an outcome for each individual case (Tabachnick & Fidell, 2001, p. 517). Additionally, Tabachnick and Fidell (2001) note that logistic regression is particularly "useful when the distribution of responses on the D[ependent] V[ariables] (recidivate yes/no) is expected to be nonlinear with one or more of the I[ndependent] V[ariables]" (number of months served) (p. 517).

Age and Recidivism. Walker (1987) states that any analysis of time served and recidivism must take into account the following key variables: age, criminal history, and type of crime. Furthermore, Walker (1987) specifically identifies the critical role of age when he writes that individuals "who have served longer prison terms tend to be older at release, and thus less likely to re-offend, regardless of their imprisonment experience" (p. 4). This is an extremely important point, signifying that age is an aspect of the relationship between long-term incarceration and recidivism that must be explored further. The present study looks more closely at the relationship between time served and recidivism and the differences across age groups. In the model discussed above, age was included as a continuous variable to determine the extent to which age is a significant predictor of recidivism, regardless of time served. However, the interdependency between age and long prison terms calls for a more in-depth analysis. Looking specifically at long-termers, the relationship is explored across four age groups. These groups were established based on the age/crime literature, and include: 16-20 years old, 21-25 years old, 26-30 years old, and 30 years old and above. Because the age-crime curve is "essentially homogeneous" for men and women (Steffensmeier & Streifel, 1991, p. 887), the same age groups were used across sexes. This regression analysis illustrates how the age/crime curve is

impacted by long-term incarceration. Specifically, it identifies whether people who served long-terms who went to prison at 18 have different outcomes than those who went to prison in their late twenties or early thirties. Such an analysis provides a more nuanced understanding of how age influences the relationship between long prison sentences and recidivism.

In addition to identifying the impact time served has on the likelihood of recidivism, this study also explores the type of re-involvement experienced by people who serve long prison sentences. This is an important issue as it identifies the nature of re-involvement experienced by long-termers. Ultimately, these analyses help us understand the extent to which recidivating long-termers cause additional harm to society.

Question 2. *How long are long-termers successful (remain free from criminal justice system involvement) upon release compared to other time served groups?*

The time immediately following incarceration, particularly the first few months, represent an individual's greatest risk to public safety (Travis, 2005). Indeed, of the 67.5 percent of individuals re-arrested within three years of release, nearly half – 29.9 percent – were re-arrested within the first six months (Bureau of Justice Statistics, 2011). This has important implications as it informs the ways in which resources should be used to help facilitate the reentry process for people who have served long prison sentences. Specifically, if people who serve long prison sentences, like the general reentry population, experience the highest rates of recidivism in the months immediately following release, resources and supports should be focused to those critical moments.

Question 2 is answered using Cox regression, the most straightforward method that predicts survival time from a group of covariates (Tabachnick & Fidell, p. 791) and a method that has been used widely in recidivism research (see Blumstein & Nakamura, 2010). Like the

model for Question 1, this analysis will explore both definitions of recidivism, first re-arrest and then re-incarceration, while controlling for age at release, crime type, criminal history, institutional behavior, and race. It is hypothesized that like general recidivism data suggests (Bureau of Justice Statistics, 2011) those who served long prison sentences will experience the highest likelihood of re-involvement in the months most closely following release.

The remaining two questions focus on those in the sample who were re-incarcerated within two years of release. Questions 3 seeks to identify the type of re-incarceration experienced by those who have served long prison sentences and, though limited, it provides an indication of how these individuals do under community supervision.[27]

Question 3. *If re-incarcerated, is there a difference in the type of return experienced (technical violation versus new commitment) for men and women who serve long prison sentences compared to other time served groups?*

Using two discrete variables, time served groups and type of re-incarceration (new commitment or technical violation), the χ^2 statistic tests the following hypotheses:

- H_0: There is no difference in the type of re-incarceration (new commitment or technical violation) experienced among time served groups.
- H_1: There is a difference in the type of re-incarceration (new commitment or technical violation) experienced among time served groups.

Question 3, like Question 4, begins to shed light on long-termers' post-release criminal behavior in comparison to other time served groups. Question 4 breaks this issue down further as it looks

[27] It should be noted that the NYS Division of Parole was approached several times for data to be used in this study. Unfortunately, the CUNY research team was unsuccessful at securing these data. Therefore, the analyses for Question 3 can say nothing about the nature of technical violations experienced by long-termers (that is, the severity of the violation, the number of violations that led up to the decision to re-incarcerate, etc.).

at how likely individuals who have served long prison sentences are to be re-incarcerated for a new violent crime when compared to other time served groups.

Question 4. *If convicted of a new crime, is there a difference in the type of return crime (violent versus non-violent) for men and women who serve long prison sentences compared to other time served groups?*

Using the χ^2 statistic, the following hypotheses are tested:

- H_0: There is no difference in the type of return crime (violent or non-violent) among time served groups.
- H_1: There is a difference in the type of return crime (violent or non-violent) among time served groups.

This analysis uses two discrete variables – time served groups and return crime type (violent or non-violent).

Conclusion

Analyses of administrative data, as outlined above, represent the most appropriate way in which to document the effect that long prison sentences have on recidivism, for it is these official data that provide the most accurate account of an individual's involvement in the criminal justice system. Working directly with DOCCS, a sampling strategy was decided upon that ensured adequate sample sizes for the long-term populations (male and female) and comparison groups. Moreover, it created a database that was manageable for DOCCS, resulting in a hirer level of confidence in data matching. The sampling strategy, combined with clearly defined variables and appropriate statistical methods, allows for meaningful analyses and interpretations of the results.

Chapter 6
Results

Within the last three decades, very little research has been conducted on people who serve long prison sentences and their post-prison outcomes. The existing literature on long-term incarceration focuses primarily on psychological impacts of long-term incarceration (see Bottoms & Light, 1987; MacKenzie & Goodstein, 1985; Flanagan, 1995), managing the long-term population (see Bottoms & Light, 1987; Porporino, 1990; Sabath & Cowles, 1990; Quinlan, 1990), and issues of system classification (see Toch, 1990). Despite the attention long-term incarceration received in the 1980s and 1990s, researchers have yet to adequately explore the relationship between time served and recidivism and to address the public safety implications of releasing individuals who have served long prison sentences.

The results presented in the following sections are an attempt to begin to fill this gap in the research by addressing the most utilized measure of public safety associated with incarceration – recidivism. The chapter begins with sample demographics and criminal history information for individuals in the sample. This section provides an illustration of the long-term population in New York that is more detailed than was presented in Chapter 4. The remaining sections address four research questions, providing findings first for men and then for women. Finding summaries are provided for both men and women.

Sample Demographics

The data used for this study include only those individuals who served five years or more in DOCCS custody; therefore, these data are not an accurate representation of the entire DOCCS release population. For example, the average age of release for individuals in the sample is 38.9 (see Table 6.1). In 2006, the average age of an individual released from the custody of DOCCS was 34 years old (Hayes, 2007). Given the direct relationship between the amount of time spent

in prison and age, it is to be expected that a sample comprised mostly of individuals serving longer prison terms would result in higher age at release averages. Also unsurprising is that the average time served was greater for these data when compared to the 2006 release cohort. Specifically, individuals released between 2000 and 2004 who served five years or more were incarcerated for an average of 9.8 years (117 months). This is compared to an overall average of 3.08 years (37 months) for the 2006 release cohort (Hayes, 2007). Such a difference is to be expected given that individuals who served less than five years in New York prisons were excluded from the database. This resulted in a sample that, on average, served longer than the entire release cohort. Any conclusions drawn from these data cannot be applied to the entire DOCCS population; they can only be applied to those who serve five years or more.

Expected differences in age and time served also appear when analyzing the sample across time served groups. People who serve long prison sentences in New York are older at release than those who served shorter sentences (see Table 6.1). The average age at release for people who served 15 years or more was 45.2, approximately five years older than individuals who served 10-15 years and nearly 10 years older than those who served five to eight years.

The majority of people released after serving a sentence of 15 years or more in New York prisons are men (96.9 percent) and are Black (57.6 percent). Moreover, individuals who serve the longest prison sentences are overwhelmingly charged with a violent felony offense (95.4 percent). People convicted of drug crimes comprised a very small portion (3.2 percent) of those who served 15 years or more. These data confirm that individuals serving the longest time in New York prisons are more likely to be: (1) older upon release; (2) male; (3) Black; and (4) convicted of a violent crime.

The sample is largely comprised of men. However, recall from Chapter 5 that *all* women released within the sampling frame that had served five years or more were included in the database. Independent *t*-tests were conducted to compare differences between the two groups – men and women (see Table 6.2). Women who served five years or more in New York prisons were slightly older than their male counterparts, both at intake and release, and these differences were significantly different. Indeed, there was a significant difference in the scores for men (M = 28.9, SD = 8.5) and women (M = 31.7, SD = 9.2) at age of incarceration; $t(352) = -5.35$, $p = .000$. Additionally, there was a significant difference in the scores for men (M = 38.8, SD = 9.2) and women (M = 39.9, SD = 9.5) at age of release; $t(5507) = -2.16$, $p = .031$. On average, men in the sample had more extensive criminal histories than women, as measured by prior arrests. There was a significant difference in the number of prior arrests for men (M = 45.1, SD = 30.9) and women (M = 33.0, SD = 33.0); $t(5507) = 6.73$, $p = .000$. Finally, on average, men served slightly more time than women, 9.9 years versus 8.3 years, a difference that was statistically significant – men (M = 121.0, SD = 57.0) compared to women (M = 100.7, SD = 44.3); $t(385.9) = 7.806$, $p = .000$.

Very few women – only 29 – were released within the sampling frame and had served 15 years or more in DOCCS. Therefore, as discussed in Chapter 5, the definition of "long-term" was modified so that meaningful conclusions could be made about the effect long prison terms have on women. Henceforth, findings presented on "long-termers" include those for men (served 15 years or more) and women (served eight years or more).

Long-term population demographics and criminal justice characteristics. *T*-tests were conducted to determine significant differences between long-term and non long-term individuals, both for men and women (see Tables 6.3 and 6.4). Long-term men are seven years

older at release than non long-term men, a difference that is statistically significant – long-term men (M = 45.1, SD = 8.6) compared to non long-term men (M = 37.5, SD = 8.7); $t(5183)$ = -23.793, p = .000. The difference in length of time served was also significant for long-term men (M = 223.4, SD = 40.9) and non long-term men (M = 99.4, SD = 30.1); $t(1117.5)$ = -86.35, p = .000. On average, long-term men have served over twice as long in prison (18.3 years versus 8.2 years).

Indeed, long sentences, as discussed in Chapters 1 and 4, are often the result of violent crimes. Over one-quarter of long-term men (28.1 percent) served a sentence for second-degree murder, one of the five class A-1 violent felonies (see Table 6.3). The other most common crimes for which long-term men were convicted include first-degree manslaughter (18.1 percent), first-degree robbery (18.5 percent), and first-degree rape (12.1 percent). While not class A-1 violent felonies, these crimes represent violent behavior and illustrate that the list of crimes for which long sentences are given is expanding (see Chapter 4).

The population characteristics discussed above are not surprising given the direct correlation between time served and age at release, as well as seriousness of crime and time served. What is not expected, however, is that the racial makeup of the long-term population is slightly whiter than the non long-term population. This is true for both men (see Table 6.3) and women (see Table 6.4); yet, like the overall prison population, the long-term population is predominately people of color. The fact that the long-term population is slightly whiter than other time served groups is perhaps an indication that whites are more likely to engage in, be arrested for, and/or convicted of violent crime than they are non-violent crime.

Like long-term men, long-term women are older at release (by 3.7 years) and have served nearly twice as many years in prison as non long-term women (see Table 6.4). The difference of

age at release between non long-term women and long-term women was statistically significant – long-term women (M = 42.19, SD = 9.79) compared to non long-term women (M = 38.56, SD = 9.13); $t(316) = -3.375$, $p = .001$. The difference in length of time served was also significant for long-term women (M = 138.12, SD = 48.18) and non long-term women (M = 76.32, SD = 14.77); $t(140.54) = -13.971$, $p = .000$. The most serious crimes long-term women were convicted of are first-degree manslaughter (34.4 percent), second-degree murder (14.1 percent), and second-degree manslaughter (10.9 percent), all of which represent the most serious and violent behavior.

Looking at criminal justice system involvement, both long-term populations are comprised of individuals who have had significantly fewer contacts with the criminal justice system, both before and after a period of long-term incarceration (see Tables 6.3 and 6.4). Men who served a sentence of 15 years or more had nearly one half the number of arrests prior to incarceration compared to non long-term men. There is a significant difference in the number of prior arrests for long-term men (M = 31.2, SD = 25.3) compared to non long-term men (M = 48.1, SD = 31.2); $t(1544.6) = 17.422$, $p = .000$. On average, long-term men had just over 30 arrests prior to being incarcerated for 15 years or more, compared to 48 arrests for non long-term men. A similar difference was found between women serving long-terms (20.8 average arrests) and those serving five to eight years (41 average arrests), a difference that was also statistically significant - long-term women (M = 20.8, SD = 28.8) compared to non long-term women (M = 40.96, SD = 33.4); $t(293.55) = 5.722$, $p = .000$.

Even more relevant to the present study, recidivism rates for the long-term population are three-fifths that of the non long-term population. Within two years of release, 21.4 percent of men who served 15 years or more were re-arrested and 15.3 percent returned to prison for a new conviction or parole violation. On the other hand, 34.6 percent of non long-term men were re-

arrested and 25.2 percent were re-incarcerated. There is an even greater difference among women, as rates for re-arrest and re-incarceration are approximately three times as high for non long-term women. In fact, rates for long-term women were less than 10 percent on both recidivism measures; 6.3 percent were re-arrested and 4.8 percent were re-incarcerated.

In summary, the long-term population in New York is comprised mostly of men of color who have been convicted of serious and violent crimes; however, they have a less extensive criminal history than their non long-term counterparts as measured by number of arrests prior to incarceration. While much smaller in number, long-term women mirror long-term men in that they are most likely people of color who have been convicted of serious and violent crimes. Like the men, long-term women have a criminal history that is half that of non long-term women. Just as long-term men and women have had less involvement with the criminal justice system prior to incarceration, their involvement post-release is also less extensive. This is particularly true for women. Within two years of release, approximately one out of 17 long-term women were re-arrested and one out of 25 were re-incarcerated. Among men, approximately one out of five were re-arrested and one out of six were re-incarcerated.

These rates, like the ones presented in Chapter 4, indicate that men and women serving long prison sentences in New York are the individuals who are the least likely to become involved in the criminal justice system upon release. The following analyses seek to better understand the relationship between time served and recidivism through the use of administrative data obtained from New York criminal justice agencies. The remaining sections in this chapter summarize the findings of four research questions.

Men: Time Served and Recidivism

This dissertation addresses four specific research questions designed to shed light on the relationship between time served and recidivism. The first question is meant to demonstrate the impact that time served has on recidivism and identify the factors associated with the likelihood of recidivism. Specifically, this question seeks to determine the point – or points – at which people who serve long terms experience low rates of recidivism. The second question looks at survival rates for people who serve long prison sentences. This question is meant to identify when recidivism is most likely to occur for people who serve long sentences. The third and fourth questions explore the type of re-incarceration experienced by people who serve long prison sentences and illustrate the extent to which people who serve long prison sentences threaten public safety upon release. That is, do people who serve long sentences return for new crimes? And if so, what type of crime are they likely to commit? Findings for all four questions are first presented for men and then for women.

Men: Question 1. *What is the impact of each month served on the likelihood of an individual becoming re-involved (re-arrest or re-incarceration) with the criminal justice system upon release?*

To address this question, logistic regression models were constructed using both recidivism measures: re-arrest and re-incarceration. In each model, all independent variables (IV) were included, regardless of their significant contribution. As discussed in Chapter 5, a number of variables associated with parole release decisions and criminal justice system involvement were controlled for in the analyses. These factors included number of months served, age at release, crime type, number of prior arrests, race, number of infractions, and reading and math

scores are release (see Table 6.5 for descriptive statistics for all the continuous variables in the model).

Prior to running the analyses, data were screened for missing data, outliers, and multicollinearity. Missing data was a problem for two independent variables (IV): average reading score at release and average math score at release. For men, 772 cases (14.8 percent of the sample) were missing reading scores and 932 cases (17.9 percent of the sample) were missing math scores. Alternative measures for levels of cognitive functioning and rehabilitation were not available in the dataset, and these two indicators provided the best source of information. Therefore, the decision was made to include these two variables in the analysis. To do so, multiple imputation (MI) was used to replace the missing values. In MI, missing values "are predicted using existing values from other variables" (Wayman, 2003, p. 3). MI is a strategy that is easy to use and produces a complete database with robust results (Wayman, 2003).

Preliminary multiple regressions were conducted using re-arrest (yes/no) and re-incarceration (yes/no) as the dependent variables (DV). These regressions were conducted to identify outliers and test for the presence of multicollinearity among predictor variables. Five cases had Mahalanobis Distance measures that were greater than the χ^2 critical value at $df = 8$. These cases were eliminated from the analysis. Tolerance scores for all IVs were greater than .1; therefore, multicollinearity was not a concern for either model.

Re-arrest. Logistic regression was used to determine which IVs (months incarcerated, age at release, crime type, number of prior arrests, race, number of infractions, reading score at release, and math score at release) are predictors of re-arrest within two years of release. Statistics for overall model fit were large, indicating a weak and questionable model (-2Log Likelihood = 1046.555). However, the model with all IVs was significantly different than the

model containing only the constant (χ^2 (13) = 76.419, $p < .0001$), indicating the model is statistically reliable in distinguishing between re-arrest outcomes (see Table 6.6). The model including the predictor variables had a goodness of fit that was 11.6 percent better than the goodness of fit of the null model (Nagelkerke $R^2 = .116$). Additionally, the model accurately classified 65.8 percent of the cases.

Wald statistics for age at release, number of prior arrests, and number of infractions significantly predict re-arrest (see Table 6.6). However, odds ratios for these three variables indicate little change in the likelihood of re-arrest. Specifically, as the variable age at release increases by one, the likelihood of re-arrest deceases by .958. On the other hand, unit increases in number of prior arrests and number of infractions slightly increases the likelihood of re-arrest by 1.019 and 1.022, respectively.

Re-incarceration. Logistic regression was used to determine which IVs (months incarcerated, age at release, crime type, number of prior arrests, race, number of infractions, reading score at release, and math score at release) are predictors of re-incarceration within two years of release (see Table 6.6). Like the model predicting re-arrest, statistics for overall model fit were large, indicating a weak model (-2Log Likelihood = 846.218). However, the model with all IVs was significantly different than the model containing only the constant (χ^2 (13) = 37.244, $p < .0001$). Thus, the model is statistically reliable in distinguishing between re-incarceration outcomes. The model including the predictor variables had a goodness of fit that was 6.6 percent better than the goodness of fit of the null model (Nagelkerke $R^2 = .066$), and it accurately classified 76.7 percent of the cases.

Wald statistics for months incarcerated and number of infractions significantly predict re-incarceration (see Table 6.6). However, odds ratios for these predictor variables indicate little

change in the likelihood of re-incarceration. As the variable months incarcerated increases by one, the likelihood of re-incarceration deceases by .994. Additionally, as number of infractions increases by one, the likelihood of re-incarceration increased by 1.015.

Impact of each additional month served. The primary goal of the first research question is the identification of "turning points" in individuals' prison experiences that indicate the point – or points – at which they experience lower rates of recidivism. That is, at what point in an individual's prison sentence does the likelihood of recidivism begin to decline? Also important is the identification of a point in time served at which the probability of recidivism increases. Using predicted values calculated by the logistic regression models, graphs were created to determine the effect that time served has on the likelihood of recidivism for different groups. Though the models produced were weak in predicting recidivism outcomes, they were significantly different than the models containing only the constant. Therefore, these graphs are reliable in estimating the probability of recidivism.

Impact of time served on re-arrest. Predicted values were plotted to determine the effect that each additional month served has on the likelihood of re-arrest for the entire male sample (see Figure 6.1). Based on this graph, the likelihood of re-arrest after serving at least 60 months (five years) in New York prison is 39 percent. As time served increases, the likelihood of re-arrest continues to decline, reaching less than 20 percent around 250 months (20.8 years). The average time served for men in the sample was just under 10 years, the point at which the likelihood of re-arrest is approximately 30 percent.

For long-term men, at 180 months (15 years) served, the likelihood of re-arrest is just over 20 percent (approximately 23 percent) (see Figure 6.2). This is over 10 percentage points less than the re-arrest rate for non long-term men in the sample (34.6 percent). Around 210

months (17.5 years), the likelihood of re-arrest begins to decline, falling below 20 percent around 250 months (20.8 years) in. These declines are similar for that of the entire sample. Yet, these graphs do not explain is how time served impacts different groups within the sample. Such graphs would facilitate the identification of points at which people convicted of serious and violent crime, those most likely to serve long sentences, experience low rates of recidivism.

To explore the relationship further, graphs illustrating the effect of time served on people convicted of non-violent versus violent crime were created. Men who have served at least five years for a violent crime are slightly more likely to be re-arrested than people convicted of non-violent crime (see Figures 6.3 and 6.4). The likelihood of re-arrest for men who served five years or more on a non-violent or violent charge is approximately 37 percent. However, the comparison of these two graphs illustrates how different the relationship between time served and re-arrest looks for the two groups. For men convicted of non-violent crime, the relationship is somewhat linear in the sense that the risk of re-arrest continually decreases as time served increases. At 150 months (12.5 years) served, the likelihood of re-arrest is just under 30 percent. For men convicted of violent crimes, the probability of re-arrest reaches 30 percent at approximately 10 years in. It continues to decline until approximately 320 months in at which point the likelihood of re-arrest begins to flatten out.

Ultimately, the likelihood of re-arrest becomes similar for men convicted of violent and non-violent crimes at around 10 years. These graphs also show that at around 10 years served, re-arrest rates of around 30 percent are reached by men released from New York prisons. It is important to note that this predicted probability occurs approximately five years before the automatic 15-year minimum sentence for a class A-1 violent felony conviction.

Impact of time served on re-incarceration. Predicted values were plotted to determine the effect that each additional month served has on the likelihood of re-incarceration for the entire male sample. The probability of re-incarceration after serving at least 60 months (five years) in a New York prison is approximately 27 percent (see Figure 6.5). As time served increases the likelihood of re-incarceration continues to decline, reaching less than 15 percent around 230 months (19.2 years). The average time served for men in the sample was just under 10 years, the point at which the likelihood of re-incarceration is just over 20 percent.

At 180 months (15 years), the likelihood of re-incarceration for long-term men is approximately 18 percent (see Figure 6.6.). This is, of course, less than the rate of re-incarceration for non long-term men in the sample, which is 25.2 percent. Around 210 months (17.5 years), the likelihood of re-incarceration begins to slightly decline, falling below 15 percent around 250 months (20.8 years). Unlike the entire sample, the likelihood of re-incarceration begins to increase around 325 months (approximately 27 years) for the long-term group.

As with the analysis of re-arrest, graphs illustrating the effect of time served on men convicted of violent versus non-violent crime were produced. Men convicted of non-violent crime are slightly more likely to be re-incarcerated than people convicted of violent crime (see Figures 6.7 and 6.8). The likelihood of re-incarceration for men who served at least five years for a non-violent crime is approximately 31 percent compared to 27 percent for their violent counterparts (see Figure 6.7).

For men convicted of non-violent and violent crime, the relationship between time served and re-incarceration is relatively similar; the risk of re-incarceration decreases as time served increases. At 130 months (just under 11 years) served, the likelihood of re-incarceration is approximately 23 percent for non-violent men (see Figure 6.7). The predicted probability of re-

incarceration for men convicted of violent crime drops below 20 percent at 130 months (10.8 years) (see Figure 6.8). The decline continues until approximately 380 months. Around 380 months in, the probability of re-incarceration begins to flatten. Ultimately, re-incarceration rates less than 20 percent occur four years prior to the automatic 15-year minimum sentence for a class A-1 violent felony conviction (See Figure 6.8).

Age. In the model summarized above (see Table 6.6), age at release was a significant predictor of re-arrest. As an individual gets older, his likelihood of re-arrest declines. This finding is not surprising given the established relationship between age and crime (as discussed in Chapter 3). Thus, it is important to take a closer look at the relationship between time served and recidivism through the lens of age. Specifically, do individuals who enter prison at a younger age experience different rates of recidivism than those who enter prison at an older age?

The logistic regression models outlined above were re-run using a categorical variable (age at incarceration) for age in place of the original continuous variable (age at release). Four age group categories were examined: 16-20 years old at intake, 21-25 years old at intake, 26-30 years old at intake, and 31 year or more at intake. For long-term men, only membership in the 16-20 year-old group was significant in predicting re-arrest. The odds of an individual experiencing re-arrest are 1.74 times higher if he enters prison between the ages of 16 and 20 versus 31 or older. Interestingly, age group is not a significant predictor for re-incarceration. The 16-20 and 21-25 year old groups were approaching significance at the $p = .05$ level (16-20 year old group, $p = .069$; 21-25 year old group, $p = .058$). While 16 to 20 year-old men who enter prison for a long sentence are more likely to be re-arrested and re-incarcerated upon release than their 30 year-old counterparts, the difference is only significant for re-arrest.

Men: Question 2. *How long are men who have served long-terms successful (remain free from criminal justice system involvement) upon release compared to other time served groups?*

To address this question, Cox regression survival models were constructed using both recidivism measures: re-arrest and re-incarceration. These models were performed to assess the impact of long-term incarceration on recidivism after adjusting for the effects of the following covariates: age at release, number of arrests prior to incarceration, number of infractions, crime type, and ethnicity.

In preparing the data for Cox regression survival analysis, several actions were taken to enhance the power of the analysis. First, because equal sample sizes help to increase power (Tabachnick & Fedell, 2001), a random sample of non long-term men was taken (n = 938) and added to the long-term group (n = 884), creating a new dataset for the Cox regression analysis. Next, the data were screened for adequacy of distribution and outliers. Cox regression does not require assumptions regarding distribution of covariates to be met; however, meeting such assumptions increase the power of the analysis (Tabachnick & Fedell, 2001). For men, the variable number of infractions was significantly skewed. Therefore, a logarithmic transformation was computed to reduce the skewness and influence of outliers.

Multivariate outliers were also identified through a regression analysis. The covariate age at release was significant ($p < .05$) as 14 cases differed from the others due to a high score on the age at release variable. Number of prior arrests was also significant ($p < .05$) for two cases due to low scores. Finally, the covariate log of total infractions was significant for five cases; four cases differ because of a high score and one case because of a low score. All multivariate outliers were eliminated for the analysis. Finally, the proportionality of hazards was assessed to ensure the

assumption was not violated. Time variables were computed for the covariates and no interactions were significant; the assumption was not violated.

Re-arrest. The experience of long-term incarceration had no reliable effect on re-arrest after adjusting for the other covariates (G^2 (1) = .208, p = .648). However, survival time was successfully predicted by the covariates (R^2 = .11). Three covariates predicted survival time at p < .01: Risk = -.002 (months incarcerated) + (-.022) (age at release) + .715 ($\log_{10}$ number of infractions). The greatest contributor to the model was the logarithm of number of infractions (see Table 6.7). Each additional increase in log of total infractions increases the risk of re-arrest for men by about two times. The probability of re-arrest decreases by 2.1 percent with each year of increasing age and by just 0.2 percent with each month of additional incarceration. Six months after release, approximately 95 percent of long-term men and non long-term men survive (see Figure 6.9). The two-year re-arrest survival rate for long-term men is approximately 86 percent and the two-year re-arrest survival rate for non long-term men is approximately 85 percent.

Re-incarceration. Long-term incarceration does not have a reliable impact on re-incarceration after adjusting for the covariates (G^2 (1) = .852, p = .356). However, survival time was successfully predicted by the other covariates (R^2 = .05). Four covariates predicted survival time at p < .01: Risk = -.003 (months incarcerated) + (.782) (property/other offenses) + 1.209 (number of prior arrests) + .669 ($\log_{10}$ number of infractions). The greatest contributor to the model was number of prior arrests (see Table 6.8). Each additional arrest increases the risk of re-incarceration by over three times. An increase in the log of total infractions increases the risk of re-incarceration by about two times. Men convicted of property/other crimes have a risk of re-incarceration twice that of men convicted of violent crimes. The probability of re-incarceration decreases by just 0.3 percent with each additional month of incarceration. Six months after

release, approximately 97 percent of long-term men and non long-term men survive (see Figure 6.10). The two-year re-incarceration survival rate for long-term men is approximately 82 percent and 78 percent for non long-term men.

Men: Question 3. *If re-incarcerated, is there a difference in the type of return experienced (technical violation versus new conviction) for men who served long prison sentences compared to other time served groups?*

Two discrete variables, time served group and type of re-incarceration (new commitment or technical violation), and the χ^2 statistic were used to test the following hypotheses:

- H_0: There is no difference in the type of re-incarceration (new commitment or technical violation) experienced among time served groups.
- H_1: There is a difference in the type of re-incarceration (new commitment or technical violation) experienced among time served groups.

The χ^2 statistic calculated for the relationship between time served and type of re-incarceration ($\chi^2 = 18.982$) is greater than the critical value for the χ^2 distribution with three degrees of freedom ($p < .001$). Therefore, the null hypothesis is rejected; there is a statistically significant relationship between type of re-incarceration and time served group for men released from New York prisons.

Men: Question 4. *If convicted of a new crime, is there a difference in type of return crime (violent or non-violent) for men who served long prison sentences compared to other time served groups?*

As with Question 3, the χ^2 statistic was used to test the following hypotheses:

- H_0: There is no difference in the type of return crime (violent or non-violent) among time served groups.

- H_1: There is a difference in the type of return crime (violent or non-violent) among time served groups.

This analysis also used two discrete variables – time served groups and return crime type (violent or non-violent). The χ^2 statistic calculated for the relationship between time served and type of return crime ($\chi^2 = 5.427$) is less than the critical value for the χ^2 distribution with three degrees of freedom ($p < .05$). Therefore, I fail to reject the null hypothesis and conclude there is no difference in the type of return crime between time served groups.

Men: Summary of findings. Models constructed to address the first research question were significant but weak. Three predictors were significant in both models – age at release, number of prior arrests, and number of infractions. Unsurprisingly, younger long-term men are more likely to be re-arrested than those who entered prison in their 30s. Predicted rates for men who had served at least 10 years in New York prisons are approximately 30 percent for re-arrest and less than 20 percent for re-incarceration. These predicted rates of recidivism are lower than rates of re-arrest and re-incarceration for non long-term men, 34.5 percent and 25.2 percent, respectively.

Survival rates for long-term men are not statistically different from non long-term men. At six months post release, 95 percent of long-term men had not been re-arrested and 97 percent had not been re-incarcerated. After two years 86 percent had not been re-arrested and 82 percent had not been re-incarcerated. Overall, time served appears to have little impact on recidivism outcomes for men. However, there is a significant relationship between long-term incarceration and the type of re-incarceration experienced. Individuals who return to DOCCS custody after serving a long sentence are more likely to return to due to a violation of parole.

Women: Time Served and Recidivism

As mentioned in Chapter 5, a separate long-term definition was adopted for women since so few women released during the sampling frame had served 15 years or more. This difference required a completely separate analysis for women. That is, sex could not be used as an independent variable or covariate in the models. The remaining sections present the findings for women. In these sections, long-term is defined as eight consecutive years or more in prison.

Women: Question 1. *What is the impact of each month served on the likelihood of an individual becoming re-involved (re-arrest or re-incarceration) with the criminal justice system upon release?*

As with men, logistic regression models were constructed using both recidivism measures: re-arrest and re-incarceration. In each model, all independent variables (IV) were included, regardless of their significant contribution. As discussed in Chapter 5, a number of variables associated with parole release decisions and criminal justice system involvement were controlled for in the analyses. These factors included number of months served, age at release, crime type, number of prior arrests, race, number of infractions, and reading and math scores are release (see Table 6.9 for descriptive statistics).

Prior to the analyses, data were screened for missing data, outliers, and multicollinearity. Missing data was also a problem for two independent variables (IV) in the women's database: average reading score at release and average math score at release. For women, 43 cases (13.5 percent of the sample) were missing reading scores and 32 cases (10.1 percent of the sample) were missing math scores. Because alternative measures for levels of cognitive functioning and rehabilitation were not available in the dataset, the decision was made to include these two variables in the analysis. As was the case for the men's dataset, MI was used to replace missing variables (Wayman, 2003).

Preliminary multiple regressions were conducted using re-arrest (yes/no) and re-incarceration (yes/no) as the dependent variables (DV) to identify outliers and test for the presence of multicollinearity among predictor variables. No cases were identified as outliers. Tolerance scores for all IVs were greater than .1; therefore, multicollinearity was not a concern for either model.

Re-arrest. The IVs months incarcerated, age at release, crime type, number of prior arrests, race, number of infractions, reading score at release, and math score at release were included in the model as possible predictors of re-arrest within two years of release. Statistics for overall model fit were large, indicating a weak model (-2Log Likelihood = 217.600). However, the model with all IVs was significantly different than the model containing only the constant (χ^2 (12) = 34.378, p = .001), indicating the model was statistically reliable in distinguishing between re-arrest outcomes. The model accurately classified 87.1 percent of the cases (see Table 6.10).

Wald statistics for age at release and number of infractions significantly predict re-arrest for women. However, odds ratios for these variables indicate little change in the likelihood of re-arrest. Specifically, as the variable age at release increases by one, the likelihood of re-arrest deceases by .905. On the other hand, unit increases in number of infractions increases the likelihood of re-arrest by 1.013.

Re-incarceration. Logistic regression was used to determine which IVs (months incarcerated, age at release, crime type, number of prior arrests, race, number of infractions, reading score at release, and math score at release) are predictors of re-incarceration within two years of release for women. Like those of the first model, statistics for overall model fit were large indicating a weak model (-2Log Likelihood = 189.497). However, the model with all IVs was significantly different than the model containing only the constant (χ^2 (12) = 39.205, p <

.0001), indicating the model was statistically reliable in distinguishing between re-incarceration outcomes. The model accurately classified 88.4 percent of the cases (see Table 6.8).

Wald statistics for number of prior arrests and math score at release significantly predict re-incarceration, though odds ratios indicate these variables have minimal influence. Indeed, as number of prior arrests increases by one, the likelihood of re-incarceration increases by 1.016. Higher math scores, however, are associated with a slight decrease in the likelihood of re-incarceration. As math score at release increases by one, the likelihood of re-incarceration decreases by .718.

Impact of each additional month served. As described above, predicted values calculated in logistic regression models were used to create graphs to determine the effect that time served has on the likelihood of recidivism for a number of different groups. Though the models produced for women were weak in predicting recidivism outcomes, they were significantly different than the models containing only the constant. Therefore, they do provide reliable information with which to construct these graphs.

Impact of time served on re-arrest. The likelihood of re-arrest for women after serving at least 60 months (five years) in a New York prison is 20 percent (see Figure 6.11). As time served increases the likelihood of re-arrest declines, reaching less than 15 percent around 100 months (8.3 years), the average time served for women in the sample. At 96 months (eight years), the likelihood of re-arrest for long-term women (served eight years of more) is approximately 12 percent (see Figure 6.12). This is five percentage points lower than the two year re-arrest rate for non long-term women. At around 130 months (10.8 years), the likelihood of re-arrest reaches less than five percent and continues to fall. Ultimately, this graph indicates that women serving a

long prison sentence in New York experience very low probabilities of re-arrest at 10 years served.

The likelihood of re-arrest for women who have served at least five years for a non-violent crime is approximately 17 percent compared to 19 percent for their violent counterparts (see Figures 6.13 and 6.14). As time served increases, the probability of re-arrest continues to decrease for women who have been convicted of non-violent crime. For women convicted of violent crime, the slope is slightly steeper, indicating a quicker decline in recidivism as time passes. These graphs demonstrate that the probability of re-arrest for women convicted of violent and non-violent crime is very low. Women convicted of violent crime reach a 15 percent likelihood of re-arrest at 100 months (8.3 years). This predicted rate occurs nearly seven years before the automatic 15-year minimum sentence for a class A-1 violent felony conviction.

Impact of time served on re-incarceration. The likelihood of re-incarceration for women who served at least 60 months (five years) in a New York prison is just under 20 percent (see Figure 6.15). As time served increases, the likelihood of re-incarceration continues to decline, reaching five percent around 140 months (11.7 years). At 96 months (eight years), the likelihood of re-incarceration is 20 percent (see Figure 6.16). As time served increases, the likelihood of re-incarceration declines, falling below five percent at 140 months (11.7 years).

Women who served at least five years for a violent crime are just as likely to be re-incarcerated as women convicted of non-violent crime (see Figures 6.17 and 6.18). The likelihood of re-incarceration for women who served five years is 19 percent. The comparison between graphs illustrates how the relationship between time served and re-incarceration for these groups is very similar. For women convicted of non-violent crime the likelihood of re-incarceration never rises above 10 percent after 85 months (approximately seven years) in.

Similarly, the likelihood of re-incarceration continually drops for women convicted of violent crime. The probability of re-incarceration experiences its sharpest decline between 60 months (five years) and 140 months (11.7 years), starting at 19 percent and dropping to five percent (see Figure 6.18). After 12 years served, the likelihood of re-incarceration remains less than five percent. Most important to this study, predicted re-incarceration rates less than five percent occur for women convicted of violent crime at 12 years served (see Figure 6.18). This low probability occurs approximately three years before the automatic 15-year minimum sentence for a class A-1 violent felony conviction.

Age. In the models summarized above (see Table 6.10), age at release was a significant predictor of re-arrest for women. As women get older their likelihood of re-arrest declines. Interestingly, age was not a significant predictor for re-incarceration. The logistic regression models outlined above were re-run using a categorical variable (age at incarceration) for age in hopes of providing a better understanding of the relationship between age, long-term incarceration, and recidivism.

As with men, four age groups were examined: 16-20 years old at intake, 21-25 years old at intake, 26-30 years old at intake, and 31 year or more at intake. The models including age group at intake were not significantly different from the models including only the constant. Therefore, these models are not reliable in predicting recidivism for long-term women. These findings suggest that age has a minimal – if any – impact on the likelihood of recidivism for long-term women.

Women: Question 2. *How long are women who have served long-terms successful (remain free from criminal justice system involvement) upon release compared to other time served groups?*

To address this question, Cox regression survival models were constructed using both recidivism measures: re-arrest and re-incarceration. These models were performed to assess the impact of long-term incarceration after adjusting for the effects of the following covariates: age at release, number of arrests prior to incarceration, number of infractions, crime type, and ethnicity.

In preparation for the Cox regression survival analysis, the data were screened for adequacy of distribution and outliers to improve the power of the analysis. As was true for men, the variable "number of infractions" was significantly skewed. A logarithmic transformation of this variable was computed to reduce the skewness and influence of outliers. Multivariate outliers were also identified through a regression analysis. The covariate age at release was significant ($p < .05$), indicating one case differed from the others because of a high score on the variable. This multivariate outlier was eliminated. Finally, the proportionality of hazards was assessed to ensure the assumption was not violated. Time variables were computed for the covariates and no interactions were significant; the assumption was not violated.

Re-arrest. The model first constructed to determine the effect long-term incarceration has on the risk of re-arrest did not fit the data for women; coefficients did not converge. Therefore, the model was simplified to include a dichotomous variable for crime type (violent/non-violent) versus a categorical variable. The simplified model fit the data; however, long-term incarceration did not have a significant effect on re-arrest after adjusting for other covariates (G^2 (1) = 2.278, p = .131). Yet, survival time was successfully predicted by the other covariates (R^2 = .08). Two covariates predicted survival time at α = .01: Risk = -.087 (age at release) + .012 (number of prior arrests). The greatest contributor was number of prior arrests. Each additional arrest increases the risk of re-arrest by about one. The probability of re-arrest decreases by 8.3 percent

with each year of increasing age. Six months after release, approximately 98 percent of long-term women and 97 percent non long-term women survived (see Figure 6.19). The two-year re-arrest survival rate for long-term women is approximately 93.5 percent. The two-year re-arrest survival rate for non long-term women is approximately 86 percent.

Re-incarceration. The experience of long-term incarceration did have a reliable impact on re-incarceration after adjusting for the covariates (R^2 = .02, p = .024). Three covariates predicted survival time at α = .01: Risk = 1.767 (property/other offenses) + 1.586 ($\log_{10}$ number of infractions) + 1.274 (long-term) (see Table 6.12). The greatest contributor to the model was conviction of property/other crimes. Women convicted of property or other crimes have a risk of re-incarceration nearly six times that of women convicted of violent crimes. An increase in the log of total infractions increases the risk of re-incarceration by about five times. The probability of re-incarceration is 3.5 times greater for non long-term women than for long-term women. Six months after release, approximately 99 percent of long-term women and 97 percent of non long-term women survived (see Figure 6.20). The two-year re-incarceration survival rate for long-term women is approximately 96 percent while the two-year re-incarceration survival rate for non long-term women is approximately 86 percent.

Women: Question 3. *If re-incarcerated, is there a difference in the type of return experienced (technical violation versus new conviction) for women who served long prison sentences compared to other time served groups?*

Two discrete variables, time served groups and type of re-incarceration (new commitment or technical violation), and the χ^2 statistic were used to test the following hypotheses:

- H_0: There is no difference in the type of re-incarceration (new commitment or technical violation) experienced among long-term and non long-term groups.
- H_1: There is a difference in the type of re-incarceration (new commitment or technical violation) experienced among long-term and non long-term groups.

For women, the χ^2 statistic calculated for the relationship between time served and type of re-incarceration ($\chi^2 = .585$) is less than the critical value for the χ^2 distribution with one degree of freedom ($p < .05$). Therefore, I fail to reject the null hypothesis; there is no difference in the type of re-incarceration experience among long-term and non long-term groups for women released from New York prisons. However, this finding should be taken with caution as 50 percent of frequency cells have an expected count of less than five. Typically, in such circumstances, the χ^2 test is inappropriate. Yet, the strategy to meet the minimum expected frequency requirement – to combine categories – was utilized and cells with counts of less than five still occurred. Specifically, the time served group variable was converted from a categorical variable to a dichotomous variable. Ultimately, this issue is the result of the small number of women in the sample who actually returned to DOCCS custody within two years of release (n = 37).

Women: Question 4. *If convicted of a new crime, is there a difference in type of return crime (violent or non-violent) for women who served long prison sentences compared to other time served groups?*

As with Question 3, the χ^2 statistic was used to test the following hypotheses:

- H_0: There is no difference in the type of return crime (violent or non-violent) among long-term and non long-term groups.
- H_1: There is a difference in the type of return crime (violent or non-violent) among long-term and non long-term groups.

Two discrete variables were used in the analysis – time served groups and return crime type (violent or non-violent). The χ^2 statistic calculated for the relationship between long-term and non long-term groups and type of return crime ($\chi^2 = 1.925$) is less than the critical value for the χ^2 distribution with one degree of freedom ($p < .05$). Therefore, I fail to reject the null hypothesis and conclude there is no difference in the type of return crime between long-term and non long-term groups for women released from New York prisons. However, as with Question 3, this finding should be taken with caution as 75 percent of frequency cells have an expect count of less than five. The strategy to meet the minimum expected frequency needed was utilized (time served group variable converted to dichotomous variable); however, expected counts of less than five were still present. This issue is the result of the small number of women in the sample who actually returned to DOCCS custody within two years of release due to a new crime conviction (n = 11).

Women: Summary of findings. As was the case with men, models predicting recidivism for women were significant; however, the models were weak. Only one predictor was significant in both logistic regression models – number of prior arrests. Interestingly, given the documented relationship between age and crime, age at release was only significant in predicting re-arrest for women. Predicted recidivism rates for women who serve at least 10 years in New York prisons are less than 10 percent. These predicted rates of recidivism are lower than rates of re-arrest and re-incarceration for non long-term women, 18.1 percent and 16.1 percent, respectively. Within two years of release 22.9 percent are re-arrested and 15.5 percent are re-incarcerated.

For re-incarceration, survival rates for long-term women were significantly different from non long-term women. At six months post release, 98 percent of long-term women had not been re-arrested and 99 percent had not been re-incarcerated. After two years, 93.5 percent had not

been re-arrested and 96 percent had not been re-incarcerated. Ultimately, long-term women do better for a longer period of time upon release than non long-term women.

The findings for questions 3 and 4 must be taken with caution given the small number of cases included in the χ^2 tests. In order to achieve sufficient cell frequencies, and reliable results, the sampling frame would need to be extended. There are not enough women in the current sample who were re-incarcerated. While this arguably supports the argument that long-term women pose little risk to public safety upon release, the relationship between long-term incarceration and re-incarceration cannot be adequately assessed using the current dataset.

Chapter 7
Discussion

This dissertation sought to understand the effect of long-term incarceration on rates of recidivism and to shed light on how this relationship unfolds. To do so, four research questions were addressed. Models reflecting the findings from previous literature were constructed to answer these questions. Model summaries presented in Chapter 6 indicate that though models predicting recidivism for men and women were significant, their predictive values were quite weak.

In many ways, this research raised more questions about long-term incarceration. Though the models were significant, they were weak in their ability to predict recidivism outcomes. Therefore, the models in this study, and the conclusions drawn from them, are less definitive than might be anticipated. While the findings are based on weak models, they are significant and warrant discussion. At the same time, the very fact that these models are weak in ways that stand in contrast with what the literature might suggest warrants discussion as well. The following pages discuss the findings in further detail. The first three sections briefly summarize the findings related to each research question. The fourth section discusses the considerations for policy and practice that are the result of this study. The chapter concludes with ideas for a future research agenda on long-term incarceration.

Question 1

Logistic regression models predicting re-arrest and re-incarceration outcomes were significant for men and women. However, all four models were weak in their prediction. Despite the weak models, there were several interesting findings related to this question, both in terms of what was significant and what was not. Additionally, the weak predictive value of these models raises questions as they were constructed under the guidance of the literature. Indeed, there was

no reason to believe that these models would yield such weak findings. This, perhaps, is an indication that the impact of factors most often used to guide release decisions is ultimately quite small. On the other hand, it could be that individuals who serve long prison sentences, as a group, are unique and therefore the experience of long-term incarceration and recidivism requires its own body of research. That is, these weak results indicate that it might not be appropriate to apply findings based on general populations (i.e. factors associated with parole release decisions and recidivism) to people who serve long prison sentences. These issues are considered in the discussion that follows.

Re-arrest. Given the established relationship between age and crime, it is not surprising to find that age at release was significant in the models predicting re-arrest for men and for women. Additionally, because models were constructed based on previous literature on significant predictors of parole release decisions and criminal justice system involvement, it is also not surprising that criminal history and disciplinary record predict future re-arrest. The current findings suggest that older men with limited criminal histories and good institutional behavior are the least likely to experience re-arrest. For women, age at release and number of prior arrests are the two significant predictors. Thus, older women with limited criminal histories are the least likely to experience re-arrest. Based on previous research, these outcomes were expected. However, as discussed above, it was not expected that these variables would contribute so little to the models. Unit increases in the predictors yield very small changes in the likelihood of re-arrest.

More interesting findings appeared when the impact of each additional month on re-arrest was explored. As discussed in Chapter 4, the individuals most likely to receive a long prison sentence in New York are those who have been convicted of violent felony offenses. According

to the predicted values calculated by the models, re-arrest rates nearly 15 percentage points below overall New York rates are reached by men and women convicted of violent crimes. Moreover, these rates occur before individuals reach the average time served – 22.5 years – by people convicted of class A-1 violent felonies in New York. Most importantly however, for men, low probabilities of re-arrest occur approximately five years before the automatic 15-year minimum sentence for a class A-1 violent felony conviction. For women, the difference is even greater; 8.3 years into a woman's sentence, the probability of re-arrest is less than 15 percent. Put simply, these findings suggest that low re-arrest rates are achieved at earlier points in individuals' sentences. This is particularly true for men and women serving long prison sentences for violent crimes, suggesting that individuals comprising the long-term population can be released at earlier points in their sentences without a heightened risk of recidivism.

Re-incarceration. Results of the models examining the likelihood or re-incarceration were significant but also weak. There are two significant predictors of re-incarceration for men: number of infractions and number of months incarcerated. However, unit changes in these variables result in small changes in the likelihood of re-incarceration. Results suggest that people who experience longer periods of time served are deterred from committing future crime or that the experience of a long period of incarceration does facilitate change. Indeed, number of months incarcerated, that is time itself, is a significant predictor of re-incarceration for men.

The significance of math score at release is the most interesting take away from the models predicting re-incarceration. Of all the predictor variables included in the model, math score represent one of the only dynamic factors included in the analyses. Indeed, these scores were one of the few factors that individuals had the ability to improve or could change over time. Their significance for women indicates that dynamic factors do play a role in predicting future

behavior; however, as discussed in Chapter 3, such factors are often overlooked when making release decisions. Moreover, their significance also suggests that rehabilitative programming, particularly education, can reduce the likelihood that an individual will return to prison. Unfortunately, missing data on other rehabilitative needs variables in the dataset prevented further exploration of the relationship between dynamic factors and recidivism outcomes.

As with re-arrests, graphs exploring the impact of each additional month served on re-incarceration produced interesting findings. According to the predicted values calculated by the models, men and women who have been convicted of violent crimes and have served at least eight years experience re-incarceration rates less than 30 percent. As is the case with re-arrest, the probability of re-incarceration for women is lower than it is for men. For example, the probability of re-incarceration for women remains below five percent at 12 years in. These predicted probabilities are incredibly low and occur at points before 15 years in, the minimum sentence received for a class A-1 violent felony. As noted above, these findings suggest that low recidivism rates are achieved at earlier points in individuals' sentences, especially for men and women serving long prison sentences for violent crimes.

Age. Additional analyses were conducted to further explore the role of age in the relationship between time served and recidivism. While age at release is a significant predictor in models predicting re-arrest for men and women as well as re-incarceration for men, age at release is not a significant predictor of re-incarceration for women. This, coupled with the weak contribution of age in the other models, demonstrates that while age does play a role in the relationship between time served and recidivism, its impact is minimal.

Recall that in the additional analyses conducted, age group at intake was only significant in the models predicting re-arrest for men and women. Specifically, men and women who enter

prison between the ages of 16 and 20 are significantly more likely to be re-arrested than those who entered prison in their 30s. Membership in the remaining age groups does not significantly predict recidivism. Taken together, these results indicate that age does play a significant role in the relationship between time served and recidivism. However, it appears the role is limited to those who are members of the youngest group at intake; yet even then, the effect is minimal. This finding could, however, indicate that an experience of long-term incarceration can stunt intellectual, social, emotional, and moral development for some individuals who enter prison between the ages of 16 and 20. Or, it could be that those involved in crime earlier in life have deeper rooted problems.

Question 2

The purpose of the second research question was to identify when people who serve long prison sentences experience the highest likelihood of recidivism. As discussed in Chapter 5, this has important implications as it informs the ways in which resources should be distributed to help facilitate the reentry process for people released after a long sentence. Time to re-arrest for men very much reflected the general finding that the highest rates of recidivism occur within the first few months immediately following release. Within the first six months of release, approximately five percent of men were re-arrested. Two years after release, 13 percent had been re-arrested. Therefore, just over one-third of all men who were re-arrested experienced the re-arrest in the first six months of release. However, this is not the case for re-incarceration. Approximately three percent of men are re-incarcerated within the first six months while 18 percent are re-incarcerated within two years.[28] Therefore, there appears to be a slight delay in the

[28] The re-incarceration measure used in this study includes people returned to DOCCS custody for a new crime or a parole violation. While at first glance one might assume that re-arrest rates would be higher than re-incarceration rates, the re-incarceration rate is greater because those who returned to prison due to a parole violation are included in the measure. These individuals would not be captured in the re-arrest rate.

likelihood of re-incarceration for men who serve long prison sentences. If they are going to be re-incarcerated within their first year of release, they will most likely return during months seven through 12. Since many people who serve long prison sentences in New York are released to post-release supervision, this finding could reflect supervision practices on the part of Parole. For example, the delay in return might be due to officers' willingness to look past certain violations in the first six months. Alternatively, men who serve long sentences might be particularly well behaved immediately upon release. Or, it could be that for those men who do return, stressors related to failure do not manifest themselves (i.e. finding employment, reconnecting with family, alcohol and drug relapse, etc.) until several months after release. While the reasons for this remains unknown, findings from this study indicate that the first year of release represents the most fragile time for men who have served long prison sentence in New York.

For women who have served long sentences in New York, the likelihood of re-arrest is more evenly distributed over the two years post release. This is also the case for women who are re-incarcerated: every six months, an additional 1.5 percent to three percent of women recidivate. Recall from Chapter 6 that less than seven percent of women who serve long prison sentences are re-arrested and just under five percent are re-incarcerated within the first two years of release. Therefore, very few women who serve long sentences even experience recidivism within the first two years of release. However, for those who do, there is no one moment that represents a more fragile period of time.

Questions 3 and 4

Questions 3 and 4 are being discussed together because each addresses the level of threat individuals who have served long prison sentences pose upon release. Specifically, are people who serve long sentences more likely than others to return to prison because of a new crime?

And, if convicted of a new crime, is it violent? The findings discussed here are those from the analyses on men. As discussed in Chapter 6, there were problems with the data in regards to women. While the results of Question 4 were not significant, the χ^2 test did yield valuable information in terms of the reasons men who served long sentences return to prison (Question 3).

It is the case that men who serve long prison sentences in New York are different from other time served groups in terms of why they return to prison. If they are returned to prison, it is largely due to a parole violation, not for a new commitment. Only 20 men (two percent of those who served more than 15 years) returned to prison for a new commitment compared to 115 (13 percent) returned for a parole violation. Unfortunately, there is no information in the dataset that provides the nature or seriousness of the violation. Without any details about the violation, it is impossible to draw any further conclusions. This finding could, like the findings above, be the result of the way in which people who have served long sentences are supervised in the community. Given the serious nature of their original crime, parole officers might have a low tolerance for any form of misbehavior. On the other hand, it could be that some experience violation in place of a new commitment. For example, an individual could have been caught in possession of a controlled substance, and instead of opening a new case, officials agreed to violate the individual. Questions about the nature of technical violations remain unanswered by the present study and represent opportunities for future research.

Issues to Consider for Policy and Practice

The impact of long prison sentences and their effects on public safety are areas that have been largely overlooked by academic research. This study is a step towards filling this gap, but much remains to be explored and understood about the impact long-term incarceration has on

reentry outcomes. The findings from the present study do provide two issues to consider in the areas of policy and practice.

Low recidivism rates at earlier points in time. The findings presented here indicate that the probability of recidivism is dramatically low for individuals who serve long prison sentences in New York, under 20 percent compared to return rates of over 40 percent for the entire population. Moreover, these low probabilities occur relatively early on during individuals' sentences when compared to how long they actually serve. It is the case that for many convicted of violent crime the probability of recidivating is drastically quite low after they have served approximately 10 years. However, as discussed in Chapter 4, individuals convicted of violent crimes in New York have continually experienced increases in time served over the last several decades. Presently, a man serving a long prison sentence in New York will serve an average of 18 years, nearly 10 years past the point in which the likelihood of re-incarceration for a new crime or a parole violation is less than 20 percent. That is approximately 20 percentage points less than the overall New York two-year re-incarceration rate. For women, re-incarceration rates less than 15 percent are achieved at 7.5 years served. In many instances, these probabilities of recidivism represent numbers that rehabilitative and reentry service providers strive to achieve.

Of course, there is always the chance that a person released from prison will recidivate. Recidivism is the result of many factors, and every person leaving prison has his or her own unique experience. When the person leaving prison has committed a particularly serious and violent crime, the authority that makes the decision to release takes a political risk. Should the individual cause more harm to society, especially if they commit another violent crime, public outcry will most likely be, "Why was this person even released in the first place?" In New York, legislatures and releasing authorities have adopted policies that appear to be driven by the idea

that keeping people locked away in prison is a way to achieve public safety. Intuitively, this makes sense: a person locked away is crime that is not committed. It is also reasonable to believe that people who engage in violent behavior will continue to do so. Indeed, as the saying goes, "The best predictor of future behavior is past behavior." However, ironically, these individuals – as a group – are the least likely to recidivate upon release. Herein lies a conundrum: in some cases, and some might argue most cases, criminal justice policies and practices are intuitively as opposed to empirically driven. People convicted of serious violent crime can, and most often do, remain free from criminal justice contact upon release. Ultimately, this study illustrates that to achieve such an outcome, an individual does not need to spend 15, 20, or 25 years in prison.

Nonetheless, the politics involved in sentencing and releasing individuals who have committed violent acts cannot be overlooked. In a punitive country like the United States, suggesting that sentences for people who have perpetrated such harmful acts should be cut by nearly 50 percent is unlikely to yield acceptable policy and practice in the eyes of the public. Perhaps a more feasible suggestion is for individuals serving long prison sentences to be considered for parole after serving approximately two-thirds of their minimum sentence. Another approach is to consider the present findings in the context of sentencing. It would be worthwhile for future sentencing reforms to reflect upon the finding that drops in recidivism risk occur years before some minimum sentences are reached. Lowering minimum sentences to reflect the point at which people no longer present a heightened risk to public safety would indeed impact length of stay and ultimately help to reduce the size of the prison population.

It is not my intention to suggest that individuals who have committed serious and violent crimes should not be held accountable for their acts. Yet, some would likely argue that if a person responsible for taking a life was ever released from prison, he or she is not being held

accountable for his or her crime. These differences reflect conflicting opinions about what the purpose of punishment is and how the prison system should be involved in achieving the goal. In making the argument that extraordinarily long prison sentences are not needed to achieve low rates of recidivism, I am not suggesting that long prison sentences do not serve a purpose. For some, especially those who have experienced violence and loss at the hands of someone in prison, long prison sentences could very well serve the purpose of retribution. For these individuals, retribution may in fact be the most important or only purpose of punishment. Instead, my argument is that the long-term population experiences low rates of recidivism upon release, and those rates are achieved years before most people sentenced to long terms are released from prison. Thus, to achieve lower recidivism rates, society does not need to invest in long prison sentences (i.e. 15 year or more), which are costly to taxpayers. In a time during which state budgets are strained, it is perhaps essential to think about the penal system less as of a provider of retribution and more as a mechanism to protect society.

Indeed, many states no longer have the "luxury" of incarcerating the extraordinary number of people they did in previous decades. The size of the prison population is a function of the number of people who are admitted and the length of time they stay. In the criminal justice field, there has been growing discussion about ways in which people can be diverted from incarceration. Less consideration, however, has been given to reducing the amount of time people are incarcerated. This is especially the case for people convicted of serious and violent crimes. Given the direct impact that length of time served has on the size of the prison population, reducing the amount of time people are in prison will inevitably decrease the size of the prison system. Such a reduction could have sizable cost savings benefits for jurisdictions currently facing extreme budget cuts. Additionally, in the case of people serving long prison

sentences, resources spent on locking people up for 15 years or more, or for the remainder of their natural life, could instead be used to provide services and supports in the community. This is the core strategy of an approach known as Justice Reinvestment, which is defined as a "data driven approach to reduce corrections spending and reinvest savings in strategies to reduce crime and strengthen neighborhoods" (Justice Center, 2010, p. 1). Applied here, the argument is that while holding an individual accountable for the crimes he or she has committed is part of ensuring justice, so too is helping those who have experienced violence perpetrated towards them or family members recover from the trauma. This, in fact, is the core principle of Parallel Justice (Herman, 2010). Indeed, an astounding amount of resources go towards punishing people while hardly none go to helping victims of crime rebuild their lives (Herman, 2010). Ultimately, the responsibility of bringing peace to people who have been harmed by crime has fallen on the shoulders of the penal system, and the only way that system knows to respond to such a charge is by giving more attention and time to the person causing the harm. In other words, the only way the penal system knows how to respond to this challenge is to become more punitive. Ultimately, incorporating the principles of Justice Reinvestment and Parallel Justice with issues of long-term incarceration presents an exciting opportunity to think about what a justice system that provides fiscally responsible levels of punishment and victim support could look like.

Age as a mitigating factor. Importantly, according to the findings of this study, age does play a significant role in the relationship between time served and recidivism. However, the role is limited to those who are members of the youngest group at intake. Based on this finding, an issue to consider is whether a person's age should be taken into account, especially when sentencing an individual to a longer prison term.

Studying the impact of sentencing guidelines on people's life expectancy, Sherwin (1990) states that an individual's age is rarely considered in guidelines employed by those who sentence people to prison. However, he argues that the cost of committing a crime varies for different age groups as they have lost different percentages of their remaining life expectancy. In Sherwin's words, the individual "who at age 50 begins serving a five year sentence has forfeited upon completion about 20 percent of his predicted remaining life expectancy while a 20 year old who also serves a five year sentence forfeits upon completion less than 10 percent of his predicted remaining life expectancy" (p. 125). Put another way, equal sentences can have an unequal impact. Applying this idea to the current research: a 15 year sentence means something different for a 16 year old (who will be 31 at release) than a 31 year old (who will be 46 at release).

In the case of long prison terms, those who are older at intake already pose less of a risk to public safety upon release than those in their late teens and early 20s, regardless of the length of time they serve. To be clear, I am not advocating for longer sentences for one group over another. Instead, given the significance of age variables in these models, the suggestion from this research is that age should be considered when crafting sentencing laws and making sentencing and release decisions. For example in the case of those ages 21 and older facing a long prison term, age, according to the findings of this study, could be used as a mitigating factor when determining sentence length and making release decisions. States such as Texas, Nevada, Rhode Island, and many others consider current age as a mediating factor at the time of an individual's parole hearing.

Future Research

While these models are significant, it is surprising that their predictive values are as weak as they are, especially since they were constructed with the guidance of literature. It is reasonable

to expect that such a deductive method of model construction would yield more robust models. Their significance indicates a relationship; however, the fact that they were weak indicates that there could be additional variables to consider that were not available for this study. Moreover, to fully capture how and why the relationship between time served and recidivism unfolds, a longitudinal design, which allows one to identify how individuals change over time, is likely more appropriate than the cross sectional analysis used in the present study.

Based on findings from previous research, it was assumed that administrative data would be adequate in disentangling the relationship between time served and recidivism. However, the weak models indicate that there may in fact be better types of data that could be used for this analysis. While the current study ultimately did achieve what it was intended to, future research could in fact identify stronger recidivism predictors through the use of different measures. One possibility is to utilize data that has been collected at multiple points during a person's incarceration. For example, some jurisdictions utilize standardized assessments for the purposes for reclassification or conduct a risk assessment when the individual enters prison and prior to parole board hearing and/or release. Assessments that have been validated on the population (for example, COMPAS or LSI-R) and capture measures of dynamic risk factors might help hone in on the factors that explain how long prison sentences work. Such methods are currently being employed in other research seeking to understand an individual's risk trajectory throughout their incarceration (Pager, unpublished). Other assessments, like those measuring criminological attitudes, would also be informative.

The theoretical discussion in Chapter 2 also identifies a number of opportunities for future research. The present research fails to assess the assertion that incarcerated people can be agents of change or explain how age, social bonding, and social learning principles converge to

decrease the likelihood that individuals who served long prison terms will experience recidivism. To truly understand these dynamics, researchers must explore the impact mentoring, peer groups, and leadership dynamics have on incarcerated people. Other interesting factors to consider would be the nature of social networks and social capital in the prison environment. Applying narrative methodologies to the long-term population would be particularly helpful to better understand the role attitudes, emotions, and self-concepts play in an individual's transformation process. Truly understanding the transformation process experienced by people serving long prison sentences would be incredibly informative to those charged with making release decisions.

The role of victims is one that cannot be overlooked with discussing issues related to those who have caused great harm to society and are serving long prison sentences as a result. The discussion in Chapter 3 – factors that impact parole release decisions – also identifies an important area for future research on the long-term population. Questions surrounding the availability and use of victim input in long-termer release decisions are important to unpack, particularly given that some victims might experience rage, confusion, or hurt because someone who caused them great harm has been released. Given the role retribution plays in America's criminal justice system, issues of victim satisfaction and healing in the context of long-term incarceration also present exciting research opportunities. If shortening length of stay – be it due to shorter sentences or release practices – is ever going to be seriously considered, America's fascination for retributivism must be understood and victims needs be addressed.

Additionally, several findings from the current research would benefit greatly from further inquiry. For example, a person's disciplinary history is a significant predictor of recidivism; however, knowing when infractions occurred would help in informing those who are making release decisions. The moment in the sentence at which the infraction occurred might

play a role. Previous research already suggests that people serving long terms are likely to experience more infractions earlier on in their sentence. The point at which infractions occur might yield more predictive insight into behavioral change than a simple measure of numbers of infractions.

Another area that is in need of further exploration is the role of program participation and rehabilitative needs. Often, this sort of data is difficult to access. Even jurisdictions that have fairly sophisticated data systems cannot account for its accuracy as this type of data is typically entered into the system at the facility level. This might explain why so much data was missing from the variables intended for the present study. Ultimately, this issue speaks to the importance of sound administrative data collection policies and practices. While data entry might not be a task that has traditionally been prioritized by those who work within departments of correction, it is indeed critical for the discovery of how and why prison sentences "work" better for some populations.

Table 1.1

Average time served (in years) by people released from state prison

Crime of Conviction	1993 Releases	2008 Releases	Percent Change
Violent Offense	3	4.25	+41.6
Homicide	5	9	+81.6
Murder	7.75	13.3	+72
Non-negligent	4	12.3	+202
Manslaughter			
Negligent Manslaughter	3	4.25	+41.6
Unspecified Homicide	4.8	5.6	+17.2
Kidnapping	3.5	4.75	+35.7
Rape	4.75	7.8	+64.9

Note. From data presented in Wilson (1999) and Bonczar (2010).

Table 1.2

Re-arrest rates for people released from state prison in 1994 (percentages)

Original Crime/Status	Re-arrested	Re-arrest Crime			
		Violent	Property	Drug	Public Order
All	67.5	21.6	31.9	30.3	28.3
Lifers	20.6	18	19.9	2.9	8.3
Violent	61.7	27.5	25.5	22.6	27.4
Property	73.8	21.9	46.3	27.2	29.2
Drug	66.7	18.4	24	41.2	27.7
Public order	62.2	18.5	22.9	22.1	31.2

Note. From data presented in Mauer, King, and Young (2004).

Table 4.1

New York's Sentencing Reform Act of 1995

Category of Violent Offense	After 1995 Reforms
First-time felony	Individuals convicted of *any* felony receive a minimum sentence that is one half the maximum sentence.
Second-time felony/First-time violent felony	Individuals convicted of a class A-1I through E felony for the second time or a class B through E violent felony for the first time receive a determinate sentence. They must serve at least six-sevenths of sentence and then a period of post-release supervision.
Second-time violent felony	Individuals convicted of a class B through E violent felony for the second time receive a determinate sentence. They must serve at least six-sevenths of sentence and then a period of post-release supervision.
Persistent violent felony	Individuals convicted of a third (or more) violent felony receive an indeterminate sentence, a sentence consistent with class A-1 violent offenses. They receive lengthier minimum sentences and maximum sentences are fixed at life.

Note. From data presented in Lippman (2008) and Silver and Ferrell (1998).

Table 4.2

New York's Sentencing Reform Act of 1998

Offense	Sentence (in years)	Post-Release Supervision (in years)
Class B Felony	5 to 25	2 ½ to 5
Class C Felony	3 ½ to 15	2 ½ to 5
Class D Felony	2 to 7	1 ½ to 3
Class E Felony	1 ½ to 4	1 ½ to 3

Note. From data presented in NY Division of Criminal Justice Services (n.d.).

Table 4.3

Change in New York's prison populations

	2001	2010	Percent Change
Prison Population	67,571	56,419	-16.5
15-20 Year Population (Minimum Sentence)	3,539	4,239	19.8
20 Year Population (Minimum Sentence)	7,123	8,636	21.2

Note. From data presented in NYS Commission of Correction (2011), Rockefeller Institute of Government (n.d.), and Bernstein (2010).

Table 5.1

Variables included in the analyses

Variable	Definition	Source
Age at release	Age individual was when released from DOCCS custody.	DOCCS
Criminal History	Number of prior arrests and individual experienced before incarceration period for which he/she was released from DOCCS custody.	DCJS
Crime Type	The crime for which the person was convicted that led to the incarceration period of interest.	DOCCS
Institutional Behavior	Number of infractions received during the incarceration period of interest.	DOCCS
Race/Ethnicity	The race or races the individual most closely identifies with.	DOCCS
Recidivism	Re-arrested and re-incarcerated (resulting from a new commitment or technical violation) in NY within two years of release from DOCCS custody.	DOCCS
Education Level	Reading and Math TABE scores at release.	DOCCS
Return Crime	The crime for which an individual returned to DOCCS custody within two years of his/her release.	DOCCS
Time Served	The amount of time served (in months and time served categories) by the individual. Time served groups: 5-8 years, 8-10 years, 10-15 years, and 15+ years.	DOCCS
Type of Re-incarceration	The reason for which an individual returned (technical violation or new commitment) to DOCCS custody after being released.	DOCCS

Table 6.1

Sample demographics by time-served groups

	5-8 Years (n = 2,422)	8-10 Years (n = 1,105)	10-15 Years (n = 1,050)	15+ Years (n = 932)
Age at release				
Average age	36.7	37.7	39.6	45.2
Sex (percent)				
Men	92.1	94.9	95.9	96.9
Women	7.9	5.1	4.1	3.1
Race/Ethnicity (percent)				
White	17.7	17.5	17.6	21.8
Black	51.5	56.3	55.5	57.6
Hispanic	29.6	25.0	26.9	20.4
Other/Unknown	1.2	1.3	1.2	0.2

Table 6.2

Sample demographic & criminal justice characteristics by gender

	Men (n = 5,190)	Women (n = 319)
Average age		
At incarceration *	28.9	31.7
At release *	38.8	40.0
Race/Ethncity (percent)		
Black	53.9	56.3
Hispanic	27.0	19.8
White	18.1	23.0
Other/Unknown	1.0	0.9
Criminal justice involvement		
Average number of prior arrests *	45.1	33.0
Average time served (years) *	9.9	8.3
Crime type (percent)		
Violent felony	65.3	62.6
Other coercive	12.2	11.0
Drug offense	16.1	23.0
Property and other offenses	6.4	3.5
Average number of infractions	21.8	24.6
Education level at release		
Reading score	9.0	8.9
Math score	7.7	7.7

Note. * = $p < .05$

Table 6.3

Long-term population demographic & criminal justice characteristics (men)

	Long-term (n = 903)	Non long-term (n = 4,287)
Average age		
At incarceration *	27.1	29.3
At release *	45.1	37.5
Race/Ethnicity (percent)		
Black	58.1	53.0
Hispanic	20.6	28.4
White	21.2	17.6
Other/Unknown	0.1	1.3
Criminal justice involvement		
Average number of prior arrests *	31.2	48.1
Average time served (years) *	18.3	8.2
Most common offense	Murder 2nd	Robbery 1st
Average number of infractions	22.4	21.7
Education level at release		
Reading score	9.1	8.9
Math score	7.7	7.7
Recidivism (24 month follow-up)		
Percent re-arrested *	21.4	34.6
Percent re-incarcerated *	15.3	25.2

Note. * = $p < .05$ and + = $p < .1$.

Table 6.4

Long-term population demographic & criminal justice characteristics (women)

	Long-term (n = 126)	Non long-term (n = 193)
Average age		
At incarceration +	30.5	32.5
At release *	42.2	38.5
Race/Ethnicity (percent)		
Black	57.9	55.2
Hispanic	13.5	24.0
White	27.0	20.3
Other/Unknown	1.6	0.5
Criminal justice involvement		
Average time served (years) *	11.3	6.3
Average number of prior arrests *	20.8	41.0
Most common offense	Manslaughter 1st	Robbery 1st
Average number of infractions	23.8	25.0
Education level at release		
Reading score	9.2	8.7
Math score *	8.3	7.4
Recidivism (24 month follow-up)		
Percent re-arrested *	6.3	18.1
Percent re-incarcerated *	4.8	16.1

Note. * = $p < .05$ and + = $p < .1$.

Table 6.5

Descriptive statistics for male sample

	Mean	S.D.	Maximum	Minimum
Months served	121.00	57.03	399.20	60.87
Age at incarceration	28.92	8.50	78.00	16.00
Age at release	38.85	9.16	87.00	21.00
Number of prior arrests	45.13	30.95	98.00	0.00
Number of infractions	21.78	26.48	492.00	0.00
Reading score at release	9.00	3.17	13.00	0.00
Math score at release	7.73	2.60	13.00	0.00

Table 6.6

Regression coefficients for men

	Re-arrested (n = 5,185)					Re-incarcerated (n = 5,185)				
-2Log Likelihood	1046.555					846.218				
Nagelkerke R^2	.116					.066				
Model significance	χ^2 (13) = 76.419, p < .0001					χ^2 (13) = 37.244, p < .0001				
Predicted cases	65.8%					76.7%				
	B	*Wald*	*df*	*p*	Odds	*B*	*Wald*	*df*	*p*	Odds
Months incarcerated	-.003	3.531	1	.060	.997	-.006	7.679	1	***.006***	.994
Age at release	-.043	6.103	1	***.013***	.958	.026	1.823	1	.177	1.027
Crime type		2.839	3	.417			7.401	3	.060	
Number of prior arrests	.019	18.015	1	***.000***	1.019	.010	3.390	1	.066	1.010
Race/Ethnicity		3.831	4	.429			.080	4	.999	
Number of infractions	.022	12.551	1	***.000***	1.022	.015	4.577	1	***.032***	1.015
Reading score at release	-.056	1.085	1	.297	.946	-.084	1.837	1	.175	.920
Math score at release	-.049	.541	1	.462	.952	.001	.000	1	.991	1.001
Constant	2.139	1.485	1	.223	8.487	-21.9	.000	1	.999	.000

Table 6.7

Cox regression analysis of covariates on survival time to re-arrest (men)

	B	*df*	Prob.	Odds Ratio
Months incarcerated	-.002	1	**.006**	.998
Age at release	-.022	1	**.001**	.979
Crime type		3	.274	
Number of prior arrests	12.786	1	.905	357224.1
Race/Ethnicity		4	.953	
Log of total infractions	.715	1	**.000**	2.045

Table 6.8

Cox regression analysis of covariates on survival time to re-incarceration (men)

	B	*df*	Prob.	Odds Ratio
Months incarcerated	-.003	1	**.002**	.997
Age at release	.007	1	.352	1.007
Crime type		3	**.003**	
Other coercive	.135	1	.500	1.144
Drug offense	.049	1	.774	1.050
Property/other offense	.782	1	**.000**	2.185
Number of prior arrests	1.209	1	**.004**	3.349
Race/Ethnicity		4	.678	
Log of total infractions	.669	1	**.000**	1.952

Table 6.9

Descriptive statistics for female sample

	Mean	S.D.	Maximum	Minimum
Months served	100.81	44.31	342.27	60.93
Age at incarceration	31.75	9.21	75.00	17.00
Age at release	40.00	9.55	80.00	22.00
Number of prior arrests	32.98	33.13	98.00	1.00
Number of infractions	24.57	36.52	295.00	0.00
Reading score at release	8.90	2.71	13.00	0.00
Math score at release	7.73	2.66	13.00	0.00

Table 6.10

Regression coefficients for women

	Re-arrested (n =318)					Re-incarcerated (n =318)				
-2Log Likelihood	217.600					189.497				
Nagelkerke R^2	.187					.226				
Model significance	χ^2 (12) = 34.378, p = .001					χ^2 (12) = 39.205, p < .0001				
Predicted cases	87.1%					88.4%				
	B	*Wald*	*df*	*p*	Odds	*B*	*Wald*	*df*	*p*	Odds
Months incarcerated	-.005	.589	1	.443	.995	-.009	1.595	1	.207	.991
Age at release	-.100	12.376	1	***.000***	.905	-.038	1.947	1	.163	.962
Crime type		1.903	3	.593			1.531	3	.675	
Number of prior arrests	.013	4.890	1	***.027***	1.013	.016	6.991	1	***.008***	1.016
Race/Ethnicity			3				.155	3	.985	
Number of infractions	.000	.000	1	.998	1.000	.008	2.878	1	.090	1.008
Reading score at release	-.163	3.130	1	.077	.849	.160	2.672	1	.102	1.173
Math score at release	.020	.045	1	.833	1.020	-.331	8.850	1	***.003***	.718
Constant	-13.8	.000	1	1.00	.000	-17.4	.000	1	.999	.000

Table 6.11

Cox regression analysis of covariates on survival time to re-arrest (women)

	B	*df*	Prob.	Odds Ratio
Months incarcerated	-.005	1	.390	.995
Age at release	-.087	1	***.001***	.917
Number of prior arrests	.012	1	***.016***	1.012
Violent crime	.405	1	.220	1.500
Log of number of infractions	.357	1	.248	1.429
Race/Ethnicity		3	.910	

Table 6.12

Cox regression analysis of covariates on survival time to re-incarceration (women)

	B	*df*	Prob.	Odds Ratio
Months incarcerated	.001	1	.891	1.001
Age at release	.018	1	.395	1.019
Crime type		3	.085	
Other coercive	.511	1	.360	1.667
Drug offense	-.319	1	.467	.727
Property/other offense	1.767	1	***.030***	5.852
Number of prior arrests	-.037	1	.947	.963
Race/Ethnicity		3	.785	
Log of total infractions	1.586	1	***.000***	4.884
Long-term	1.274	1	***.037***	3.575

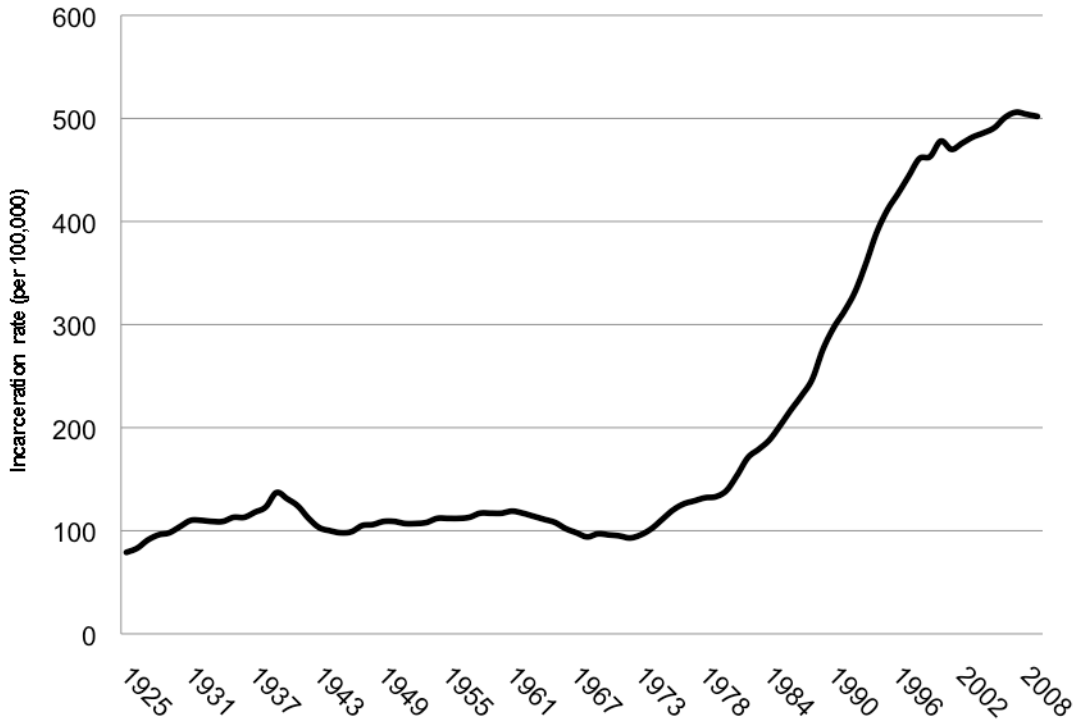

Figure 1.1. United States incarceration rate per 100,000 population from 1925 to 2009.

Note: From data presented in *Sourcebook of Criminal Justice Statistics* compiled by the Bureau of Justices Statistics (2009).

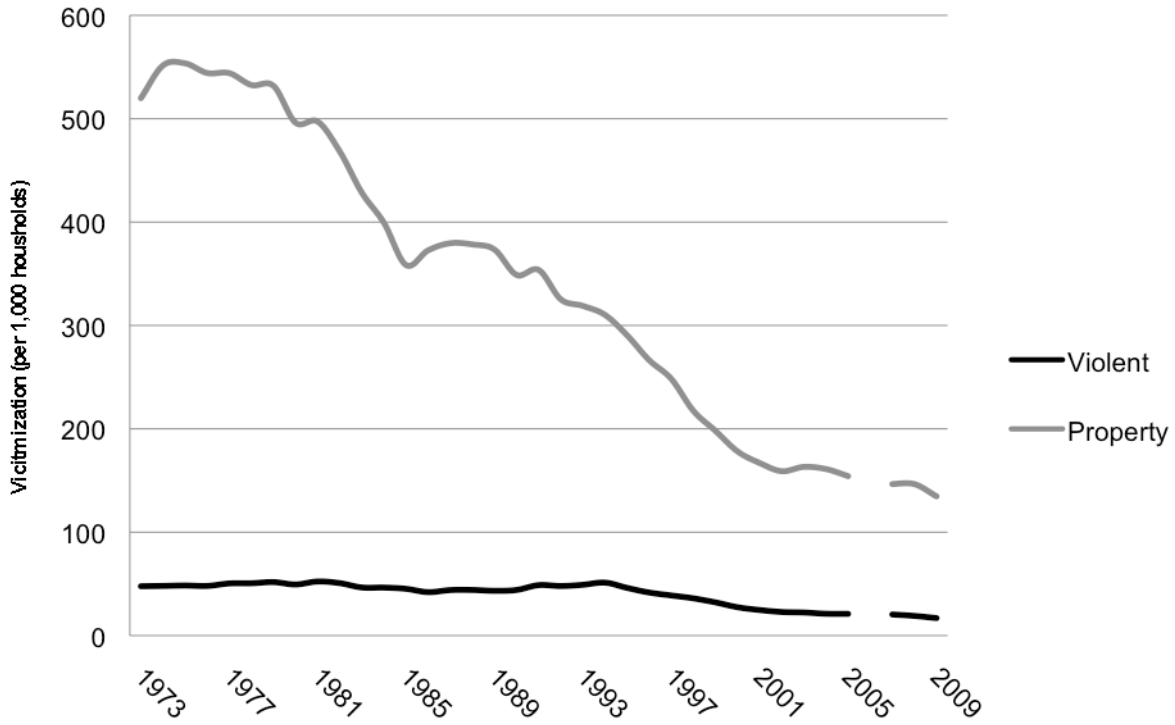

Figure 1.2. The rate of crime victimization in the United States (per 1,000 households) from 1973 to 2009.

Note: From data compiled by the Bureau of Justice Statistics (2011). In 1992, significant changes were made to the methodology of the National Crime Victimization Survey. The Bureau of Justice Statistics has adjusted data from 1973-1991 to account for these differences. However, estimates from 2006 have been omitted due to methodological inconsistencies.

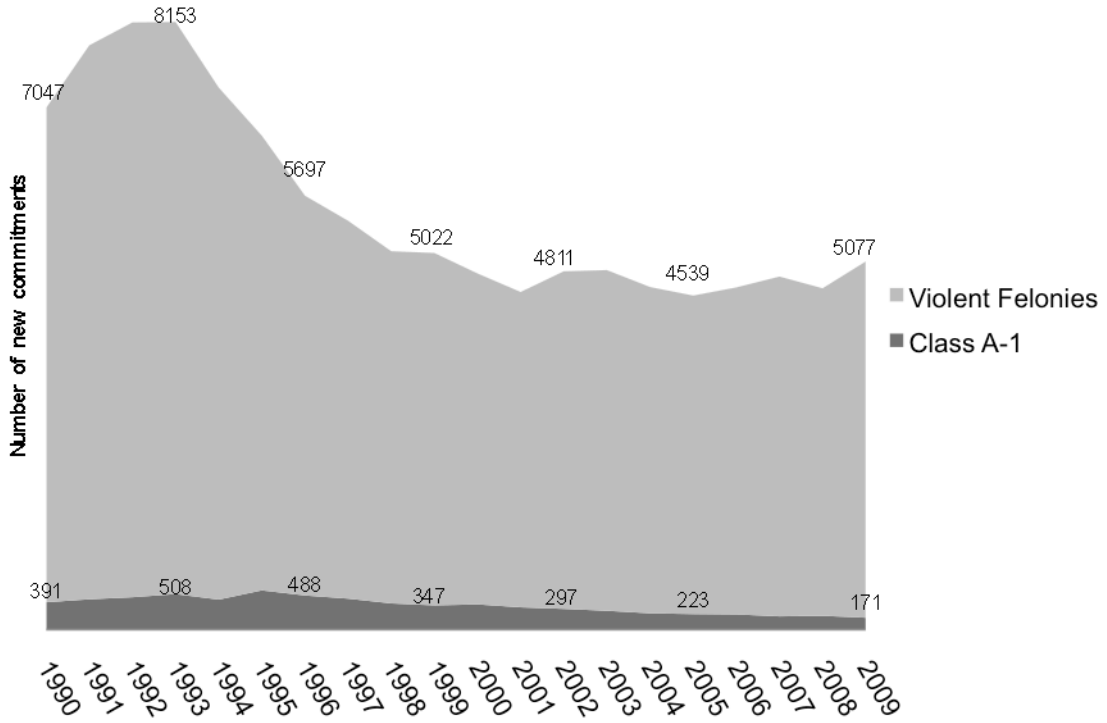

Figure 4.1. The number of new commitments to New York prisons between 1990 and 2009. *Note*. From data reported by Fisher (1997); Fisher and Chapman (1997); Fisher, Chapman, and Davis (2001); Mergenbesser, Clark, Davis, and Castro (2002); Hayes (2007); and Maruniak (2010).

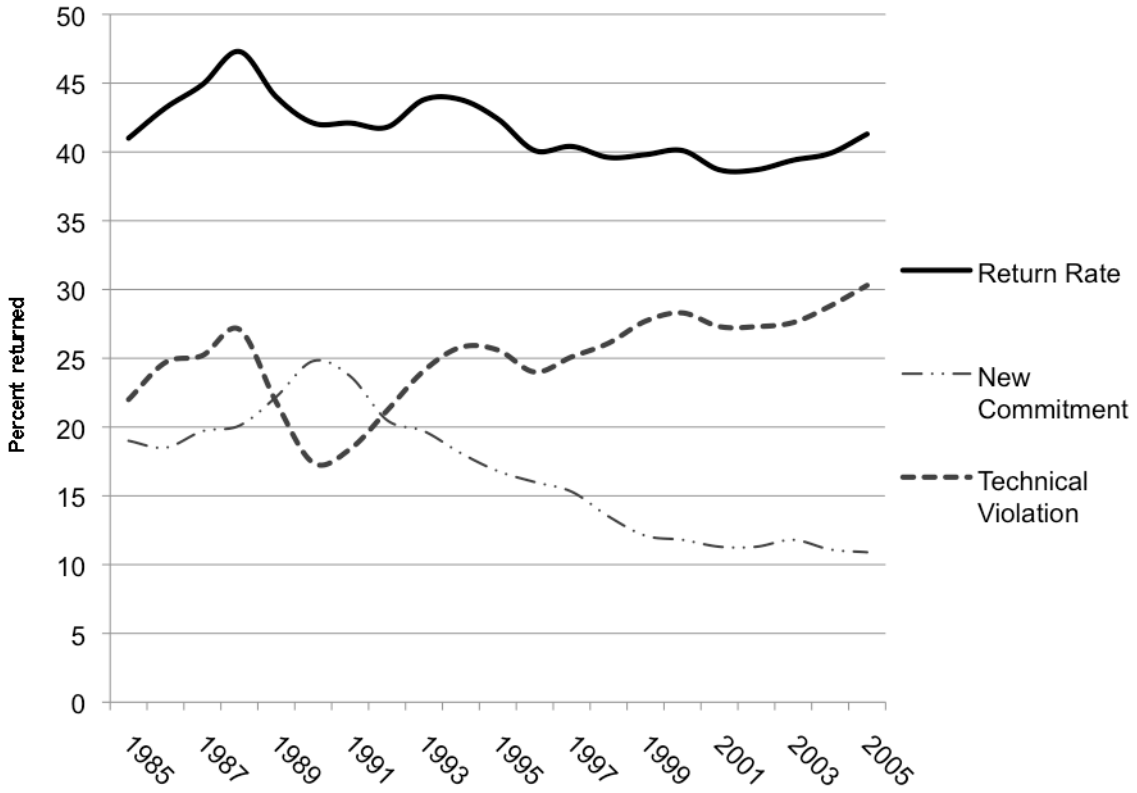

Figure 4.2. The percentage of individuals returned to New York prisons within three years of release between 1985 and 2005.

Note. From data reported by Staley and Kim (2009).

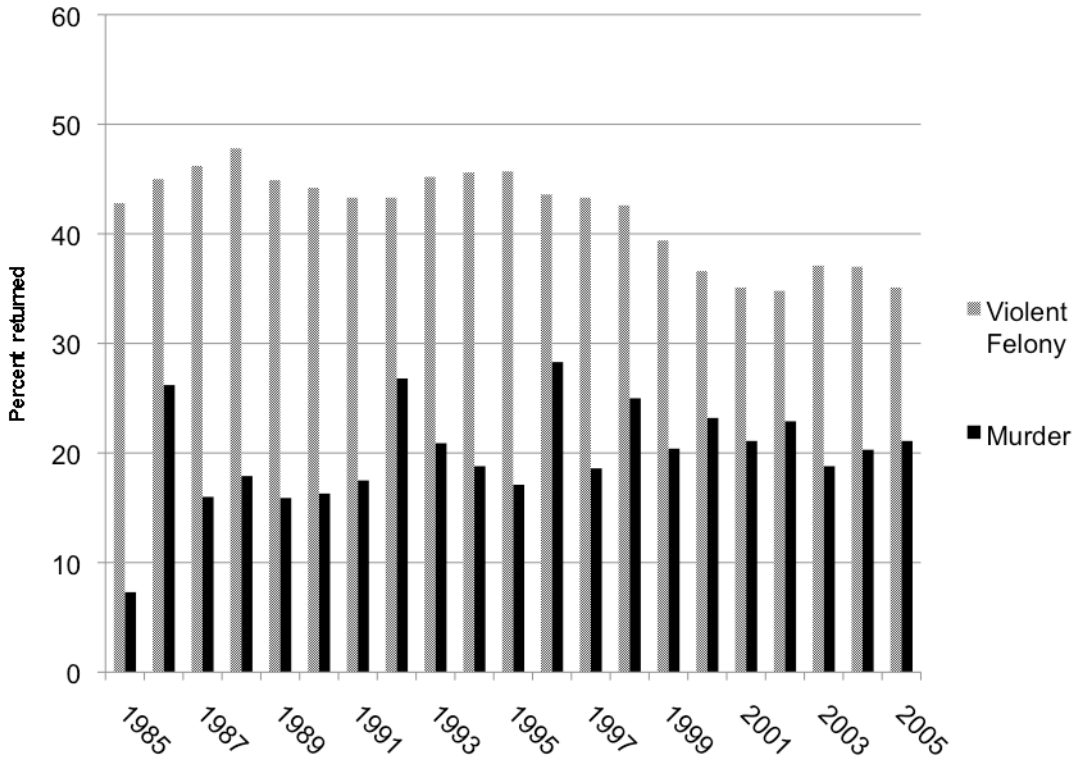

Figure 4.3. The percentage of individuals returned to New York prisons within three years of release between 1985 and 2005 (by crime).

Note. From data reported by Staley and Kim (2008).

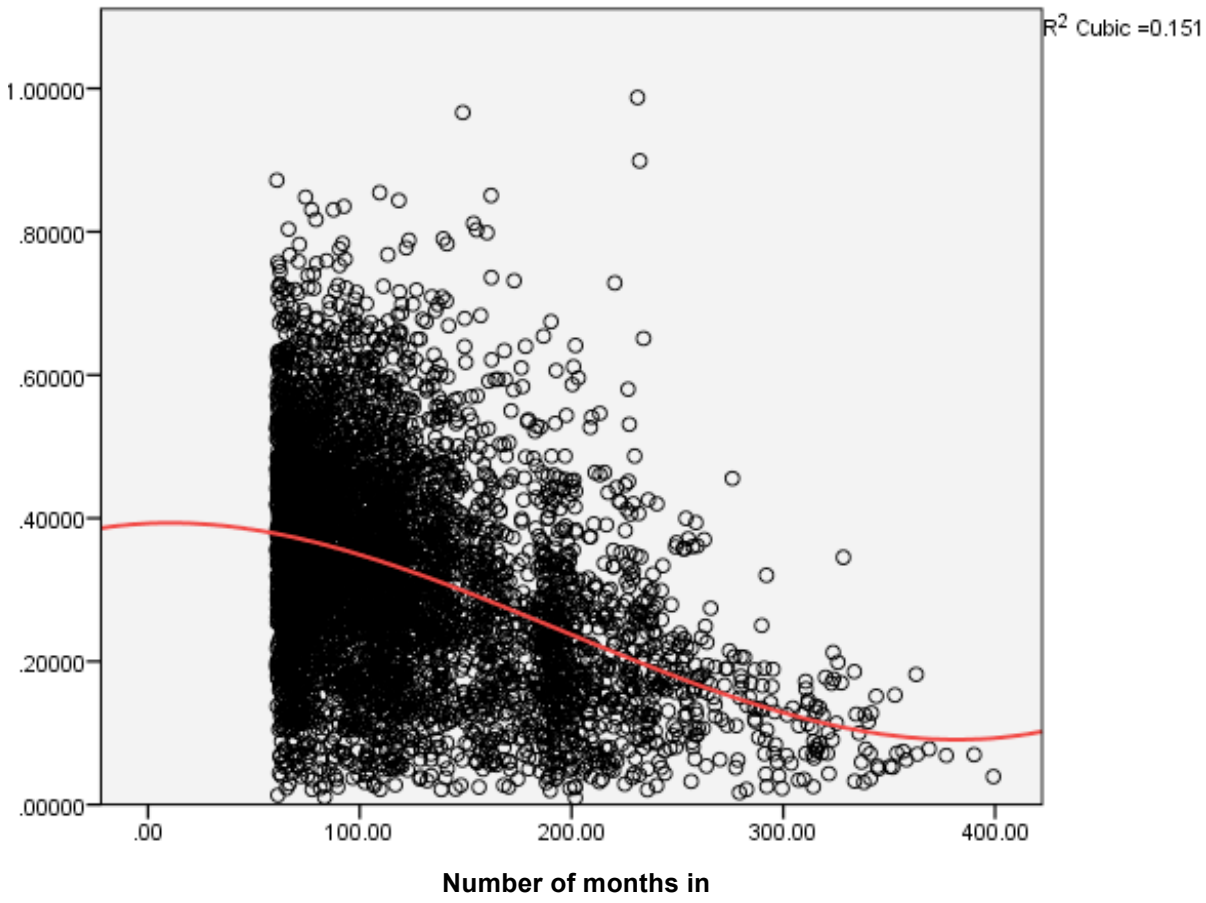

Figure 6.1. The probability of re-arrest for men by time served.

Note. Model used to predict the probability of re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

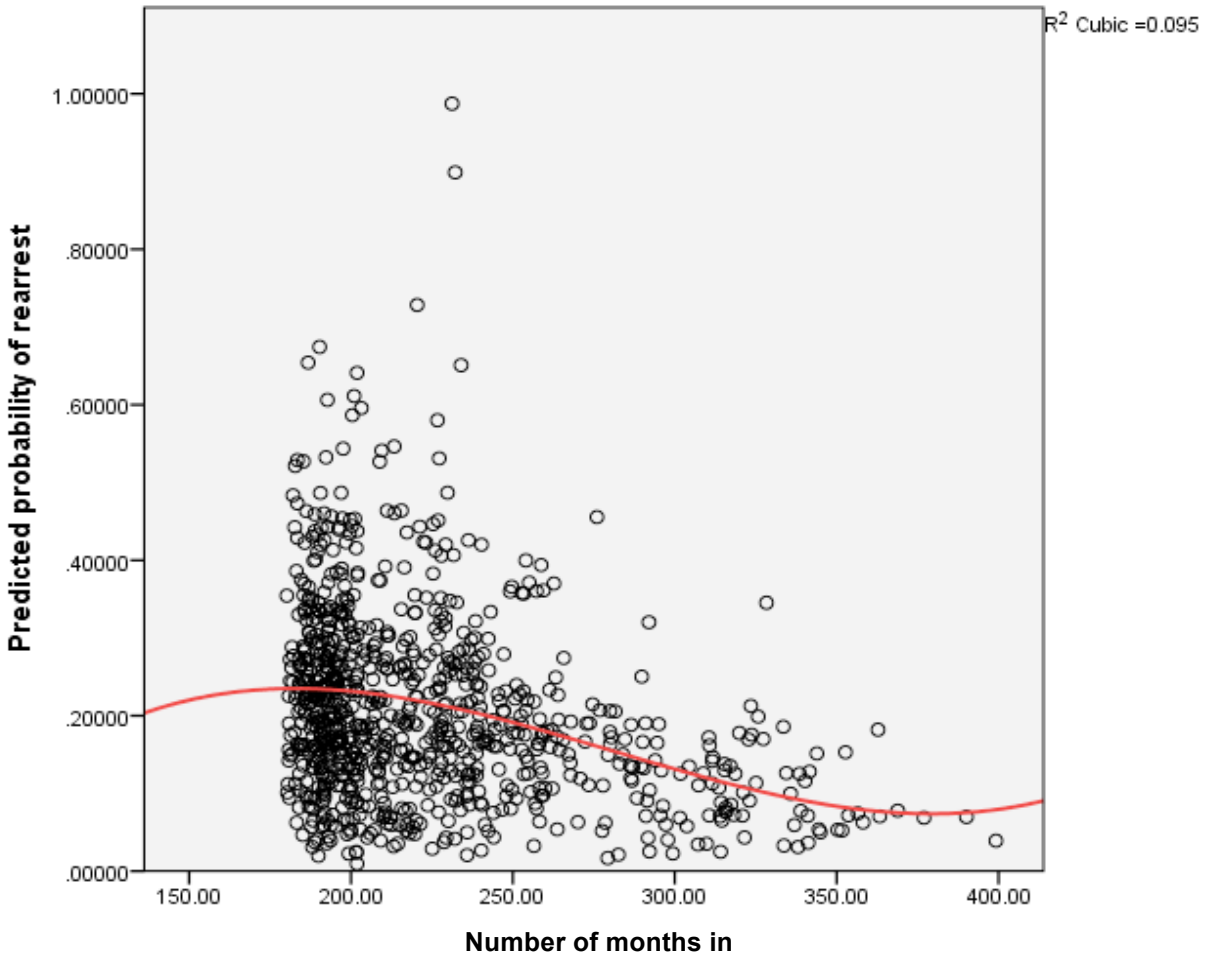

Figure 6.2. The probability of re-arrest for long-term men by time served.

Note. Model used to predict the probability of re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

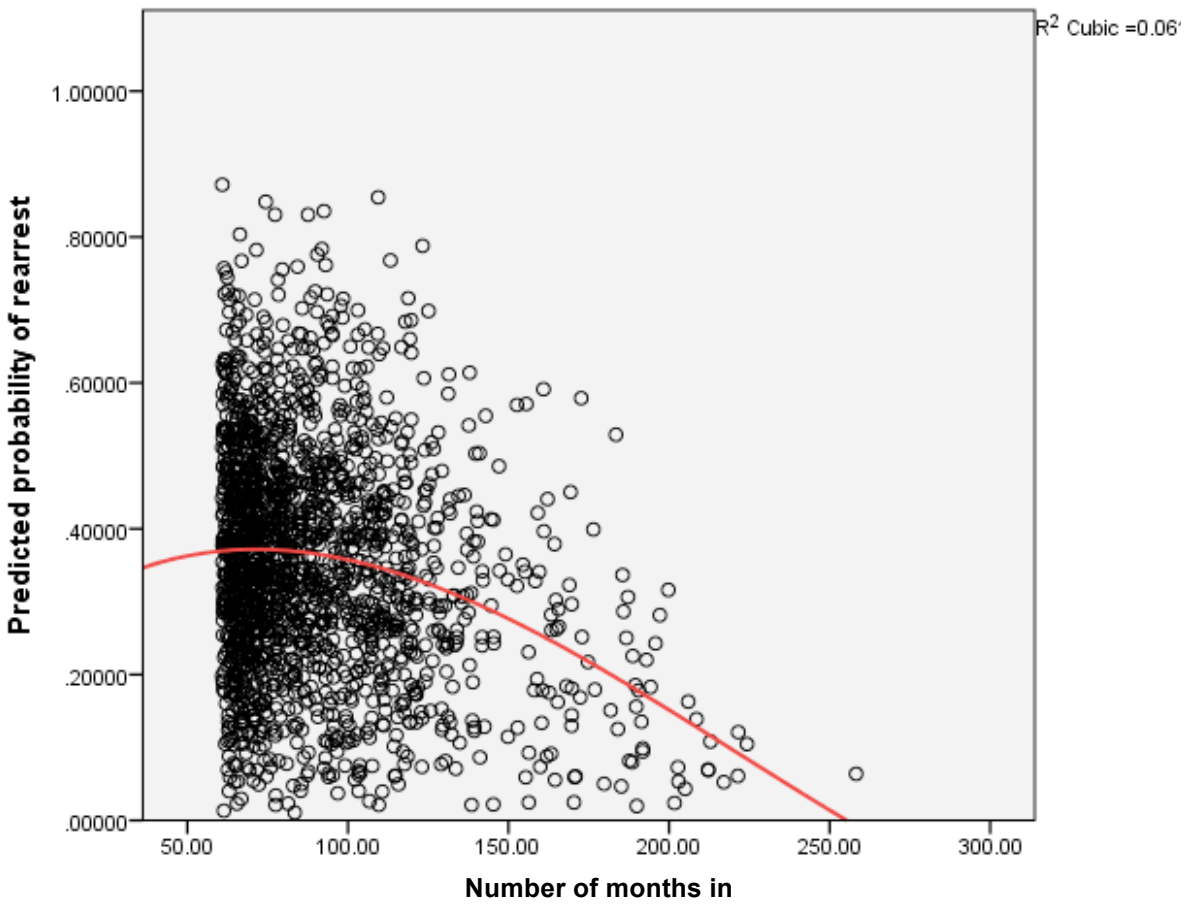

Figure 6.3. The probability of re-arrest for non-violent men by time served.

Note. Model used to predict the probability of re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

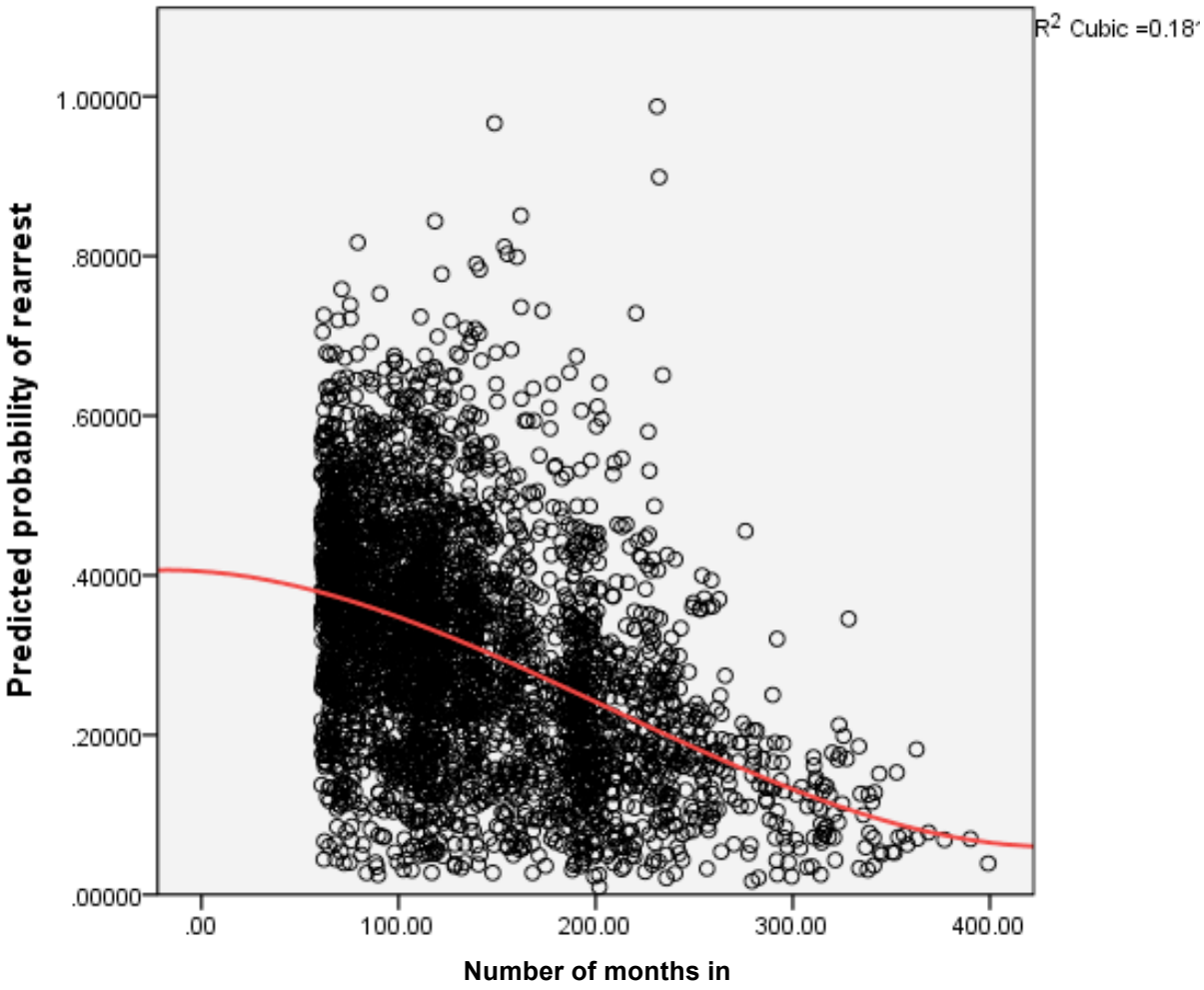

Figure 6.4. The probability of re-arrest for violent men by time served.

Note. Model used to predict the probability of re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

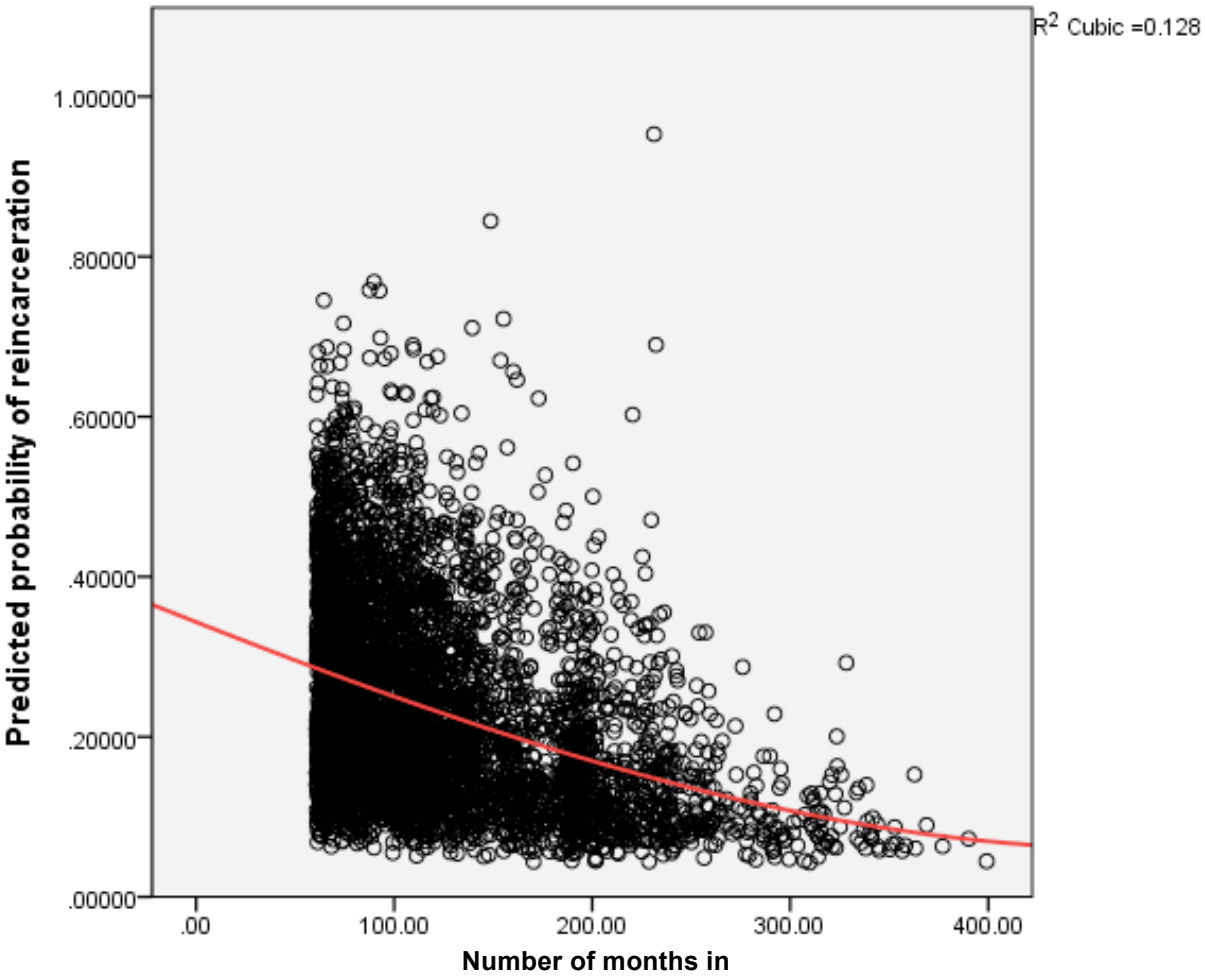

Figure 6.5. The probability of re-incarceration for men by time served.

Note. Model used to predict the probability of re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

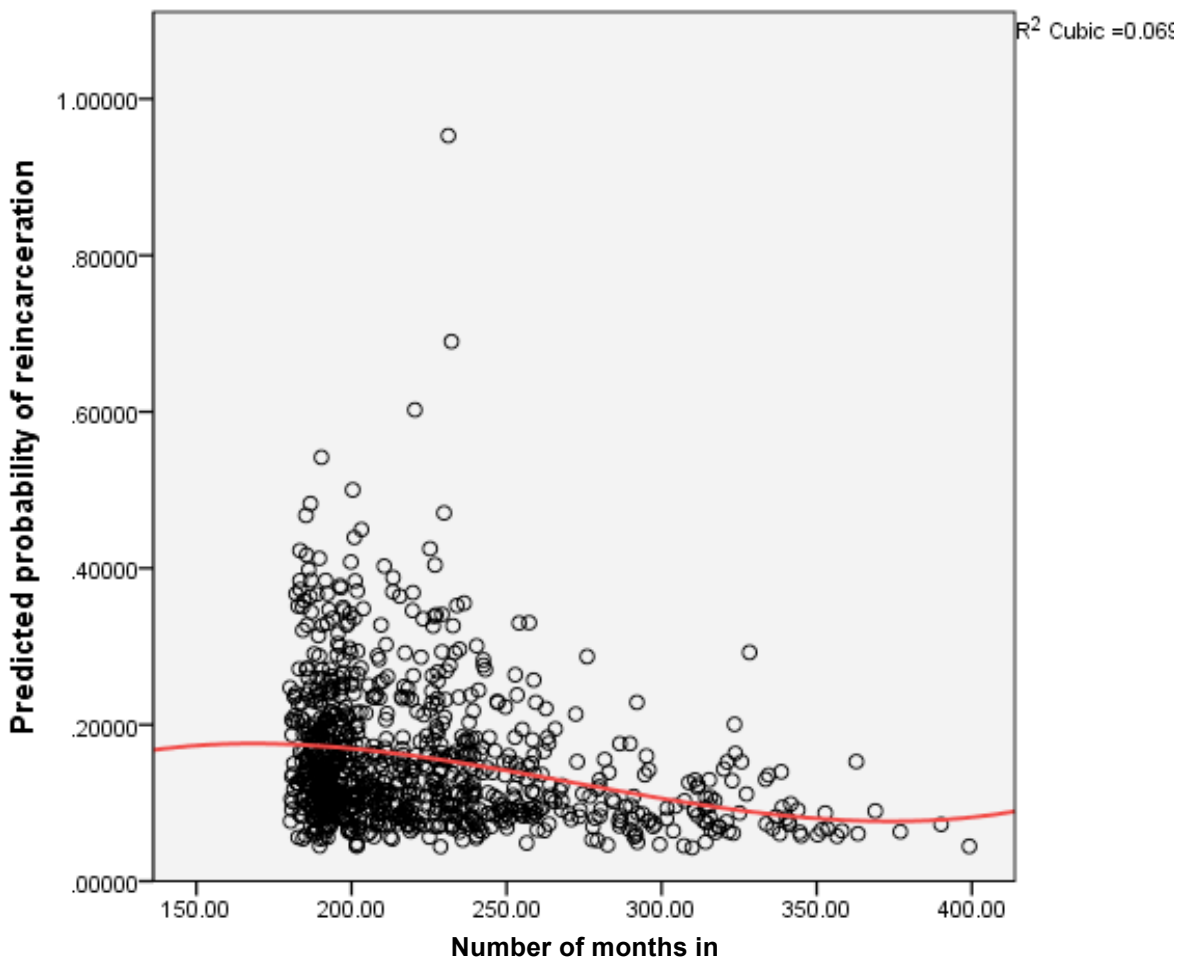

Figure 6.6. The probability of re-incarceration for long-term men by time served.

Note. Model used to predict the probability of re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

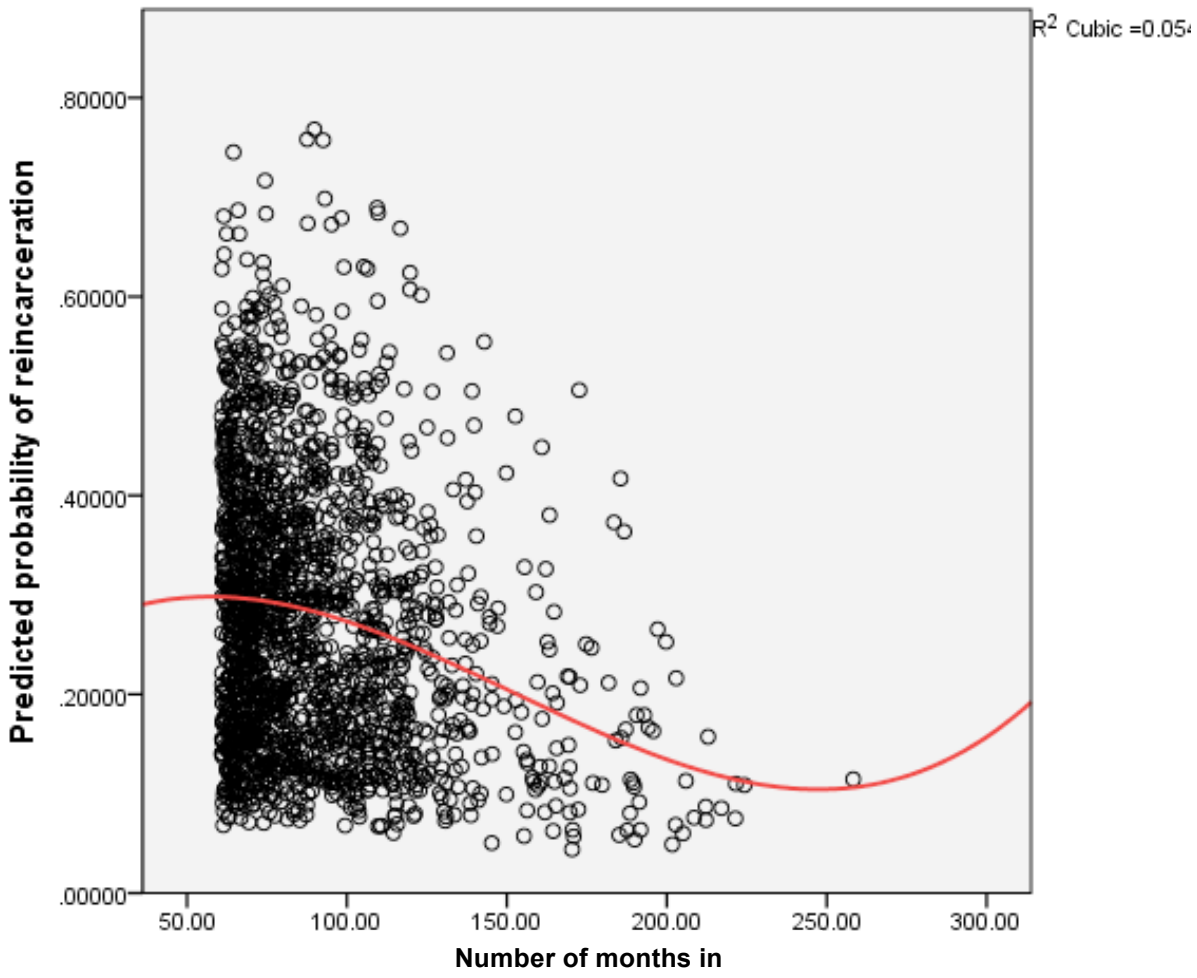

Figure 6.7. The probability of re-incarceration for non-violent men by time served.

Note. Model used to predict the probability of re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

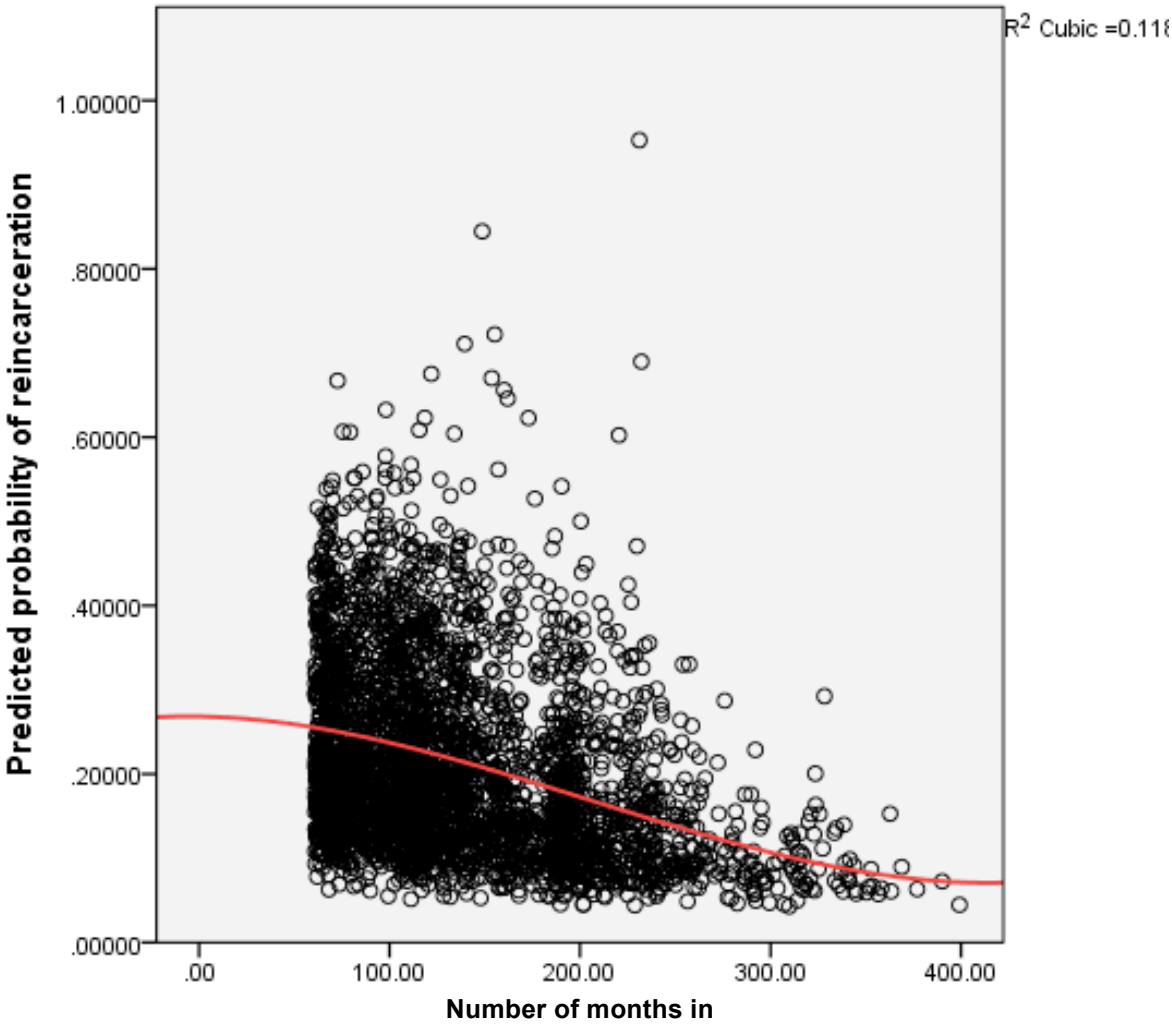

Figure 6.8. The probability of re-incarceration for violent men by time served.

Note. Model used to predict the probability of re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

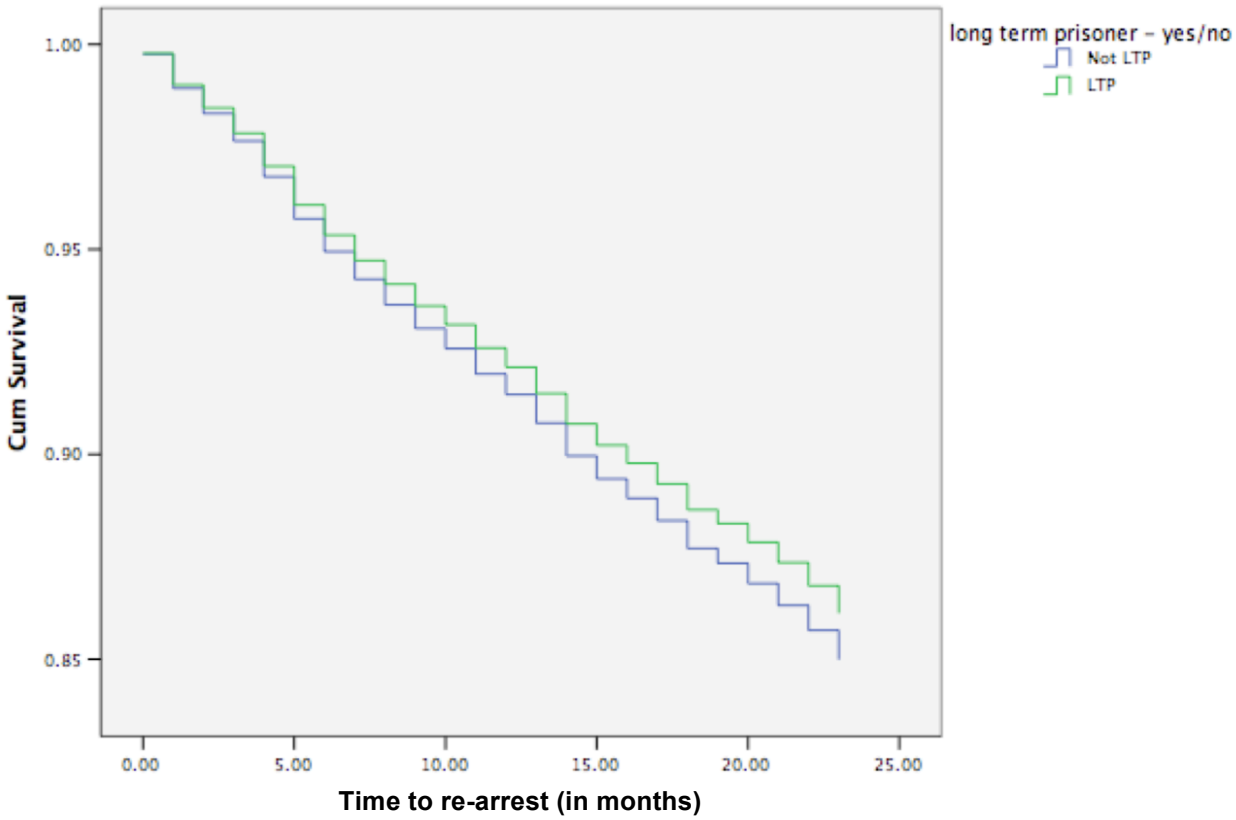

Figure 6.9. Time to re-arrest for male sample.

Note. Model used to predict time to re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, and number of infractions.

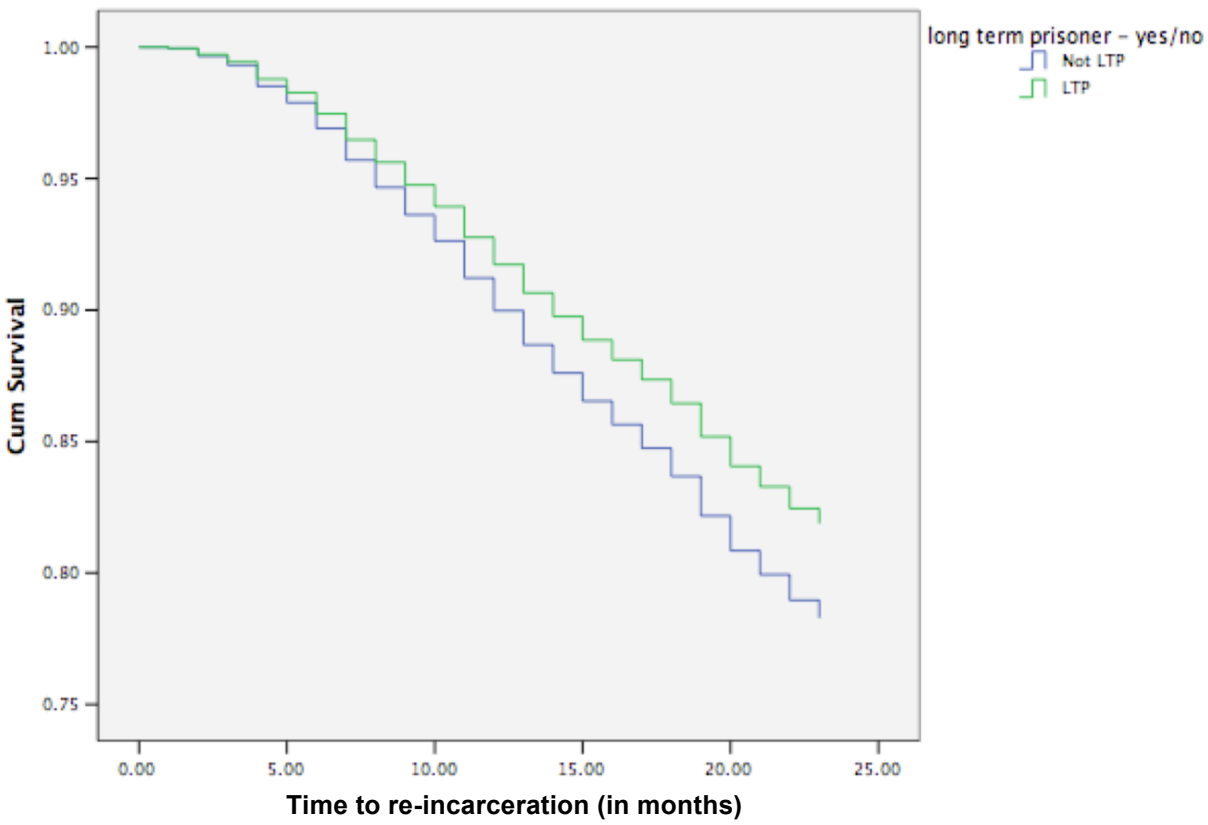

Figure 6.10. Time to re-incarceration for male sample.

Note. Model used to predict the time to re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, and number of infractions.

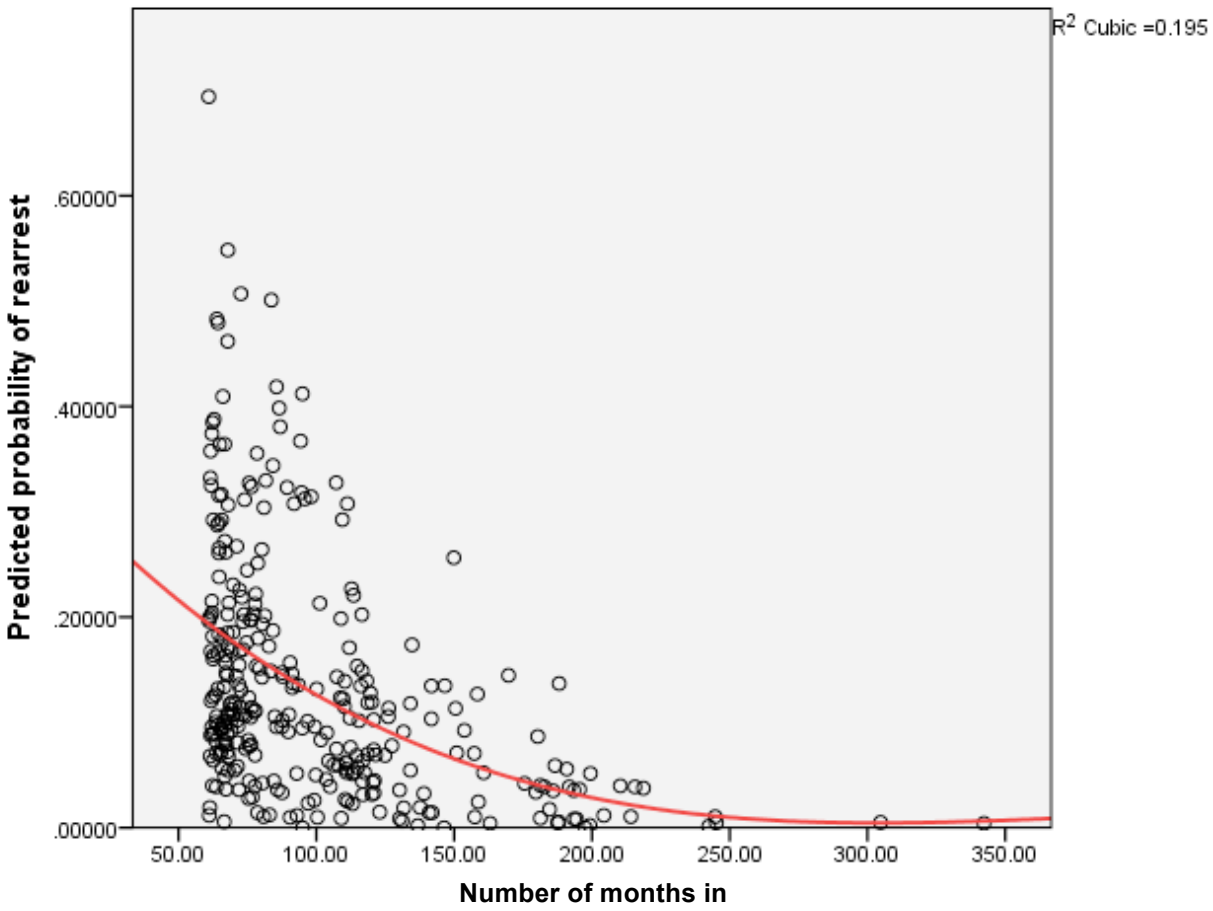

Figure 6.11. The probability of re-arrest for women by time served.

Note. Model used to predict the probability of re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

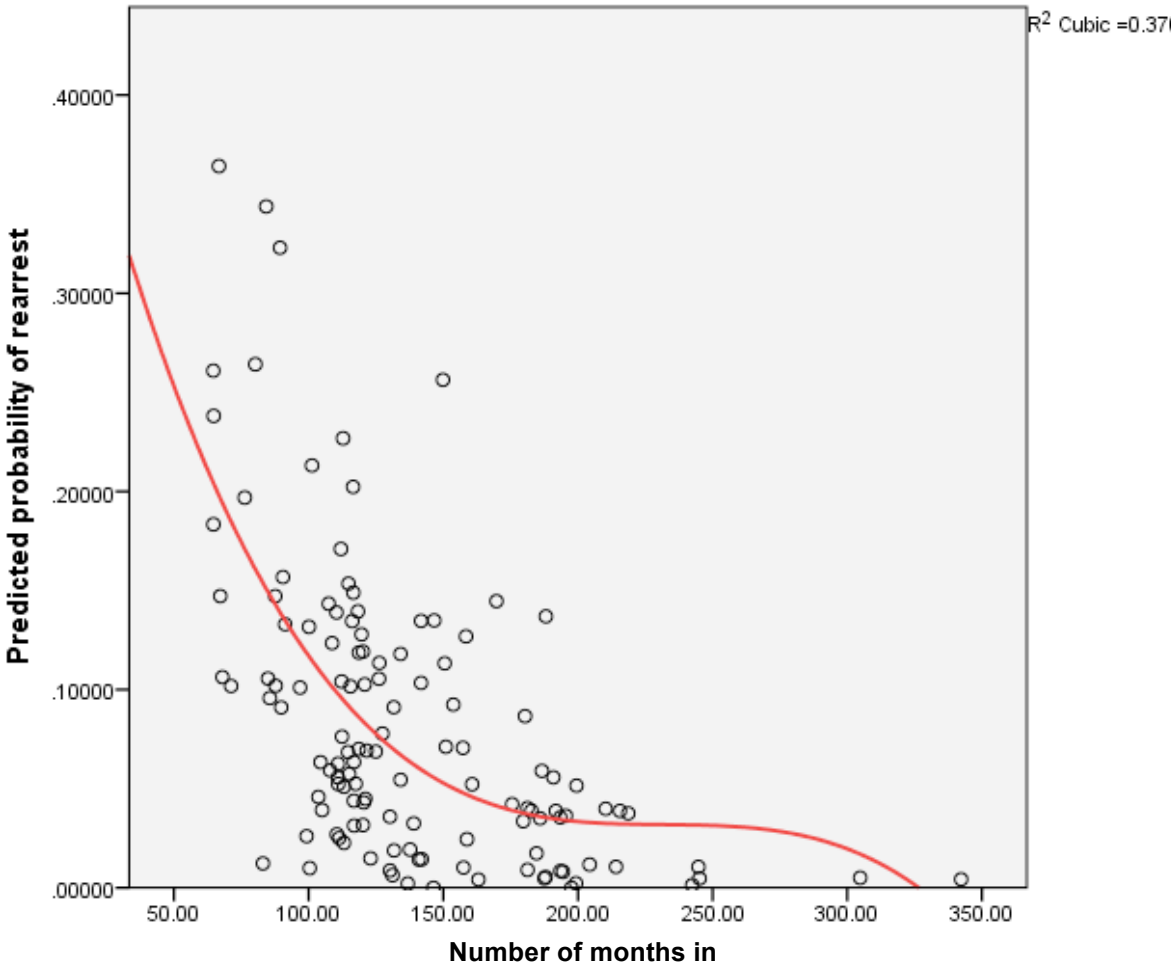

Figure 6.12. The probability of re-arrest for long-term women by time served.

Note. Model used to predict the probability of re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

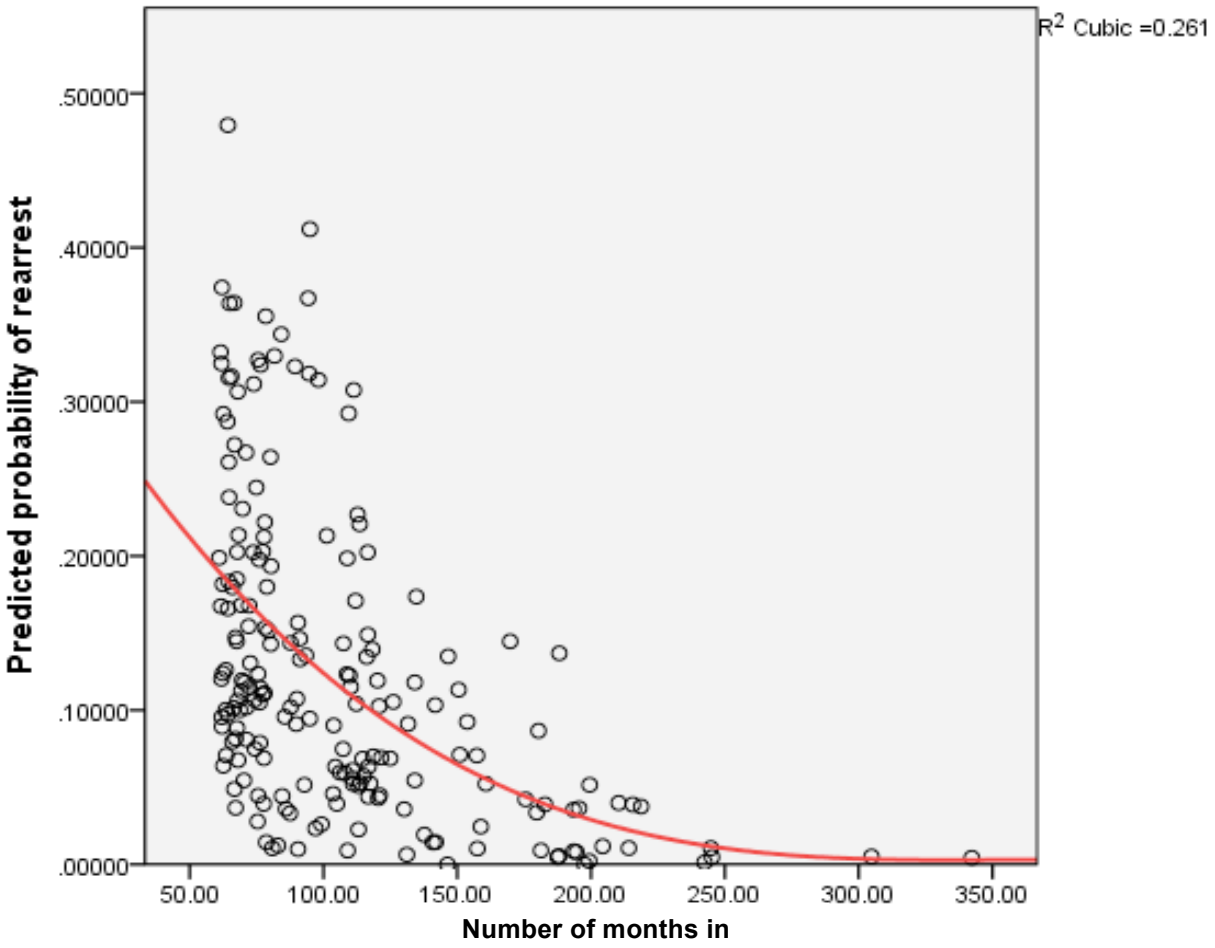

Figure 6.13. The probability of re-arrest for non-violent women by time served.

Note. Model used to predict the probability of re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

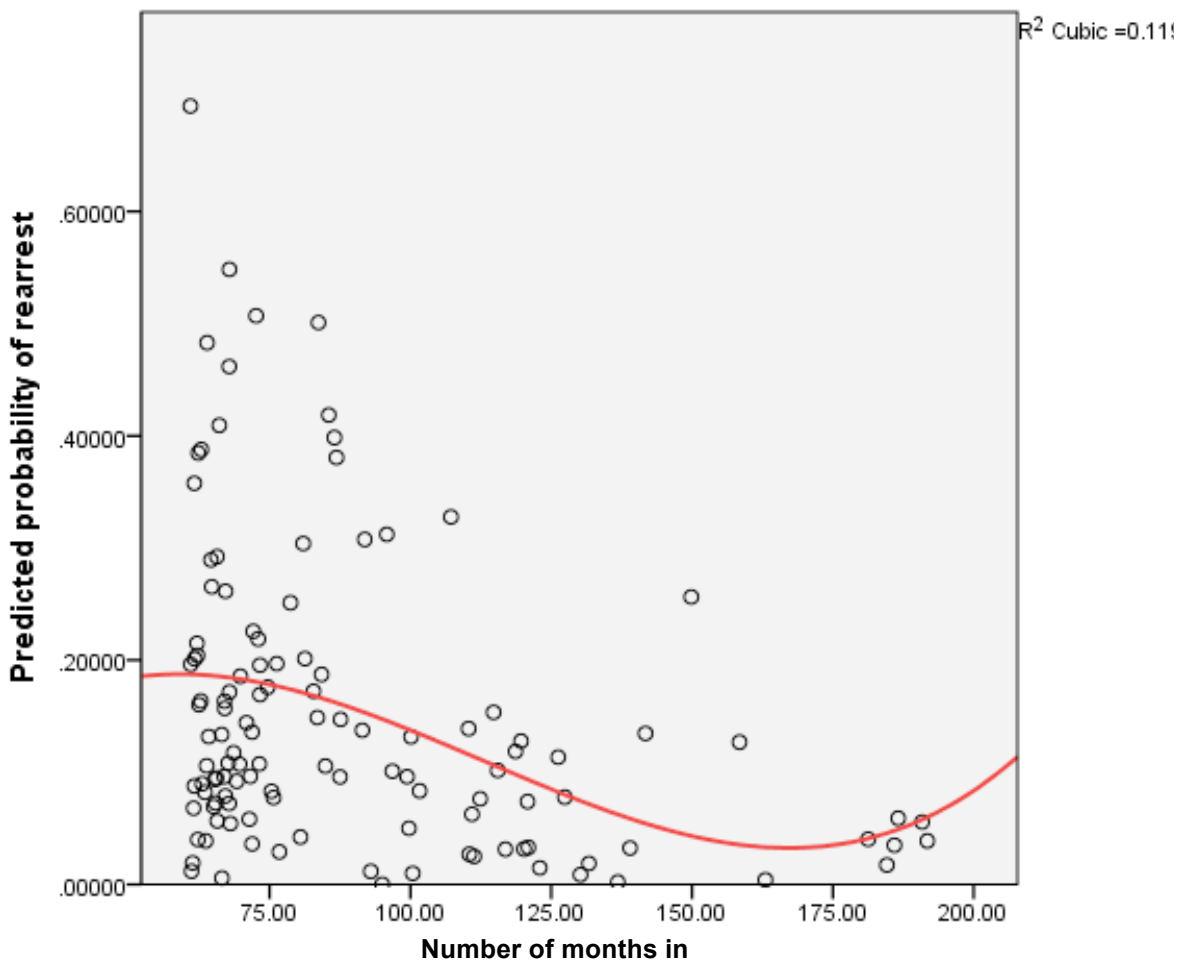

Figure 6.14. The probability of re-arrest for violent women by time served.

Note. Model used to predict the probability of re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

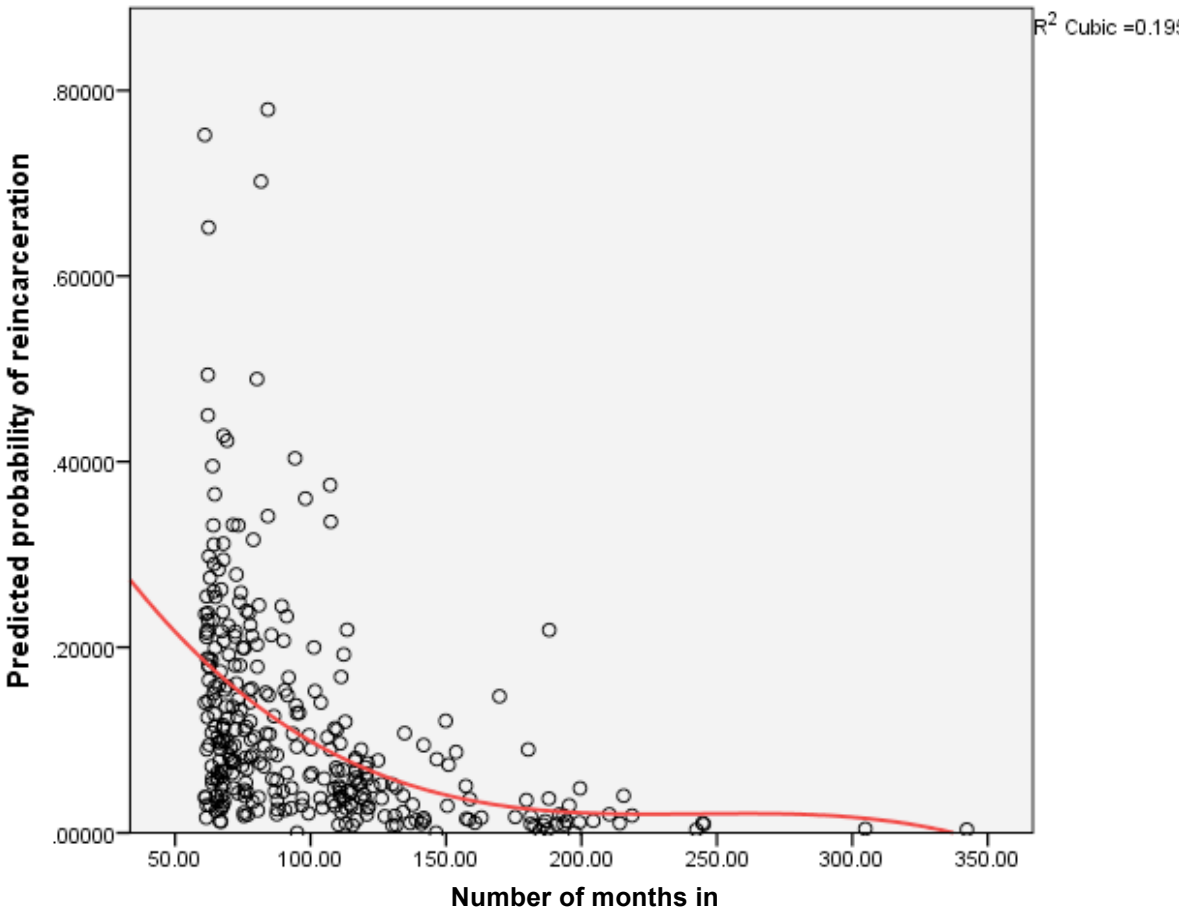

Figure 6.15. The probability of re-re-incarceration for women by time served.

Note. Model used to predict the probability of re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

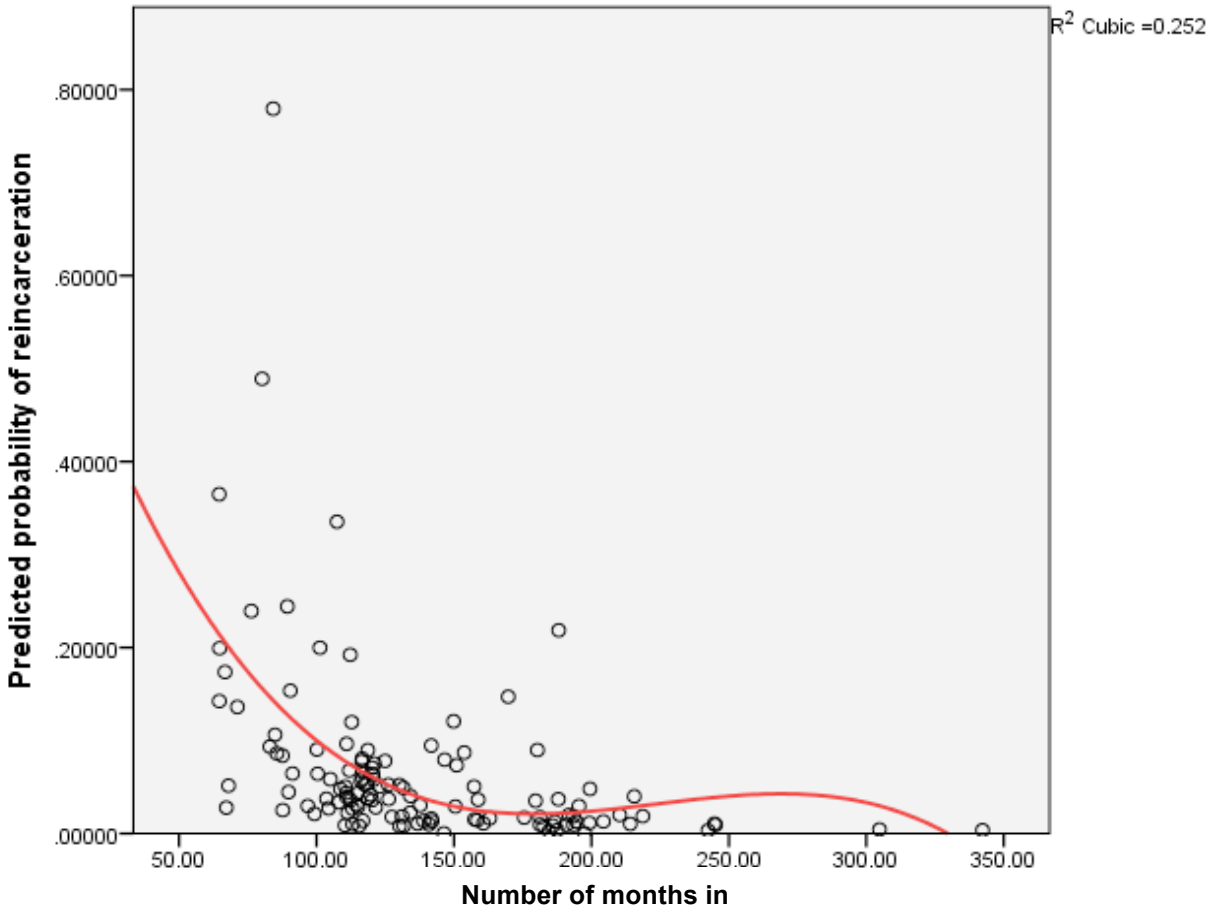

Figure 6.16. The probability of re-incarceration for long-term women by time served.

Note. Model used to predict the probability of re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

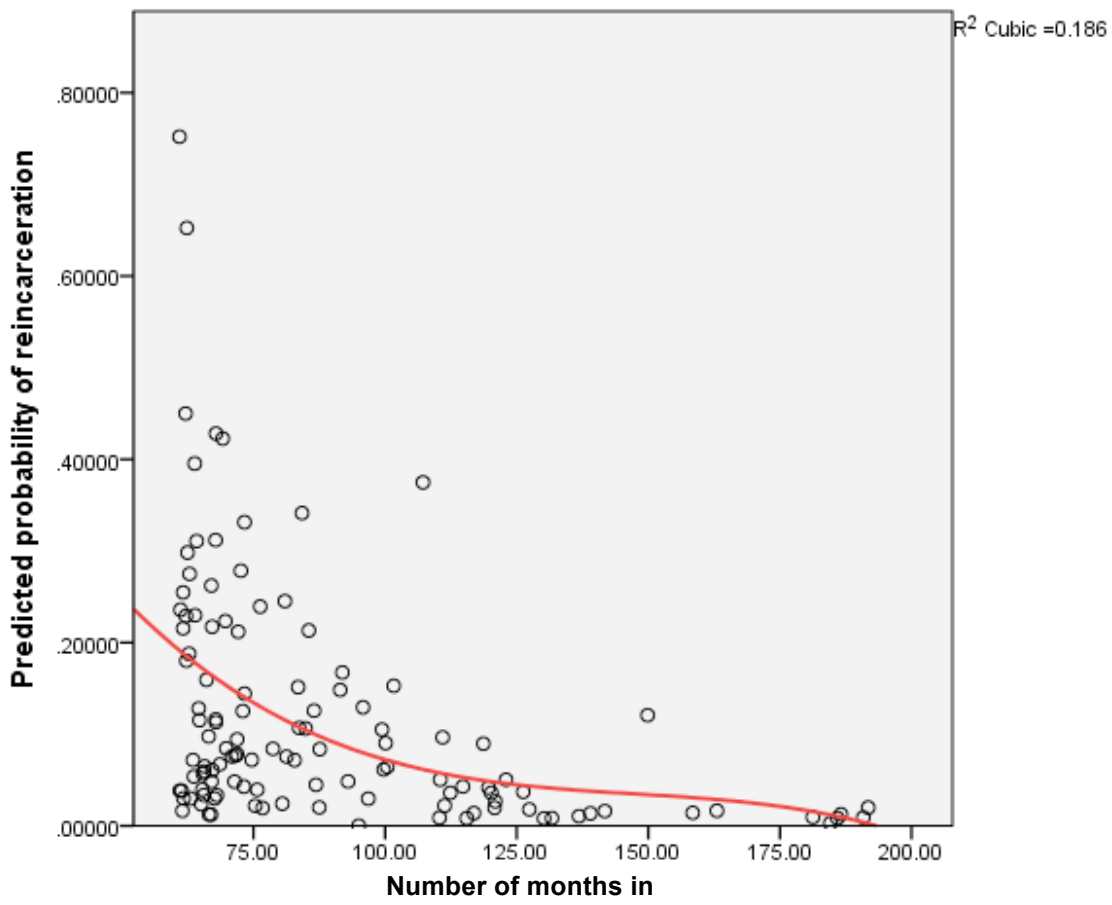

Figure 6.17. The probability of re-incarceration for non-violent women by time served.

Note. Model used to predict the probability of re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

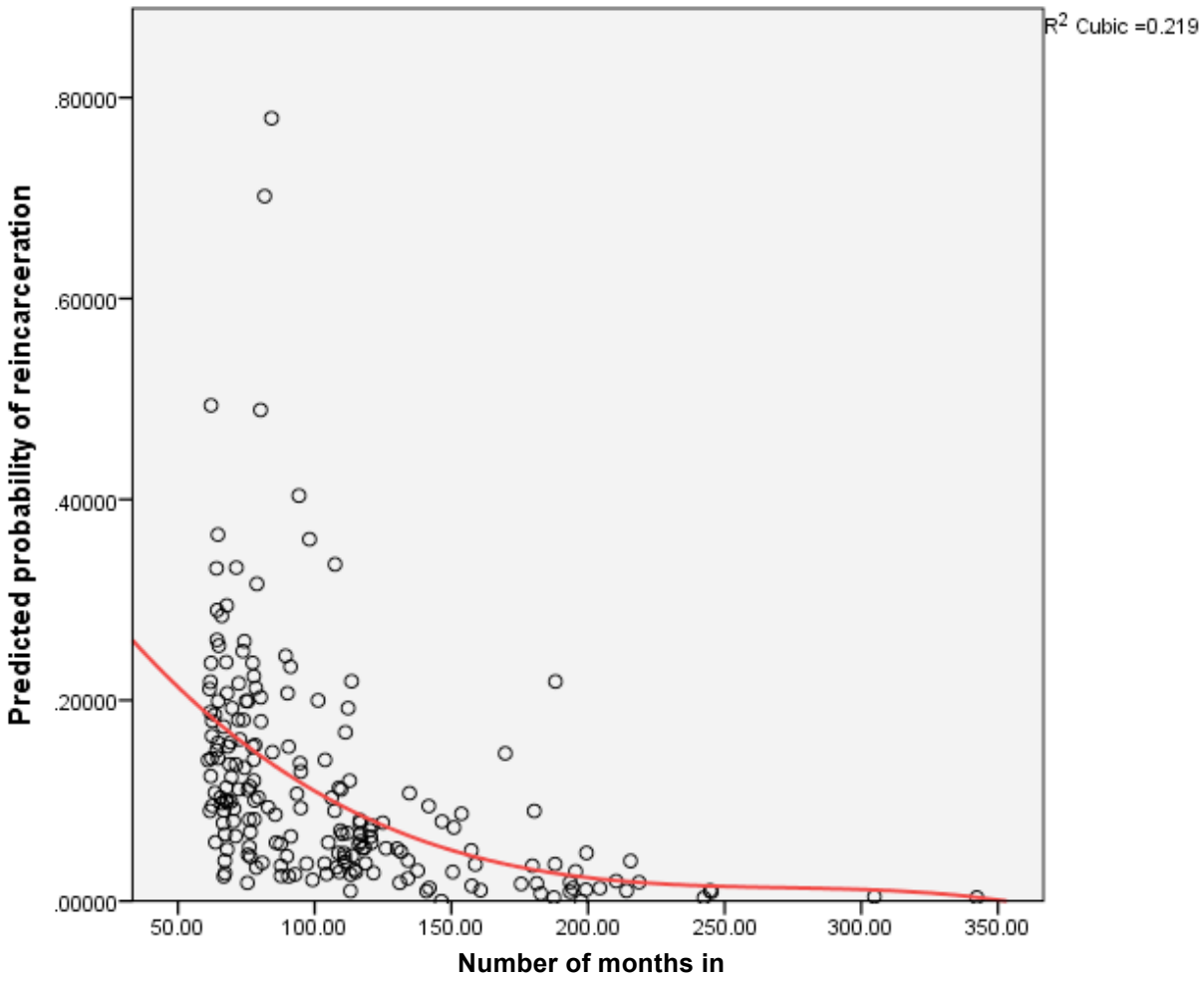

Figure 6.18. The probability of re-incarceration for violent women by time served.

Note. Model used to predict the probability of re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, number of infractions, and math and reading scores at release.

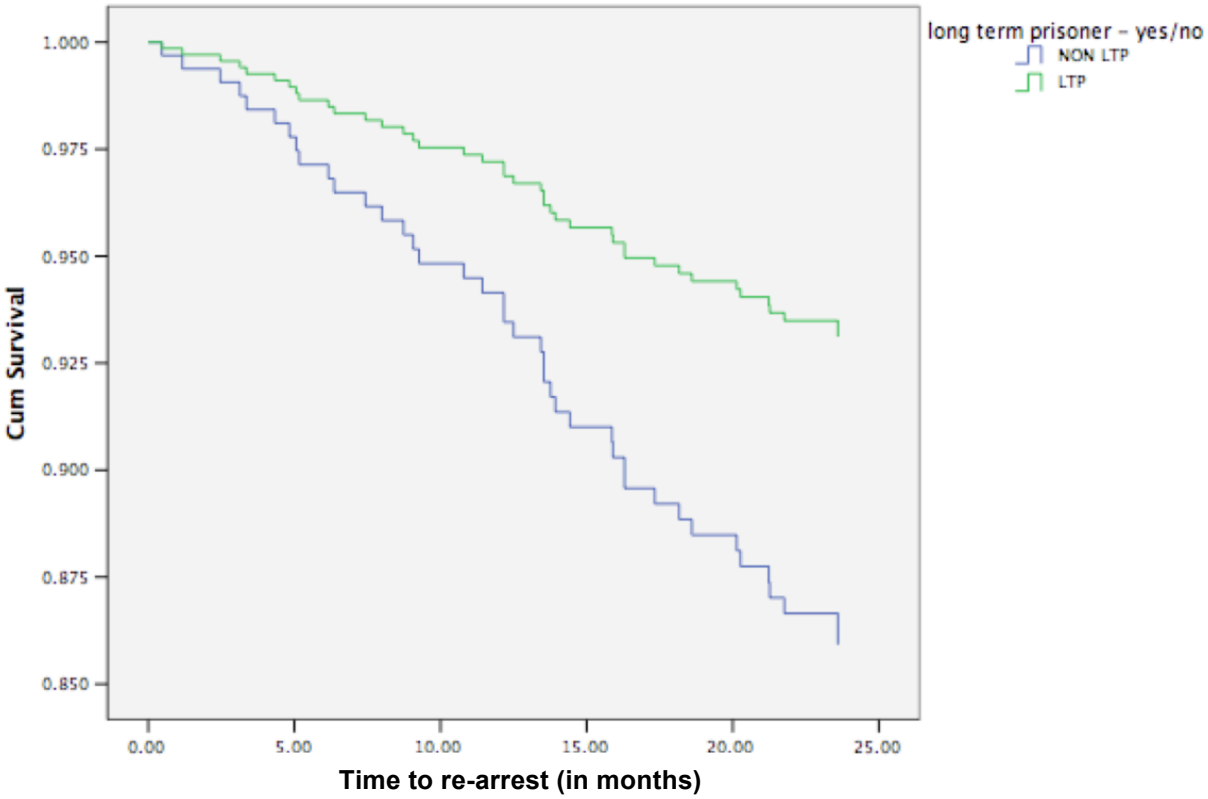

Figure 6.19. Time to re-arrest for female sample.

Note. Model used to predict the time to re-arrest controlled for age at release, crime type, number of prior arrests, race/ethnicity, and number of infractions.

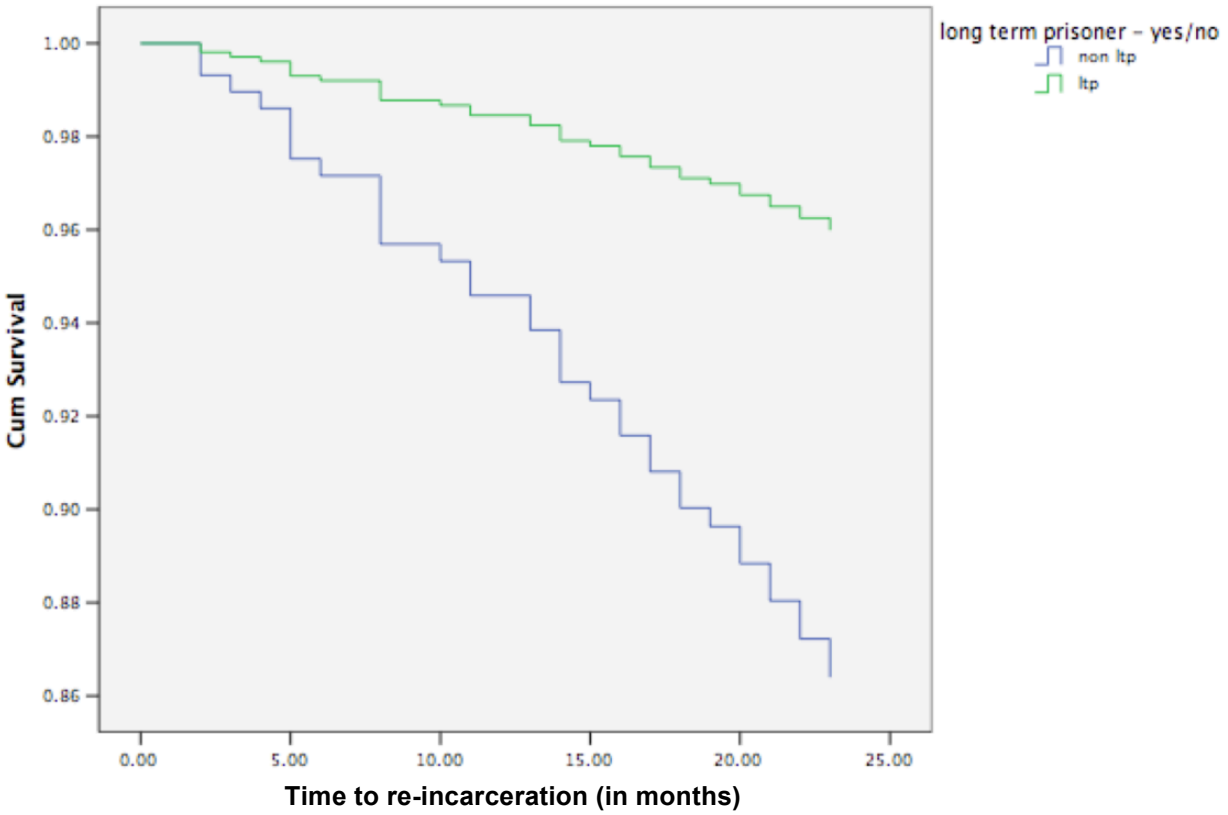

Figure 6.20. Time to re-incarceration for female sample.

Note. Model used to predict the time to re-incarceration controlled for age at release, crime type, number of prior arrests, race/ethnicity, and number of infractions.

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