

A Quantitative Analysis of Factors Related to Recidivism

by

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Abstract

The purpose of this study is a determination of whether percentage of time served of a prison sentence affects the rate of recidivism for offenders released from prison. A quantitative analysis was done of known factors that affect recidivism. The sample utilized for this study comes from a data set collected by the Bureau of Justice Statistics in 1994. Correlations, simple regressions, and hierarchical linear regressions were conducted to examine whether percent of time served can predict the number of rearrests, the number of reconvictions, and the number of resentences to prison for offenders. Results of this study suggest that the percent of sentence served is not statistically significant in predicting recidivism. The results also suggest that longer sentences are associated with higher rates of recidivism, and that the use of incarceration as an instrument of deterrence may not be effective and somewhat criminogenic in nature.

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List of Abbreviations and Symbols

Mean	M
Standard Deviation.....	SD
Pearson Correlation.....	r / R
Coefficient of Determination	r^2 / R^2
Level of Significance	p
Unstandardized Regression Coefficient.....	B
Standardized Regression Coefficient.....	Beta
Inter-University Consortium for Political and Social Research	ICPSR

CHAPTER ONE

INTRODUCTION

Langan and Levin (2002) found that 30 percent of prisoners included in their 1994 study on recidivism were rearrested for another offense after they were released from prison. This number grew to nearly 45 percent in the first year, and roughly 60 percent at 2 years. May, Sharma, and Stewart (2008) concluded in their study that 75 percent of all their participants recidivated in some way in the three years after their release from prison, with 50 percent reconvicted in either a state or federal court of law, and 25 percent resentenced to prison for a new crime. These findings support the notion that a significant proportion of criminals released from prison go on to commit additional crimes. Recidivism, the repeated reoffending of criminals, is a great concern of the criminal justice system.

Repeat offending undermines the retributive and deterrent basis of the criminal justice system. When released from prison, most offenders go right back to the communities from which they came. This problem begs the question: What can be done to prevent offenders from recidivating? Many responses have included alternatives to incarceration (such as probation), but the most recent and popular solution has been the institution of longer terms of incarceration. The disparity that exists between sentence length and actual amount of time served can negatively impact the deterring effect of the criminal justice system, as it does not necessarily show offenders the costs associated with criminal activity outweigh the perceived benefits. The greater the disparity between sentence length and the actual amount of time served in prison of

that sentence, the greater and more prevalent the rate of recidivism will be in the three years following an offender's release from prison.

The principal thesis of this research is that offenders are more likely to recidivate if they only serve a small percent of their actual prison sentence. Lack of certainty in time served is more important to recidivism prevention than just severity of punishment alone. This study will add to the growing body of knowledge that already exists about the recidivism of criminal offenders and support future research. This study will help identify areas of concern that need to be addressed when an inmate is released from prison and aid in the prevention of future re-offending and re-incarceration. Because this study will analyze and explain recidivism beyond what is known to affect the phenomenon, this study is useful, therefore, to the corrections system and sociologists, and to the community as a whole.

This research is separated into several distinct chapters. Chapter two discusses the literature that exists about the criminal justice system, recidivism, and rational choice theory. This chapter will look specifically at deterrence, media images of crime and criminals, public opinion, sentencing and incarceration in the United States, and Truth in Sentencing within the criminal justice system, criminal history, demographic characteristics, drug use, sentence length, and previous studies of recidivism within recidivism, and economics, culture, and certainty versus severity of punishment are discussed within rational choice theory. Chapter three discusses the research design and methodology of this project. This chapter presents the research questions, discusses the data set, presents the research design and the methods of analyses. Chapter four presents the results. Finally, chapter five presents a discussion of the results presented in chapter four, discusses limitations of the research, provides suggestions for future research, and presents a conclusion.

CHAPTER TWO

LITERATURE REVIEW

Chapter two is a presentation of the literature that exists on a variety of aspects of the American criminal justice system. The information presented in this chapter is particularly oriented towards to topics of deterrence, recidivism, and rational choice theory. The topic of deterrence is discussed in relation to formal and informal social norms and controls, media images of crime, the influences of public opinion, sentencing and incarceration in the United States, longer versus shorter sentences, and the more recent concept of truth-in-sentencing. Recidivism is discussed in relation to previous studies of recidivism and variables that are known to have a relationship with increased and repeated offending such as criminal history, demographic characteristics, drug use, and sentence length. Finally, rational choice theory is examined by looking at the economics of crime, culture and rational choice theory, the importance of certainty versus severity of punishment.

2.1. The Criminal Justice System

Our criminal justice system “dispenses justice by apprehending prosecuting, and punishing lawbreakers” (Nagin, 1998, p. 345). Since the 1970s, the practiced policies of our American criminal justice system have been characterized by “administrative realism” with particular attention paid to determining “what works?” (Reiner, 2007b, p. 350). Initially, the

criminal justice system's philosophy was of rehabilitation. Rehabilitation aims at taking criminals and changing them from lawbreakers into law-abiders (Cullen & Gendreau, 2000; Calvi & Coleman 2000). With regard to rehabilitation, Jackson's (2009) research on restorative and rehabilitative justice shows that "individuals who are guilt-prone are also more likely to be empathetic and are more likely to want to reconcile their transgressions in order to repair any harm done" (Jackson, 2009, p. 199). Rehabilitation, however, is often painted as a failure and much of the faith in it as a policy practice was lost. The public began to feel that criminals were not "disadvantaged, ill-treated members of society who can be changed for the better" (Reitz, 1998, p. 545). As a result, the philosophy of the criminal justice system has changed. Our current system is characterized by a philosophy of retribution, and the current policies are "the harshest in American history and of any Western country" (Tonry, 1998, p. 3). Retribution is a perspective that feels that the criminal justice system has the right to punish offenders because offenders make the decision to break the law and the punishment for criminal acts should be equal to the crime in question (Calvi & Coleman, 2000). This perspective is often associated with deterrence, as deterrence aims to deter crime through the threat of, or use of, punishment.

2.1.1. Deterrence

Deterrence is "discouraging a specific offender from further illegal acts and...detering others from criminal activity" (Calvi & Coleman, 2000, p. 188). According to Ellis (2003), "if punishment is to be justified, it must be predominantly by reference to deterrence" (p. 337). Pogarsky (2009) states that "deterrence is a process in which threatened or actual sanctions discourage criminal acts" (p. 241). Deterrence is therefore the utilization of punishment to make crime so costly that it dwarfs the incentives that drive criminal behavior and thus deter crime

(Pogarsky, 2009). In addition to being both an explanation for and solution to crime, deterrence theory is an important perspective “because of its implicit or explicit embrace by lawmakers in the United States” (Pratt, 2008a, p. 369). Our criminal justice system is set up to punish ignore the threat of punishment, but does that mean “that it is unjustifiable to issue threats of punishment whenever we are sure that this will not deter?” (Robinson & Darley, 2004, pp. 348, 350). Determining whether or not punishments deter crime as intended is important because “with the exception of homicide, more severity (i.e., more time in prison) was associated with more crime, not less” (Bernard, Snipes, & Gerould, 2010, p. 19). The importance of more severity being associated with more crime with the exception of homicide is likely due to the overwhelming number of offenders whose crimes are property crimes. According to Langan and Levin (2002), “released property offenders had higher recidivism rates than those released for violent, drug, or public-order offenses” (p 8).

Deterrence is embraced by the public so much so that, since the 1970s, the ideology that crime interventions should be harsher for all types of crime has dominated (Pratt, 2008a). Nowadays, any discussion of the topic of deterrence or crime immediately brings to mind incarceration as the most common form of punishment. The utilization of incarceration as an instrument of deterrence is known as incapacitation. Though incapacitation does prevent future crime in certain ways, increasing the harshness of punishment is hard to justify without knowing something about the risk offenders pose to reoffend in the future (Leipold, 2006, p. 543). Our society spends a considerable amount of money on punishing criminal offenders. It is important, therefore, to know “whether in fact threatened punishment deters criminal behavior” (Wright, Caspi, Moffitt, & Peternoster, 2004, p. 181).

As a solution to crime, the deterrence perspective stipulates that crime can be made less

attractive by utilizing policies which increase the costs of crime so crime does not pay (Pratt, Cullen, Blevins, Daigle, & Madensen, 2008b). Deterrence aims to prevent crime by making criminal acts both unappealing and unprofitable. The Criminal Justice system is based in the concept of deterrence because the criminal justice system utilizes punishment and the threat of punishment as a means to prevent crime. The types of deterrence are specific and general, and to a degree, incapacitation. Classical deterrence theorists generally feel that motivation to commit crime is not important to deterrence itself. The motivation to participate in criminal activities is constant for all individuals and as a result the threat of punishment deters all individuals equally. Situational differences are the only reason there are differences in criminal offending. Criminal propensity theorists state that persons who are prone to crime are deterred less by the threat of punishment because criminal prone individuals are impulsive, risk takers, and oriented only to the present which leads them to neglect long-term consequences of any criminal action because criminally prone individuals are focused only “on their immediate benefits” (Wright et al., 2004, p. 183).

Wright et al., (2004) analyze “the distribution of deterrence perceptions across levels of criminal propensity” (p. 195). Their results found that individuals that felt the likelihood of getting caught was high committed fewer crimes. In addition, individuals who committed more crimes had low self-control and viewed themselves as criminals. The results of their study point to the many social processes that can affect an individual’s involvement in criminal behavior and how these social processes impact those individuals with greater “psychological and biological” propensities to commit crime (Wright et al., 2004, p. 207). Explanations of crime must therefore analyze both person and situation with regard to the threat of punishment and propensity to commit crime. Deterrence is made real through controls which aim to make society conform.

Formal and informal social norms and controls are agents of social control. The threat of punishment can be perceived differently depending upon an individual's propensity to commit crime (Wright et al., 2004).

2.1.2. Formal and Informal Social Norms and Controls

There are many ways in which society's members are made to conform. There are internal and external controls. Internal controls instill members with "conventional norms, values, and attitudes" (Piliavin, Thornton, Gartner, & Matsueda, 1986, p. 101). These controls are similar to informal social controls such as family and peers. External controls, however, "coerc[e], threat[en], and sanction[n]" individuals into conformity (p. 101). These controls are similar to formal social controls such as school and the criminal justice system. When informal, internalized social controls fail, then external, formal social controls are utilized. The corrections system, therefore, is a prime example of such external social controls. Society controls through the utilization of the threat of formal and informal punishments, "such as arrest and imprisonment, and...social disapproval and withholding of resources," respectfully (Wright et al., 2004, p. 180). These punishments are heavily related to social norms and controls. Just how well social norms are internalized can play a major role in an individual's criminal propensity.

A study done by Kroneberg, Heintze, and Mehlkop (2010) addresses the internalization of moral norms and their effect on the crimes of tax fraud and shoplifting. The authors discuss how individuals with internalized norms prefer to act "in accordance with their normative beliefs" as any violation of those norms will lead to shame and guilt which can be seen as a "kind of psychological cost" (Kroneberg et al., 2010, p. 263). The authors' findings point to instrumental rationality existing only "among respondents who do not feel bound by strongly

internalized norms” (Kroneberg et al., 2010, p. 277). The interesting finding in this study is how “perceived benefits and subjective probability [of being caught]” are incentives to commit shoplifting while “the penalty weighted with the expectation of being caught” is incentive with regard to tax fraud (Kroneberg et al., 2010, p. 278). The findings of Kroneberg et al.’s (2010) study point to the importance of “shared moral beliefs...and how they are shaped by social contexts and processes” (p. 285). A variety of factors can affect individuals in many different ways and therefore affect how they view the expected costs and benefits of committing crime. Increased severity of sanctions can increase moral norms against criminal behavior, especially if individuals believe in those who will punish offenders (Kroneberg et al., 2010, p. 285).

Deterrence theory offers both a solution to and explanation for crime and criminal behavior. Deterrence offers an explanation to crime through the concept that individuals choose to commit crime or participate in criminal behavior because it pays in some way. The benefits of committing crime outweigh the costs of crime, which is considered the punishment. According to Pratt et al. (2008b), “people may not be perfectly rational, but they are reasonably aware of the potential costs and benefits associated with criminal acts” (p. 367). Punishment and the threat of punishment are supposed to deter those who would commit crime. As a solution to crime, deterrence can make crime less attractive by “implementing policies that heighten the costs of illegal conduct—that is, laws and penalties that ensure that criminal participation” is not profitable (Pratt et al., 2008b, p. 368).

The effectiveness of deterrence is tied to three concepts: probability, punishment amount, and delay. Punishment must have a high probability of occurring, that is, more likely to be certain. In addition, the punishment must reflect the program that implements it to be an effective deterrent. Finally, “the effects of punishment in deterring behaviour drop off rapidly as

the delay increases between the transgressive response and the administration of punishment for that response” (Robinson & Darley, 2004, p. 193). The perceived benefit of the crime is typically immediate as it is with theft or assault in which the immediate possession of money or property or feelings of revenge are the immediate benefit (Robinson & Darley, 2004).

Greenberg (2003) states that “In any society, people hold beliefs that certain distributions of goods and bads are right because they allocate to people what they deserve. Other distributions are wrong, that is, undeserved and unjust” (p. 319). Greenberg’s statement indicates that the distribution of crime exists as it is because it allocates to those who are in power more wealth. Any distribution that is contrary to this allocation of good and bad is wrong. Clear & Rose (2003) state that “more likely to conform to mainstream norms and values when they have the skills, incentives, and opportunities to do so” (p. 40). Social isolation through incarceration inhibits and lessens these skills, potentially having an effect on crime as “isolation decreases opportunities for conventional behavior and rewards and increases incentives for alternative lifestyles and cultures” (Clear & Rose, 2003, p. 40). More and more individuals are being released from prison, which has a profound effect on the communities and families to whom they return. Offenders are often concentrated in specific areas and “developing a thorough understanding of the characteristics of returning prisoners and the challenges they face is an important first step in shaping public policy toward improving the safety and welfare of all citizens” (Soloman, Thomson, & Keegan, 2004, p. 1).

2.1.3. Media Images of Crime

Crime has been a popular genre in media, both real and fictional. Even before mass media, crime has been “popular spectacle and entertainment” (Reiner, 2007a, p. 304). Narratives

and representations of crime are a large part of our current mass media. Reiner (2007a) writes that the “proportion of news devoted to crime and criminal justice has increased over the last century” (p. 307). Murder is often the most reported news story, and often exaggerates the true nature of crime and how violent crimes are more likely to be solved than property crimes. In addition to this exaggeration, offenders are portrayed in a clearly stereotypical way, often “misleadingly towards lower-status groups” (Reiner, 2007a, p. 309). Greenberg (2003) states that “perceptions of justice” enable a better understanding of the criminal justice system and how it is administrated as “African Americans and some other minorities (Latinos, Native Americans) are very disproportionately represented among those arrested, tried, convicted, and imprisoned in relation to their numbers in the U.S. Population” (p. 325). Kohl, Hoover, McDonald, and Soloman (2008) find that violent offenders and sex offenders are mistakenly believed to be serious risks of reoffending due to “misrepresentations in the media and a general fear of these particular offenders” (p. 31).

Some acts are criminal because they are labeled as such by both “citizens and/or law enforcement officers,” and for a crime to be committed one must be motivated and driven to violate the act that is labeled as criminal (Reiner, 2007a, p. 316). The media is important with regard to crime because it helps shape “the conceptual boundaries and recorded volume of crime” (Reiner, 2007a, p. 316). The media is an important part of the perception of crime among the public because the media is often portrayed as “spreading knowledge of criminal techniques” to current and potential offenders (Reiner, 2007a, p. 317). In addition, the media may stimulate crime by distressing “a consumerist ethos” which often characterizes American society (Reiner, 2007a, p. 317). This consumerist ethos corresponds with the concept of money being the indication of success in American society. The more money you have, the more you can buy.

Motivated offenders and potential offenders are less likely to commit crime, however, if effective formal and informal social controls are in place.

The negative connotations most commonly associated with media images of crime is how “[media images] erode the efficacy of both external and internal control” by negatively representing the criminal justice system and questioning the integrity, efficacy, and effectiveness of its instruments (Reiner, 2007a, p. 318). It also glamorizes offending and offenders. This glamorization is dangerous because of the effect it has on public perception. Reiner (2007a) states that “negative representations of criminal justice could lessen public cooperation with the system, or potential offenders’ perception of the probability of sanctions, with the consequences of increasing crime” (p. 318). The fear of crime is as important, if not more so, than crime itself. Reiner (2007a) states that “fearful people are more dependent, more easily manipulated and controlled, more susceptible to deceptively simple, strong, tough measures and hard-line postures—both political and religious” (Reiner, 2007a, p. 321). The media’s representations of crime and the criminal justice system can have a significant impact on public policy.

2.1.4. The Influence of Public Opinion

The view of the public toward crime has changed significantly in recent years. The criminal justice system’s policies are heavily influenced by public opinion, especially the views of the public “in the areas of gun control, parole, drugs, and above all sentencing reform” (Roberts & Stalans, 1998, p. 31). Politicians appeal to the public’s demand for harsher punishment for criminals, which demonstrates how influential the politics of law and order can be to politics in general. Crime was not a typical concern of the public before the 1980s, however, “a significant shift in public priorities appears to have occurred” and since the 1990s

crime has been a major concern for an overwhelming majority of the public (Roberts & Stalans, 1998, p. 32). This concern for crime is associated with a negative view of the criminal justice system and its operation.

The public feels that the cause of the supposed increase in crime rates is “leniency on the part of the courts and the correctional system” (Roberts & Stalans, 1998, p. 33). The public feels that many criminals go unpunished. With the exception of homicide, serious crimes have a low clearance rate meaning many criminals offend without facing the legal consequences of their actions. It is not hard to see how sentencing policies in the United States would reflect a desire of retribution in punishing individuals who are at high risk of reoffending. Deterrence is therefore associated with longer sentences and incapacitation. Recidivists cast doubt upon the efficacy of rehabilitation, special deterrence, and undermine any feelings of compassion due to their repeated contact with the criminal justice system. Recidivism is largely the cause of our skyrocketing prison rate and makes one wonder if longer terms of incarceration through a harsher sentencing practice addresses an offender’s individual risk of reoffending (Leipold, 2006, p. 554).

Public opinion typically reflects a limited knowledge of crime and criminal justice (Tonry, 1998). Many surveys of public perceptions of crime and criminal offenders shows that many people believe that crime rates are on the rise even when they are not. They also believe that many offenders are “physically unattractive, unemployed individuals who are frequently gang members” (Roberts & Stalans, 1998, p. 37). Kohl et al. (2008) find that violent offenders and sex offenders are mistakenly believed to be serious risks of reoffending due to “misrepresentations in the media and a general fear of these particular offenders” (p. 31). The public also believes that the proportion of violent crime is higher than it is in reality. This

misconception highlights the public's limited knowledge of "awareness of the broad range of criminal behavior, or the significant numbers of people who are involved in criminal behavior at some point in their lives" (Roberts & Stalans, 1998, p. 37). The views of the public are important regarding crime and criminal offenders because "they undoubtedly have an impact on support for various crime control policies, as well as the administration of justice" (Roberts & Stalans, 1998, p. 38). As a result, state sentencing policies have been drastically affected by public opinion. This result is evidenced in a study done by Sorensen and Stemen in 2002, which looked at how sentencing policies affect incarceration rates. These variables are discussed below.

Sorensen and Stemen (2002) attempted to determine if and how state incarceration rates are affected by sentencing policies and just "how the effect of sentencing policies compare[s] to other demographic and social factors shown to influence incarceration rates in previous studies" (Sorensen & Stemen, 2002, p. 457). Sentencing policies are designed so that court-imposed sentences are uniform, certain, and severe. Uniformity, certainty, and severity are essential for punishment to be effective as both a punishment and a deterrent. These policies alter the flow of individuals into the prison system. They also increase prison time inmates are required to serve. These laws increase the prison population by abolishing parole and increasing dramatically the length of sentence. These laws can often be viewed as harsher on criminals and crime (Sorensen & Stemen, 2002, p. 457).

Mandatory sentencing laws determine a specific term of imprisonment as a minimum for certain crimes as a way to increase the certainty and severity of punishment (Sorensen & Stemen, 2002, p. 458). Three strikes laws stipulate significantly longer terms of incarceration for repeat offenders and are somewhat similar to mandatory sentencing laws (Sorensen & Stemen, 2002, p.

458). Truth in sentencing laws have recently been adopted by many states to “ensure certainty in time served” as it requires inmates to serve significant amounts of the sentence they were initially given (Sorensen & Stemen, 2002, p. 458). Sorensen and Stemen (2002) state that the percentage of a state’s black population tends to be a consistent predictor of crime (particularly violent crime) and thus affect incarceration rates. The population’s age structure is also linked to crime and incarceration rates, and thus considered a predictor. Sorensen and Stemen (2002) also state that “the at-risk age category for criminal activity typically includes those in their late teens and early 20s” (p. 459). As a result, the incarceration rates for individuals aged in their 20s is the highest, stable for those ages in the 30s, and lowest for those age 35 and older (Sorensen & Stemen, 2002).

A predictor of crime in Sorensen and Stemen’s (2002) study is the measure of the state’s population and urbanization. Areas that are more populated and urbanized tend to have higher crime rates and incarceration rates that are equal to them. Sorensen and Stemen (2002) also suggest that these higher rates are due to higher levels of social disorganization that more populated and urbanized areas tend to exhibit, as they have a “greater reliance on formal mechanisms of social control” (p. 460). These measures are often “viewed as indicators of the level of economic development within states, which in turn has been found to influence the level of policy innovation” (Sorensen & Stemen, 2002, p. 460).

Though demographic variables and economic variables “point to the underlying social forces driving incarceration rates, admissions, and sentence lengths,” it is really citizen and governmental ideology that drives state policy innovation and the ways these forces are affected (Sorensen & Stemen, 2002, p. 460). Higher rates of incarceration are also indicated as being related to two economic factors: poverty and unemployment (Sorensen & Stemen, 2002).

Sorensen and Stemen (2002) find that presumptive sentencing guidelines are the only policy related to rates of imprisonment. States that have these guidelines are typically associated with much lower rates of incarceration. Legislation such as truth in sentencing and three strikes laws are still very new, and may take time to be able to discern any measureable effect. The most measureable effect, however, on incarceration rates is ideology, particularly of the citizens (Sorensen & Stemen, 2002). Most criminal justice system models are based in rational choice and suggest that unconscious thought processes might weigh on decisions made by law enforcement officers and also affect fear of crime and explain “racialized patterns of law enforcement more fully” (Greenberg, 2003, p. 340). Unfortunately, the current policies of our criminal justice system have left us all with “high levels of both crime and incarceration” (Kleiman, 2009, p. 7).

2.1.5. Sentencing and Incarceration in the United States

The punishment most often associated with the deterrence perspective is incarceration. Incarceration is known as incapacitation as well. The number of offenders being sentenced to significant terms of incarceration exceeds the rate at which offenders are being released from prison. Offenders are receiving longer sentences. But is this answer an effective one to recidivism prevention? Does the increased severity of punishment deter crime? The use of incarceration itself as a deterrent to crime is already in question. The sheer volume of offenders who recidivate (go on to commit additional crimes after serving a term of imprisonment) would suggest that longer sentences are not effective. Something is not working if most of the offenders who are released from prison return after having committed additional crimes. Offenders with lengthier criminal histories are typically thought to be “more deserving of longer

prison sentences than those without” (Leipold, 2006, p. 550). This assumption is made because feelings in support of retribution are given more emphasis and the need to prevent future criminal activity and punish offenders as offenders with criminal histories are recidivists. Recidivists undermine the purpose of the criminal justice system and therefore warrant harsher punishments. This fact makes them prime candidates for harsher sentencing due to such retributive policies and perceptions (Leipold, 2006, p. 550). The effectiveness of the deterring power of longer sentences is drawn into question, however, as a significant number of offenders in prison have already served time in prison.

The rate of incarceration in the United States is increasing at an alarming rate. A significant number of Americans are in prison as at “the end of 2004 there were nearly 1.5 million [in prison], which translates to roughly 1 inmate for every 200 people in this country” (Leipold, 2006, p. 526). The crime rate in our nation, however, has been declining steadily since 1990, and currently is at a thirty year low (Leipold, 2006). Though the crime rate in the 1990s has fallen consistently in recent years, the incarceration rate has skyrocketed. This increase has been attributed particularly to a number of “harsh sentencing policies enacted since the late 1970s” (Sorensen & Stemen, 2002, p. 456). This practice goes hand in hand with deterrence’s central aim. The Criminal Justice system is based in deterrence, the idea that crime is deterred if the consequences of criminal action exceed the benefits. If formal, external controls fail in preventing crime from occurring, then the general punishment for crime becomes more intense. This retributive sort of deterrence is how the current state of our corrections system is characterized.

According to Ashworth (2007), the sentencing of an offender “is probably the most public face of the criminal justice process” (p. 990). In recent years sentencing policy has seen a

sharp increase in severity, especially in the 1990s. Retributive theories of punishment gained favor in the 1970s because of the apparent failure of rehabilitative success. Ashworth (2007) states that while a first time offender may not require a serious punishment, a recidivist might require a harsher type of punishment. In this case, “the seriousness of the offence becomes less important than the prevention of repetition” which is evident in our current harsh sentencing style for repeat offenders (Ashworth, p. 993). Currently, “more attention has been devoted to general deterrence” in the hopes of deterring many by punishing few for a particular offense (Ashworth, 2007, p. 993). Incapacitation aims at “identify[ing] offenders or groups of offenders who are likely to do such harm in the future that special protective measures (usually in the form of lengthy incarceration) are warranted” (Ashworth, 2007, p. 995). This practice is often portrayed as “utilitarian” through greater social benefit with longer terms of incarceration because the rights of the offender take a back seat to the importance of the rights of the victims (Ashworth, 2007, p. 995).

According to Clear & Rose (2003), the increased rate of incarceration may be partially attributed to a reduction in the crime rate but is largely due to policy changes and the utilization of longer sentences as a punishment for offenders. Sentencing reform has dominated our justice system for a long time now, “gradually increasing the certainty and severity of incarcerative penalties for those convicted of a crime” (Clear & Rose, 2003, p. 27). The policy utilized in the American criminal justice system targets offenders individually, removing offenders from their communities. Clear & Rose (2003) state that, since offenders typically come from areas characterized by social disorganization, removing offenders from their communities will increase the social disorganization that is present and “reinforce social control efforts in socially *organized* areas” (p. 29). Precious social capital (reading, writing, reasoning, and other skills

necessary to effective human function) is damaged or lost in incarceration for both the offender and the families and communities from which they come. Conventional means become more unattainable for individuals who are incarcerated. With significant legal means to conform either limited or blocked, many offenders may choose to employ illegal means achieve their ends. This perspective leads the arguments for whether sentences should in fact be longer or shorter for offenders.

2.1.6. Longer versus Shorter Sentences

Song and Leib's (1993) study analyzes "the effect of prison or jail sentences on recidivism" (p. 1). Their study is important to both public safety and cost effectiveness. Opinions on sentence length differ depending on which length is advocated. Advocates of longer sentences do so with the argument that longer sentences are a benefit to public safety while those who advocate shorter sentences do so with the argument shorter sentences are a benefit to cost effectiveness. Both sentence types are tied to their ability to reduce recidivism rates (Song & Leib, 1993, p.1).

Longer periods of incarceration are argued to reduce crime in three ways. First, the offender is prevented from committing additional crimes against the public while in prison. This type of crime prevention is known as incapacitation and is also known as a form of deterrence. The last two reasons are tied together. Incapacitation serves as a double-edged sword: it deters specifically those who are released from prison from committing additional crimes and deters generally those who would potentially commit crime. Some feel, however, that, while longer sentences keep offenders in prison longer, delays and uncertainty in punishment diminish the deterring effect longer sentences have on future crime (Cornelius, 1997). Advocates for shorter

sentences argue that “certainty of punishment is more important than duration of punishment in deterring offenders from reoffending” because many offenders continue to commit crime due to a variety of reasons: physical addiction, limited life choices, illiteracy, poor job training and the idea that prison is a school for criminals which emphasizes the use of criminal efforts in everyday life (Song & Leib, 1993, p. 2).

Incapacitation, therefore, has many positives with regard to explaining current sentencing practice. Incapacitation prevents prisoners from committing new crimes save for those against other inmates and prison guards. Incapacitation prevents recidivism through “longer sentences, mandatory minimums, and reduced parole” (Leipold, 2006, p. 542). Incapacitation is an appealing explanation for our nation’s growing prison population. A lot of the justification for longer sentences lies in the knowledge that half of all inmates released from prison will recidivate by being convicted for a new crime. The recidivism rate increases when you include offenders who are simply arrested for a new crime after their release. Leipold (2006) points out that almost 70% of the cohort in a 1994 study was arrested for a new crime after release.

According to Piliavin et al. (1986), “prior research has failed to unearth a consistent deterrent influence of perceived severity of formal sanctions” though there does seem to be a measureable effect when it comes to certainty of sanctions (pp. 102-103). This lack of deterrent effect can lead to recidivism. Recidivism constitutes a failure of the criminal justice system to do its job. This fact, in part, is especially true when one looks at Langan and Levin’s (2002) report on recidivism which states the average length of prison sentence was 5 years but offenders were typically “released after serving 35% of their sentence, or about 20 months” on average (Langan & Levin, 2002, p. 3). Leipold (2006) points out that many individuals will likely commit additional crimes when released from prison, but “a more exact estimate [of those that

do] is surprisingly underdeveloped” (Leipold, 2006, p. 543).

2.1.7. Truth in Sentencing in State Prisons

In the United States, the amount of time an offender typically serves in prison is shorter than the actual sentence they are given by the criminal justice system. Recently, however, many states have enacted “a truth-in-sentencing law which requires offenders to serve a substantial portion of their sentence” in order to reduce the disparity between the sentence they receive and the actual time they serve in prison (Ditton & Wilson, 1999, p. 1; Rosich & Kane, 2005). The 1970s were characterized by an indeterminate sentencing model in which a parole board typically determined when an offender would be released from prison, however, uniformity in punishment has led to “mandatory minimums and sentencing guidelines” to be enacted in the 1980s (Ditton & Wilson, 1999, p. 1). With recent prison crowding and time served credit, many prisoners are still released early.

The severity of sentencing laws has been increased in a number of states, and placed “restrictions on the possibility of early release” (Ditton & Wilson, 1999, p. 3). Truth-in-sentencing laws basically require offenders to serve a significant portion of their sentence before they are released from prison, or even eligible to be released for that matter. The percent of sentence required to be served as well as the actual definition of truth-in-sentencing varies from state to state. The required amount of sentence to be served can vary from 50% to 100% of the minimum sentence given by the court. This amount differs from the federal 85% standard of time served of sentence given. For example, Maryland, Texas, Nebraska, and Indiana have a 50% requirement, whereas Arkansas has a 70%, and Colorado and Massachusetts have a 75% minimum requirement (Ditton & Wilson, 1999).

Andrew Leipold (2006) suggests that the current state of corrections focuses too much on retribution and not enough on preventing offenders from committing additional crimes. This retributive perspective has led to a surge in the number of individuals incarcerated which, in turn, has had some effect on reducing the crime rate but also has significant social and monetary costs. It is hard to argue, however, that imprisonment is not effective. Incarcerated individuals are prevented from committing additional crimes, save for those offenses against their fellow inmates and prison personnel. But is this type of punishment effective in deterring crime? Longer sentences keep individuals from committing additional crime for longer periods of time. If many people do go on to commit additional crimes after release from prison, then incapacitation through harsher sentencing is definitely useful in preventing recidivism, if only for a specific period of time. If many individuals are unlikely to commit additional crimes when released from prison, however, “longer sentences are wasteful (Leipold, 2006, p. 543). Recidivists, therefore, are more deserving of longer sentences.

2.2. Recidivism

According to Beck and Shipley (1989), recidivism is “an estimate of the percentages of released prisoners who commit another offense” (Beck & Shipley, 1989, p. 2). Their study concluded “an estimated 62.5% [of those in their study] were rearrested for a felony or serious misdemeanor within 3 years, 46.8% were reconvicted, and 41.4% returned to prison or jail” (Beck & Shipley, 1989, p. 1). A careful review of recidivism studies as well as other literature indicates there are four types of variables that have continued to show a noted affect on criminal recidivism when released from prison. These influential variables are previous criminal history, demographic characteristics (age, sex, race), drug use, and sentence length.

2.2.1. Criminal History

A significant number of individuals released from prison are already recidivists, having served time or been convicted of crimes additional to the ones they serve time in prison. An offender's criminal history can be tied to their individual risk for recidivism as criminal history labels an offender a repeat offender. Criminal history, therefore, is an important factor related to recidivism as an established criminal history tags an offender as a recidivist from the start. The intensity of an offender's record and the length of time it spans can uniquely influence the rate of recidivism for criminal offenders. According to May et al. (2008), "the likelihood of reoffending increase[s] with the number of previous convictions" (p. 4). The amount of time between an individual's first arrest and the present (whether incarcerated or on probation, etc) is strongly believed to be predictive of potential reoffense rates. Those individuals with longer periods of time between their first offense and their latest are more likely to recidivate than other offenders. The intensity of the record is also a factor, meaning that the more offenses between point A and point B are also a predictor of how likely an offender is to be rearrested (Beck & Shipley, 1989). Thus, "the number of times a prisoner has been arrested in the past is a good predictor of whether that prisoner will continue to commit crimes after being released" (Langan & Levin, 2002, p. 10). In addition to the number of times incarcerated, previous criminal activity can include deviant behavior that does not result in an individual's incarceration. This behavior can include activities an individual engages in on a regular basis, such as having ties to a gang or living in a crime ridden area as these factors may pressure individuals into engaging in criminal behavior.

2.2.2. Demographic Characteristics

The United States is a virtual melting pot, one of the most racially and ethnically diverse

of the industrialized nations on the planet. As a result, there are significant “differences in violent crime rates...among racial and ethnic groups within American society” (Messner & Rosenfeld, 2007, p. 26). This difference in the distribution of crime can be affected by demographic characteristics, especially age, race, and sex. An offender’s demographic characteristics play a significant part in the risks they pose to reoffend when they are released from prison.

May et al. (2008) state that recidivism carries an inverse relationship with age. This relationship indicates that recidivism decreases as age increases. May et al. found that “reoffending...was the highest for those aged from 18 to 20, and lowest for those aged 40 and over” (p. 4). Langan and Levin (2002) also found that older prisoners are much less likely to recidivate than younger prisoners. Race is a significant factor as well. Langan and Levin (2002) found in their study that blacks are more likely to recidivate than whites and those of non-hispanic origin are more likely to recidivate than those of Hispanic origin. The differences between the offenses committed by each gender, as well as the overwhelming disparity of criminals between genders, has a lot to do with the social roles instilled in the American culture. Women are far more likely to be invested in the family unit, and therefore have less time to be involved in other, more dangerous or illegal activities outside the home as males (Messner & Rosenfeld, 2007). Langan and Levin (2002) agree that men are more likely to recidivate than women, which has a lot to do with society’s gender role socialization. This finding may have changed recently with the current shift in the definition of today’s gender roles.

2.2.3. Drug Use

Drug use is an important factor related to recidivism due the very nature of the drug trade

itself. Illegal drugs are characterized by violence because individuals often have to resort to violence to sell, receive payment, and keep individuals from alerting law enforcement. When the end itself is illegal, the means to attain are often illegal as well. Kleiman (2009) states that even though drugs and drug dealers can be taken off the streets, it does not necessarily limit the drug trade as another drug dealer will take their place. Often times, taking one drug dealer off the street can increase crime as this action can be accompanied by an increase in price of drugs for drug users. For example, May et al. (2008) state that individuals who report a problem with drugs before custody were much more likely to reoffend. May et al.'s (2008) study found that three-quarters of the participants who recidivated within a year of their release had reported a problem with drugs before their incarceration (Kohl et al., 2008, p. 17).

2.2.4. Sentence Length

Sentence length is a double-sided variable as it relates to the total sentence length and also the percent of sentence length served. Sentence length, as the main variable in this study, has a lot to do with certainty of punishment and thus is an important aspect of the criminal justice system and recidivism research. The total length of a given sentence (a sentence of ten years as opposed to a sentence of two) may influence the rate of recidivism once an offender is released. Sentence length is an important variable to analyze because it must be known whether those individuals who serve longer periods of time in prison per sentence (10 year sentence as opposed to a 3 year sentence) are less likely to recidivate than other offenders who spend or have spent less time in prison. In Kruttschnitt, Uggen, and Shelton's (2000) essay, they state that incarceration can have a criminogenic effect as it reduces job stability, weakens social bonds, and limits the ability to accumulate social capital (p. 64). Longer sentences and time served in

prison may be particularly damaging in that respect.

In contrast to this finding, May et al. (2008) indicate longer terms are statistically significant in predicting recidivism. Their study found that offenders with a sentence of four years or more are less likely to commit another crime than offenders sentenced to a term of incarceration of one year or less. In addition, “the odds of reoffending were reduced for prisoners who were in custody for the first time” (May et al., 2008, p. 5). With regard to longer sentences, Leipold (2006) states that “the policy implications are plain enough: those looking to reduce our worldwide lead in imprisonment must confront directly the risks of recidivism and the ability of longer incapacitation to address those risks” (Leipold, 2006, p. 554).

The disparity that can exist between the sentence length given to an offender and the actual time they serve in prison in relation to that sentence length inspires a poor view of the criminal justice system on the part of the offender. This lack of certainty regarding time served of a sentence may encourage criminal activity instead of dissuading or deterring it by lessening the seriousness of criminal activity in the eyes of offenders and negating the idea that criminal activity is truly certain to be punished. Recidivism can occur as a result. For deterrence to work, offenders must connect punishment with crime. They must take the threat of punishment seriously. Punishment must be certain in addition to the idea that it must be severe. Basically, incapacitation is drawn into question as an effective deterrent of criminal behavior when offenders only serve a portion of their sentence. This hypothesis relates to certainty of sentence, as offenders may be certain they’ll be sentenced but not necessarily be certain that they will serve the entirety of that sentence.

Time served in prison is important. It relates to sentence length and its direct effects on the offender. The most important aspect of this variable (and perhaps the crux of this research

project) is the proportion of time served in relation to the arguments for shorter and longer sentences. Previous incarceration may play a role in terms of the prisoner's lifestyle as it establishes an offender as a recidivist before they are even released from prison. An offender serving time that has already previously served a term of incarceration is an earmark of the failure of the criminal justice system and denotes a significant risk of future offending. In *Recidivism of Prisoners Released in 1994*, Langan and Levin (2002) state that "no evidence was found that spending more time in prison raises the recidivism rate" and that the "results were mixed regarding whether serving more time reduces recidivism" (Langan & Levin, 2002, p. 2). There are many reasons to look at total time served as an indicator of potential recidivism.

In order to prevent persisting criminal activity something must be known about its causes. Recidivism is a multi-faceted phenomenon. Many things can influence recidivism and it thus cannot be linked to one particular factor. There are a number of variables that are known to have an effect on recidivism. Previous criminal history and specific demographic characteristics such as age, sex, and race are continually associated with the risk of continued offending as well as previous drug use and sentence length. Langan and Levin (2002), however, did not find a relationship between sentence length and recidivism.

2.2.5. Previous Studies of Recidivism

Beck and Shipley's (1989) study concluded that recidivism rates are higher for men, blacks, Hispanics, high-school dropouts, offenders with more extensive prior arrest records, and lower for women, whites, high school graduates, and offenders who serve longer than five years in prison (Beck & Shipley, 1989). The results of this study also showed that offenders with more extensive criminal histories are much more likely to recidivate, and thus the authors conclude

recidivism to be strongly related to prior offense record. Age is also related to recidivism (the younger an individual offender is during release, the more likely they are to commit additional offenses). Time served in prison is also a factor, but only in the instances when an individual serves a sentence of more than five years. In this case, the offender is less likely to recidivate. Another conclusion is that over half of the prisoners released from prison have previously served a term of incarceration (prison or jail) and this fact makes them more likely to recidivate than those who are serving a period of incarceration for the first time (Beck & Shipley, 1989).

The Bureau of Justice Statistics noted that recidivism differed at different periods of time after an offender's release from prison. According to their report, "within the first 6 months of their release, 29.9% of the 272,111 offenders were rearrested for a felony or serious misdemeanor" (Langan & Levin, 2002, p. 3). 44.1% had recidivated in the first year, 59.2% in the first 2 years, and roughly 67.5% of the 272,111 prisoners released had recidivated at least once. With regard to the overall recidivism rate, 67.5% of the 272,111 were rearrested, 46.9% were reconvicted for a new a crime in either federal or state court, 25.4% were back in prison for a new sentence (federal or state, excluding jails), and 51.8% were "back in prison because they had received another prison sentence or because they had violated a technical condition of their release, such as failing a drug test, missing an appointment with their parole officer, or being rearrested for a new crime" (Langan & Levin, 2002, p. 7).

With regard to the amount of time previously served in prison, over half of the 56% of the 272,111 prisoners who were released after serving their first prison sentence were rearrested in the three years following their release from prison. 73.5% of those individuals who had been incarcerated at least once prior to the sentence they were released from were rearrested. The study noted that they found no evidence "that spending more time in prison raises the recidivism

rate” and that “the evidence was mixed regarding the question of whether spending more time in prison reduces the recidivism rate” (Langan & Levin, 2002, p. 11). One thing the study did conclude was that those offenders released after spending a significant amount of time in prison (61 or more months) had an arrest rate significantly lower than other offenders (Langan & Levin, 2002).

In a study done by Kohl et al. (2008), incarceration is found to be negatively associated with rates of recidivism. As time served in prison increased, recidivism rates decreased. Inmates who served six months in prison or less had a recidivism rate of almost 50% while those offenders who served over six months in prison had a rate of just under 45 percent. Inmates who served five years or more had a rate of recidivism of 30%. Kohl et al. (2008) also found that “recidivism rates did not differ significantly among those released after serving 6 months or less (66.0%), those released after 7-12 months (64.8%), those released after 13-18 months (64.2%), those released after 19-24 months (65.4%), and those released after 25-30 months (68.3%)” (p. 11). Kohl et al. (2008) also found that offenders who “returned to prison were young, single, and more likely to commit nonviolent (i.e., property) crimes” (p. 31). They also found that offenders released from prison had dense, length criminal histories. Kohl et al. (2008) found that paroled inmates were 45% of the recidivism reported while those offenders who left prison via expiration of sentence recidivated at a rate of 36%.

Solomon et al. (2004) found in their study that gender (male), race (particularly black and then white), age (specifically ages 20-39, average age being 35.7 years old), sentence length (cumulative minimum sentences was two years or less, nearly half serving one year or less while a quarter served more than five years) are significant in terms of recidivism. Solomon et al. therefore state that “ex-prisoners returning to communities with high unemployment rates,

limited affordable housing options, active drug markets, and few services may be more likely to relapse and recidivate” (Soloman et al., 2004, p. 29). It can be seen, therefore, that many offenders who are released from prison choose criminal behavior on a rational basis as the more conventional means of attaining social capital are damaged by incapacitation.

2.3. Rational Choice Theory

Deterrence is a perspective that aims to prevent crime with the threat of punishment. The costs of committing certain crimes outweigh the benefits, and therefore potential criminals are deterred from committing crime. The punishment most frequently associated with deterrence is incarceration. Current sentencing practices stipulate harsher punishments for offenders, especially those offenders with criminal histories. The incarceration rate, therefore, has skyrocketed in the United States since 1980. The number of individuals who go on to commit additional crimes after being released from prison, however, would suggest that harsher sentencing practices are ineffective in deterring additional crime. This prevalence of recidivism is possibly due to a lack of certainty in the amount of time served of the prison sentence received. Offenders, once released from prison, may choose to continue a criminal lifestyle if they do not feel the threat of punishment is severe enough when they only serve a small portion of the harsher sentence the criminal justice system is handing out to offenders. Rational choice theory enables researchers to explain aspects of criminal behavior. Rational choice theory is helpful because, as a theory, “it is a sensible way of understanding something, of relating it to the whole world of information, beliefs, and attitudes that make up the intellectual atmosphere of a people at a particular time or place” (Bernard et al., 2010, p. 1).

2.3.1. The Economics of Rational Choice Theory

The rational choice/deterrence model is “a theoretical perspective proposed by economists that not only provides a general explanation of criminal behavior, but also stipulates a specific mechanism by which formal sanctions deter” (Piliavin et al., 1986, p. 101). Rational choice theory has been given a makeover in its recent reintroduction to criminology. It has recently been presented with a more economic outlook. This economic outlook has individuals “continually looking about him for opportunities, making amoral and asocial choices to maximize his personal utility” (Rock, 2007, p. 16). These economic individuals may or may not be rational. Mostly, these individuals go through life “on the basis of imperfect information and the presence of risks and uncertainty” (Rock, 2007, p. 16). According to Shover & Copes (2010), the reason that some people commit crimes while others do not it “they choose” to (p. 128). Certain individuals do calculate, but the process is affected by “their prior choice of lifestyle” and therefore offenders weigh “potential benefits and costs” differently (Shover & Copes, 2010, p. 135). The deterrence approach is unique in that it offers an explanation of and solution to crime. As an explanation, individuals choose crime because crime’s benefits outweigh its costs. Though not everyone is considered rational, criminals included, people are aware of the “potential costs and benefits associated with criminal acts” (Pratt et al., 2008b, p. 367). In this respect, criminals feel they are making rational decisions even when others outside the situation may feel otherwise.

Piliavin et al. (1986) suggest that how people evaluate and come to discern meaning of sanctions has a determinable impact on their behavior. The evaluations are affected by different elements that vary according to the situations and thus differ from individual to individual. This statement essentially means that “the persons’ perceptions of the opportunity, returns, and

support for crime within a given situation may influence their perceptions of risks and the extent to which those risks are discounted” (Piliavin et al., 1986, pp. 114-115). When considered this way, individual evaluations of risk vary and are unstable, and also affected by the situation they are in at any given time. Piliavin et al. (1986) find individuals who are at higher risk of sanctioning are not influenced by their perceptions of risks or sanctions. Rather, they are influenced by the “perceptions of their opportunities and respect for criminal activities” (Piliavin et al., 1986, p. 117).

Basically, if the utility of an act (either illegal or legal) is greater than that of its alternatives for an individual, then the individual will engage in that act because it yields the highest utility (Piliavin et al., 1986). What does make a difference is the “other side of the rational-choice process,” basically the concept of “opportunity or returns” (Piliavin et al., 1986, p. 114). The opportunity for crime, according to Piliavin et al. (1986), has a measureable and statistically significant effect on criminal behavior because “persons who perceive greater opportunities to earn money illegally are more likely to violate the law” (p. 114). Therefore, individuals that hold more respect for agents of criminality than for their legitimate counterparts have “more to have and less to lose by violating the law and therefore are significantly more likely to do so” (Piliavin et al., 1986, p. 114). This statement is especially interesting when one considers how “economic disadvantage, criminal offending, and criminal victimization are concentrated in similar populations” (Piehl, 1998, p. 315).

For the purpose of this research, the lens utilized, as previously mentioned, is one of rational choice. Rational choice is based in deterrence theory as rational choice theory is essentially a cost-benefit analysis. Offenders gain some kind of benefit or positive reinforcement for committing criminal behavior, or the perceived losses or costs as lower than the benefits and

thus criminal behavior is an acceptable means to an end (Eller 2006). This perspective is especially reinforced by an individual's social surroundings. Individuals provide others with "examples of how humans might or ought to behave" (Eller, 2006, p. 44). Imitation of behavior increases the likelihood that it will be repeated in the future, "especially if some reinforcement did occur" by peers or superiors (Eller, 2006, p. 44). Once this behavior is learned, it is modeled for someone else to imitate, learn and thus model for another. This method of social learning is especially true for children (Eller 2006). Such behaviors and interactions are learned from a variety of sources such as "family, friends, coworkers, and others, and each of these may support or oppose criminal behavior" (Ferguson, 2010, p. 23). This modeling relates to Rational Choice Theory through socialization. If an offender does not fear receiving punishment, they are more likely to commit criminal activity, especially if their social environment affects what an inmate perceives as costs and benefits. The modeling of this type of behaviors essentially shows others how the benefits of crime and criminal activity outweigh the costs in our society, especially in terms of using them as a means to an end to achieve goals or valued goods.

2.3.2. Culture and Rational Choice Theory

Grasmick, Jacobs, & McCollom's (1983) study explored socioeconomic status (SES) in relation to perception of risk with criminal activity. Their hypotheses concerned whether high SES individuals commit more crimes because they perceive lower risks of punishment than those individuals of a lower SES. Therefore, higher SES individuals are not influenced as strongly by punishment threat as low SES individuals. The authors' data suggests that "compared to low SES persons, high SES persons perceive a lower certainty of legal sanctions for these offenses" and that those individuals of a higher SES are "less deterred by the risk of legal sanctions"

(Grasmick et al., 1983, p. 370).

Each individual has his or her own definition of a good and fulfilling life, of what constitutes a life worth living. The means to achieve this life vary for different people. Some may find their concept of a fulfilling life to be unattainable or unrealistic. Therefore, some individuals resort to criminality in order to attain that which they feel may be unattainable or to ease the process. According to Tony Ward (2002), these definitions of good lives can point to risk factors for potential criminal behavior. He states that “individuals commit crimes [because] they are perceived to be rewarding in some ways, [and] a criminal lifestyle represents one way of achieving personal goods” (Ward, 2002, p. 514).

American culture is unique in that success is measured through money. There exists a constant pressure to accumulate more and more money as an indication of achievement and success, and this pressure typically “entices people to pursue their monetary goals by any means necessary” (Messner & Rosenfeld, 2007, p. 70). This concept is known as the American Dream. Competition to achieve the American Dream pushes people to feel they must reach their end, their goals, through a variety of means. Messner and Rosenfeld (2007) state that “this open, widespread, competitive, and anomic quest for success provides a cultural environment highly conducive to criminal behavior” (p. 71). This criminogenic push towards success is especially true for individuals who are released from prison, as their ability to effectively compete with non-offenders is disabled by incarceration. Some individuals have the goals of the American Dream but lack the resources to achieve it and thus many individuals resort to criminal behavior as a means to their end. This macro perspective can be whittled down to a micro perspective as well, since individuals make up the whole of society. Individuals are innovative. They come up with many ways to achieve this notion of the “American Dream,” even if those ways are illicit in

nature.

2.3.3. Certainty and Severity of Punishment

Mendes & McDonald (2001) state that there are three important parts to deterrence theory which “creat[e] an expected cost for committing a criminal act” (p. 606). These parts are the probability of arrest, probability of conviction after arrest, and punishment following conviction. Assuming that severity of punishment is not important undermines the credibility of deterrence theory. Certainty and severity must be in tandem for punishment to be effective. Mendes & McDonald (2001) states that “deterrence must be treated as a package composed of three elements: arrest, conviction, punishment” and severity is important to effectively translating the theory (p. 606).

According to Kronberg et al. (2010), “the deterrent effect of harsh penalties depends on the subjective probability of being caught and arrested” (p. 262). In this case, possible benefits of committing crime or participating in criminal activity are incentives only if offenders feel there is certainty in getting away with it (Kroneberg et al., 2010). There are two points of contention with regard to rational choice theory. The first argues “whether increases in the severity of punishment exert a stronger deterrent effect than comparable increases in the certainty of punishment” while the second asks “whether stronger criminal justice sanctions or better labor market performance effectively reduces crime” (Grogger, 1991, p. 297). Grogger (1991) states that imprisonment can leave individuals without any but the lowest jobs which can lead them to see the benefit in participating in criminal activity despite the threat of severe punishment.

Grogger (1991) also finds that increased severity is not as effective a deterrent as

increased certainty of punishment, and that longer prison sentences may not be the most effective way to reduce crime. Grogger (1991) also finds that while increased sentence length does seem to have some measureable deterrent effect, the “criminogenic effect of imprisonment is nearly three times as great as the deterrent effect” (p. 304). Grogger (1991) concludes that the general effect a prison sentence has is to increase, on average, criminal activity once released back into the population (p. 304). Grogger (1991) finds that sanctions and economic activity are important in determining the level of criminal activity for at risk individuals. Certainty of punishment has a greater deterrent effect than the severity of punishment, as increased severity of punishment seems to have a “sizeable criminogenic effect” (p. 308).

Certainty of punishment has a stronger effect than severity of punishment on criminogenic effect estimates. Perception of punishment can be affected by an individual’s involvement in criminal behavior. If an offender has respect for criminal avenues, they are more likely to perceive the threat of punishment as being less severe than in reality. A longer sentence is supposed to cause anxiety or fear or guilt and thus reduce recidivism because the individual is compelled to “avoid future punishment, and thus discourages reoffense” (Song & Leib, 1993, p. 3). Longer sentences are also supposed to make an offender feel offending is too costly in terms of earnings and freedom. The longer an individual is removed from general society, social bonds are weakened, which makes adjustment difficult when the offender is eventually released from prison. Offenders can experience social rejection, which can “influence reoffense behavior” (Song & Leib, 1993, p. 3). Grogger (1991) states that penal efforts should be directed at individuals who are able to be deterred and that these efforts should be done without damaging an offender’s future employment opportunities. These efforts are most likely to reduce the costs for society, the offender, and incarceration. Kohl et al. (2008) say that “what an inmate

encounters during the transition back into the community and how well he is equipped and supported in handling that process is key to a successful transition” (p. 34).

The main focus of deterrence has always been on one cost and action. The cost is material and/or physical deprivation which is legally imposed while the act is a crime, or a legal violation. The perceptions on the part of the offender revolve around their perceptions of the “certainty of arrest and the perceived severity of punishment if arrested” (Grasmick & Bryjack, 1980, p. 471). They are concerned with whether they will incur a certain cost and how severe that cost will be if it is experienced.

Researchers often come to the conclusion of how important certainty of arrest is to criminal behavior. Most commonly, researchers “observe that perceived certainty of arrest is inversely related to illegal behavior” and that severity of sanctions is not even considered (Grasmick & Bryjack, 1980, p. 472). With regard to rationality, Grasmick & Bryjack (1980) state that most literature does not assume that individuals accurately estimate potential costs and benefits, rather, deterrence assumes only that “within the limits of their estimates of costs and rewards and within their system of values, individuals behave rationally” (p. 473). The results of Grasmick & Bryjack’s (1980) study show that people are influenced by the certainty of punishment, but this influence has bearing if they also feel that the punishment will be severe. In this case, the authors write that their “respondents appear to be rational actors—from the standpoint of their own values” (Grasmick & Bryjack, 1980, p. 486). A potential cost can also be seen as social stigma and disapproval. Robinson and Darley (2004) state that criminal rules are rarely known to people “even when those rules are formulated under the express assumption that they will influence conduct” and thus most do not know the severity of penalties associated with different criminal activities (p. 176). Robinson & Darley (2004) also state that most

“people commonly assume the law to be as they think it should be, so they assume the existence of criminal law rules that correspond to their own intuitions of justice” (p. 176-177). The context or situation in which a decision must be made ultimately affects the “interpretations that the decision-maker puts on the facts on the facts as they are relevant to [the decision-maker]” (Robinson & Darley, 2004, pp. 178-179). Memberships or participation in a group is a situational and contextual factor that often has great effect on “both the ability and the motivation to make the calculations required for deterrence” because individuals around the decision-maker are expressing a sentiment that reinforces criminal behavior and delinquent activity (Robinson & Darley, 2004, p. 180). As a result, the decision-maker experiences a significant decrease in accountability which allows him or her to participate in criminal activity freely or at least with a lesser feeling of responsibility for one’s actions (Robinson & Darley, 2004).

Pratt (2008a) states that many “individual and contextual factors” affect individual perceptions of the costs and benefits of engaging in behavior, especially criminal behavior (p. 43). In addition, the political standpoint since the 1970s has been rigid, revolving around the assumption that the crime problem in the United States “is the result of chronic leniency on the part of the criminal justice system” (Pratt, 2008a, p. 44). As a result, the sentencing policies that have been embraced in this country are harsher as of late, especially for drug offenses. The harsher punishment is aimed at deterring potential offenders in order to make them “think twice about misbehaving” (Pratt, 2008a, p. 44). Pratt (2008a) states that “policy makers...end up making the decisions that ultimately affect the lives of citizens, and policy makers have a particular set of incentives in front of them—most of which are tied...to reelection” (p. 48). This misinformation that tends to guide them is potentially dangerous as it “masquerade[es] as

reality” (Pratt, 2008a, p. 49).

Seipel & Eifler’s (2010) study researched the impact of utility and self-control on deviant action. Their hypothesis is that “Self-control predicts deviant action in low-cost situations, whereas utility predicts deviant action in high cost situations” (p. 167). A common view in the social sciences is that many factors and situations affect human action. Therefore, the interaction between person and situation is important to the rational choice perspective. The authors point out how criminals are viewed as rational because they commit crimes based on their own perceptions of the risks and benefits of participating in criminal behavior. This rationality is true with regard to situation as well because offenders “try to minimize their risks of crime by considering the time, place, and other situational factors” (Seipel & Eifler, 2010, p. 171). The author’s results show that “the self-control personality trait has a stronger effect in a low-cost situation, whereas utility has a stronger effect in a high-cost situation (Seipel & Eifler, 2010, p. 192).

2.4. Summary

Our criminal justice system currently operates under a perspective of retribution. The deterrence approach to crime prevention is closely associated with retribution through deterrence’s use of punishment and threat of punishment to deter crime. Incarceration is the most commonly utilized punishment by both the retributive and deterrence perspectives. When informal norms and social controls fail or are not internalized, formal controls are utilized with regard to the agents of our criminal justice system. The policies that dictate the ways criminals are punished are affected greatly by the media, which in turn affects public opinion of crime, criminals, and our criminal justice system. Our criminal justice system currently incarcerates

individuals at a rate greater than which they are released, they are being sentenced to longer terms in prison, and yet criminals still go on to commit more crime when released. Longer sentences are most common for offenders, especially if those offenders are recidivists. Despite these longer sentences, offenders are typically released after only serving a portion of their sentence.

Most offenders who go on to commit additional crime after serving time in prison have significant criminal histories, are of a specific age, race, and sex, and have a noted substance abuse problem. Rational choice theory is closely tied with deterrence, as rational choice theory both explains why offenders commit crime and states how it can be prevented. Crime can be prevented by making the costs of such choices exceed the benefits. Unfortunately, most offenders are concentrated in the same areas, areas marked with economic problems, and both criminal offending and victimization. American culture puts such emphasis on money as a measure of success, however, that equal competition between offenders and non-offenders is difficult. This emphasis makes American society highly conducive to criminal behavior as those individuals who cannot effectively compete will find other ways to be successful, even if those ways are not legitimate. Many contextual factors play on criminal propensity. Severity of punishment is the focus of our criminal justice system, but more and more research is oriented towards the idea that certainty of punishment is important to effective punishment and deterrence as well.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Chapter three details the research design and methodology utilized to conduct the current study. It presents the research questions proposed for the analyses, descriptions of the analyses utilized, steps done to prepare the data set for analysis, steps taken to do correlation, simple regression, and hierarchical linear regression analyses. Validity and reliability are discussed at the end of this chapter. This study is a quantitative analysis of percent of sentence served in relation to recidivism. Data comes from a 1994 data set collected by the Bureau of Justice Statistics and contains information on a variety of topics related to the criminality and demographic characteristics of each offender included in the study.

3.1. Research Hypotheses

The research questions in this study concern the effect that lack of certainty of time served in prison of the sentence an offender has received can have on recidivism. Specifically, they address the disparity between sentence length and time served and how such disparity may affect criminal behavior. The research questions are as follows:

1. As the percentage of sentence served increases, the reported instances of rearrest, reconviction, resentence, and return to prison will decrease.

2. Percent of sentence served predicts recidivism with regard to reported instances of rearrest, reconviction, and resentence to prison.
3. The percentage of sentence served predicts above and beyond known predictors (age, sex, race, criminal history, drug use, etc.) of recidivism with regard to reported instances of rearrest, reconviction, and resentence to prison.

3.2. Quantitative Analysis

This study's main purpose is to determine if absence of certainty in time served has an effect on the recidivism of criminal offenders. Specifically, the quantitative analyses will help the researcher to determine if percent of time served has an effect on recidivism. The criminal justice system is based in deterrence, which is preventing crime through the threat of punishment. Deterrence relies on the threat of punishment to be effective, and the most commonly associated type of punishment is incarceration. The criminal justice system has increased the severity of punishment through the utilization of harsher, longer sentences. But incarceration may prove to be an ineffective instrument of deterrence if offenders only serve a small portion of their total sentence, thus indicating a lack of certainty in time served affects the rate of recidivism for criminal offenders.

Data for this study come from a sample of 38,624 prisoners released in 1994 from prisons in fifteen different states who were then tracked for three years after their release for four types of recidivism. The measures of recidivism tracked are rearrest, reconviction, resentence, and return to prison without a new sentence. The fifteen states were chosen because they were "large and diverse, collectively accounting for the majority of prisoners released in 1994" (Langan & Levin, 2002, p. 11). 302,309 prisoners were released from these fifteen states in 1994, and from

there 38,624 prisoners were randomly chosen separating each offender into one of thirteen categories of conviction offense that brought about their term of imprisonment (Langan & Levin, 2002). The data used comes from a data set collected by the U.S. Department of Justice's Bureau of Justice Statistics for a special report. The data set consists of mostly complete criminal histories for each offender and was chosen because it is the closest to a national study of recidivism in the United States (Bureau of Justice Statistics, 2002). The data set, therefore, facilitates a secondary analysis of recidivism statistics and was taken from the Inter-University Consortium for Political and Social Research (ICPSR) where it was archived (Bureau of Justice Statistics, 2002).

This study will analyze what effects, if any, sentence length and percent of that sentence served in prison have on the recidivism of criminal offenders and whether or not percent of sentence served predicts recidivism above and beyond the effect that the variables demographic characteristics, previous criminal history, and drug use have on the rate of recidivism for criminal offenders with the overlying hypothesis of the research being the lack of certainty in time served of the sentence received leads many offenders to recidivate. This study will be a statistical analysis of data collected by the U.S. Department of Justice's Bureau of Justice Statistics for prisoners released in 1994. Utilization of this data set will allow for a determination of whether a relationship exists between percent of time served and recidivism, to what extent this relationship exists without the influence of spurious variables and what can be done with these findings to reduce and even prevent future recidivism.

There are three types of analyses that pertain to the focus of this research. These analyses are a simple correlation, simple regression, and hierarchical linear regression. Each of these analyses will be repeated for each of the level of recidivism measurement: rearrest, reconviction,

resentence to prison, or return to prison and will be measured across all included offenders.

3.2.1. Preparing the Data Set

With such a large data set, a number of offenders are likely to have missing or incomplete information in some variables that are important to this research. Many variables have the option to enter a numerical value that indicates the information is 'Unknown', if there is not a known entry for a specific variable. For each step of the analyses (correlation, analysis of variance, regression, hierarchical linear regression), cases are selected to be included if, and only if, they do not have any value necessary for the analyses marked as 'Unknown'.

In addition to excluding cases with missing information, the main variable utilized in the analysis, PCTSRV, must be transformed into a new variable labeled PCTSRV2. Many entries for this variable report a numerical value greater than 100.00%. As stated in the codebook for the 1994 data set, PCTSRV corresponds with the variables TMSRV and SNTLN. SNTLN is either the sum of consecutive sentences or the longest of concurrent sentences. Since it is impossible to tell exactly why offender served greater than 100.00% of their sentence and to make the data more uniform for the intended analyses, any value over 100.00% and not coded as 'unknown' are recoded into PCTSRV2 as 100.00%. This step is also taken to prevent extreme outliers from skewing the data so drastically as to alter the results. All other values are copied into the new variables exactly as they were in the old variable. This step, therefore, makes all included observations in this variable able to be utilized for potential analyses.

3.2.2. Correlation

The first stage of the analysis is to complete correlations. This analysis echoes the

procedures employed by Langan & Levin (2002), and also Deschenes, Owen, & Crow (2007) who state that correlations are used “to examine the bivariate relationships between the probability of a new arrest and potential predictors of recidivism” (p. 17). This analysis determines how well the percentage of sentence served corresponds to the recorded instances of recidivism. This analysis is done by comparing percentage of sentence served and rearrest, percentage of sentence served and reconviction, and percentage of sentence served and resentence to prison¹. The results yielded tell whether percent of time served is a potential factor in the rates of recidivism for criminal offenders through analysis of their strength of association.

3.2.3. Simple Regression

The second stage of the analysis is to completion simple regressions. A simple regression allows the researcher to determine how well the percentage of time served can predict the levels of recidivism for each offender. This analysis shows whether or not a relationship exists between percentage of time served and the recidivism variables beyond what a simple correlation would show. This analysis is repeated for all three measures utilized in the 1994 recidivism study. These measures include percentage of sentence served and rearrest, percentage of sentence served and reconviction, and percentage of sentence served and resentence to prison.

¹ The first step in the analysis process is filtering the variable PCTSRV2 (the transformed variable of PCTSRV, Percent of time served for 1994 imprisonment) and each one of the recidivism analysis variables (REARR, RCNVCT, and RPRS) for variables that are coded as unknown. Doing so will allow for the analysis of only variables with reported instances of recidivism and a known percent of time served. In SPSS, all cases that are coded ‘unknown’ (99899899.88) in PCTSRV2 and ‘unknown’ (888) in REARR are excluded from the analyses. A correlation is then run between the variables PCTSRV2 and REARR. This process is repeated for the additional dependent variables of RCNVCT and RPRS. Cases that have ‘unknown’ values reported (888 for both RCNVCT and RPRS) are excluded from the analysis. Correlations are also run between PCTSRV2 and RCNVCT and between PCTSRV2 and RPRS.

3.2.4. Hierarchical Linear Regression

The third stage of the analysis is the completion of hierarchical linear regressions. The use of a hierarchical linear regression allows the researcher to remove, or control for, the influence of other variables. Research has shown demographic variables (such as age, sex, and race), drug use, and criminal history have a significant effect on instances of recidivism and their influence must be removed to be able to determine just how much of an influence the percent of sentence served actually has on recidivism. This type of analysis also allows the research to detect spurious relationships. Control variables are removed a total of three times, once in the analysis of percentage of sentence served and rearrest, once the analysis of percentage of sentence served and reconviction, and once in the analysis of percentage of sentence served and resentence to prison. These methods allow the researcher to analyze the rate of recidivism in relation to the time served of the actual sentence.

CHAPTER FOUR

RESULTS

Chapter four is a presentation of the statistical results for the study. The variables that were used for the study are presented first, followed by the results for the correlation, simple regression, and hierarchical linear regression analyses. The correlation results are reported first, starting with the descriptive statistics of the variables utilized and then the results for rearrest, reconviction, and then return to prison. The simple regression results are reported next, starting with the descriptive statistics of the variables utilized and then the results for rearrest, reconviction, and then return to prison. The hierarchical linear regression results are reported last, starting with the descriptive statistics of the variables utilized and then the results for rearrest, reconviction, and then return to prison. A summary of the results concludes the chapter.

4.1. Variables Used in the Study

There are several variables utilized in this research. The variables used in this study come from the 1994 data set *'Recidivism of Prisoners Released in 1994'* and represent a variety of concepts presented in the literature review. These variables will be used as independent and dependent variables in the current research and represent concepts outlined in the literature review. The variables PRIR, RELAGE, SEX1, RACE1, ETHNIC1, DRUGAB, SNTLN, TMSRV, and PCTSRV are considered independent variables in this study. REARR, RCNVCT, and RPRS are considered dependent variables in this research.

PRIR – Independent – The offender’s number of prior arrests.

RELAGE – Independent – The offender’s age at release. This is derived from knowing the offender’s birth date and release date.

SEX1 – Independent – The sex of the released prisoner.

RACE1 – Independent – The race of the released prisoner.

ETHNIC1 – Independent - The ethnicity of the released prisoner.

DRUGAB – Independent - Indicates whether the inmates was a drug abuser.

SNTLN – Independent - The offender’s sentence length for their 1994 imprisonment. It is either the sum of consecutive sentences or the longest of concurrent sentences.

TMSRV – Independent - Time Served for 1994 imprisonment. This is calculated by subtracted their admission date from their release date.

PCTSRV – Independent - The offender’s percent of sentence served for their 1994 imprisonment.

PCTSRV2 – Independent – The offender’s percent of sentence served for their 1994 imprisonment recoded from PCTSRV.

REARR – Dependent – The number of times the offender was rearrested in the three years following release from prison.

RCNVCT – Dependent – The number of times the prisoner was reconvicted in the three years following release from prison.

RPRS – Dependent – The offender’s number of resentences to prison in the three years following release from prison.

4.2. Correlation

The first research question argues that “as the percentage of sentence served increases, the reported instances of rearrest, reconviction, resentence, and return to prison will decrease”. A correlation was done for each one of the recidivism variables for rearrest, reconviction, and resentence to prison (REARR, RCNVCT, and RPRS respectively) and the percent of time served (PCTSRV2). Descriptive statistics are reported for the correlation analyses in table 1a.

4.2.1. Descriptive Statistics

There are 38,624 offenders included in the 1994 data set. Looking at Table 1a, after excluding cases that have an ‘unknown’ value listed in either number of rearrests (REARR) or percent of time served (PCTSRV2), the number of original subjects included in the analysis for percent of time served and number of rearrests is reduced by 20% ($N = 28,539$). Percent of time served ranged from .03 to 100 percent. The average percent of time (PCTSRV2) served for offenders included in this level of analysis is just below 40% percent of their sentence ($M = 38.49\%$) with a standard deviation of 23.28 ($SD = 23.28$). The number of rearrests ranges from 0 to 55 arrests in the three years following release from prison. Number of rearrests has a mean of 1.61 and a standard deviation of 2.26. The number of reconvictions ranges from 0 to 20 in the three years following release from prison. Number of reconvictions has a mean of 0.67 and a standard deviation of 1.18. The number of resentences to prison ranges from 0 to 7 in the three years following release from prison. The number of resentences to prison has a mean of 0.23 and a standard deviation of 0.55.

The results for the correlation between percent of time served (PCTSRV2) and number of rearrests (REARR), the results for the correlation between percent of time served (PCTSRV2)

and number of reconvictions (RCNVCT) and the results for the correlation between percent of time served (PCTSRV2) and number of resentences to prison (RPRS) are reported in table 1b.

4.2.2. Rearrest

Looking at Table 1b, the Pearson Correlation number (r) denotes the strength of association between two variables. The range of the Pearson Correlation coefficient is from -1 to 1, with 0 being no relationship and either 1 or -1 being the strongest relationship. The correlation between percent of time served (PCTSRV) and the number of rearrests (REARR) is .032 ($r = .032$), which indicates a weak to moderate relationship between the two variables. Squaring this value gives us the coefficient of determination (r^2), which represents the percent of variance overlap between percent of time served (PCTSRV2) and number of rearrests (REARR). Squaring .032 yields a value of .001 ($r^2 = .001$) and indicates the two variables share an extremely small amount of variance. The p value is less than .01 ($p < .001$), which indicates the relationship is statistically significant despite the relationship being as weak as it is and how little variance they actually share.

4.2.3. Reconviction

Looking at Table 1b, the Pearson Correlation (r) number denotes the strength of association between two variables. The correlation between percent of time served (PCTSRV) and the number of reconvictions (RCNVCT) is .046 ($r = .046$) and indicates a weak to moderate relationship between the two variables. Squaring this value gives us the correlation coefficient (r^2), which represents the percent of variance overlap between percent of time served (PCTSRV2) and number of reconvictions (RCNVCT). Squaring .046 yields a value of .002 ($r^2 =$

.002) and indicates these two variables share very little variance with one another. The p value is less than .01 ($p < .001$). The results are significant ($p < .001$), but it is hard to confidently reject the null hypothesis when the correlation's strength is so weak and the amount of variance they share is almost nonexistent.

4.2.4. Resentence to Prison

Looking at Table 1b, the Pearson correlation (r) denotes the strength of association between two variables. The correlation between percent of time served (PCTSRV) and (RPRS) is -0.015 ($r = -0.015$) and indicates a weak inverse relationship between these two variables. Squaring this value gives us the correlation coefficient (r^2), which represents the percent of variance overlap between percent of time served (PCTSRV2) and the number of resentences to prison (RPRS). Squaring -0.015 yields a value of $.0002$ ($r^2 = .000$) and indicates these two variables share a considerably small amount of variance. The results are statistically significant ($p < .001$), however. Even through the results support rejecting the null hypothesis, it is hard to confidently do so when the percent of variance overlap is less than 1 percent. This finding suggests that even though there may be a relationship between the independent variable, percent of time served (PCTSRV), and the dependent variable, number of resentences to prison (RPRS), the relationship does not seem to be meaningful.

4.3. Simple Regression

The second research question argues “the percentage of sentence served predicts recidivism with regard to reported instances of rearrest, reconviction, resentence, and return to prison”. A simple regression was done for each one of the recidivism variables for number of

rearrests, number of reconvictions, and number of resentences to prison (REARR, RCNVCT, and RPRS respectively) and the percent of time served variable (PCTSRV2). Descriptive statistics for the simple regression between percent of time served (PCTSRV2) and number of rearrests (REARR), number of reconvictions (RCNVCT), and number of resentences to prison (RPRS) are reported in Table 2a.

4.3.1. Descriptive Statistics

There are 38,624 offenders included in the 1994 data set. Looking at Table 1a, after excluding cases that have an 'unknown' value listed in either number of rearrests (REARR) or percent of time served (PCTSRV2), the number of subjects included in the analysis for percent of time served and number of rearrests from the original data set is reduced by 20% ($N = 28,539$). Percent of time served ranged from .03 to 100 percent. The average percent of time (PCTSRV2) served for offenders included in this level of analysis is just below 40% percent of their sentence ($M = 38.49\%$) with a standard deviation of 23.28 ($SD = 23.28$). The number of rearrests ranges from 0 to 55 arrests in the three years following release from prison. Number of rearrests has a mean of just over 1.5 ($M = 1.61$) and a standard deviation of 2.26. The number of reconvictions ranges from 0 to 20 in the three years following release from prison. Number of reconvictions has a mean of 0.67 and a standard deviation of 1.18. The number of resentences to prison ranges from 0 to 7 in the three years following release from prison. The number of resentences to prison has a mean of 0.23 and a standard deviation of 0.55. The results for the simple regression between percent of time served (PCTSRV2) and number of rearrests (REARR), number of reconvictions (RCNVCT), and number of resentences to prison (RPRS) are reported in Table 2b.

4.3.2. Rearrest

The correlation between percent of sentence served (PCTSRV2) and the number of rearrests (REARR) is weak ($r = .032$). The results are statistically significant ($p < .05$). However, since the correlation coefficient is less than one percent, this result suggests that though a very minute relationship may exist between the number of rearrests (REARR) and percent of time served (PCTSRV2), it may not be meaningful. The correlation (r) between percent of sentence served (PCTSRV2) and number of rearrests (REARR) is $.032$ ($r = .032$). The coefficient of determination is less than 1% at $.001$ ($r^2 = .001$). This result indicates a very weak relationship between percent of sentence served (PCTSRV2) and number of rearrests (REARR) even though it reaches statistical significance ($p < .001$) as they share a significantly minute amount of variance.

The unstandardized regression coefficient suggests that the number of rearrests increases by $.003$ for every increase in the percent of time served ($B = .003$). Since the unstandardized regression coefficient (B) is positive, any one-point increase in percent of time served (PCTSRV2) is accompanied by an increase in the number of rearrests (REARR) by $.003$. The coefficient of determination ($r^2 = .001$) indicates that less than 1% of the variance in the number of rearrests (REARR) can be accounted for by its linear relationship with percent of time served (PCTRV2). The analysis reaches statistical significance ($p < .001$) even though the coefficient of determination is extremely low. This value suggests that even though there is a minute relationship between percent of time served (PCTSRV2) and the number of rearrests (REARR) the relationship may not be meaningful enough to confidently reject the null hypothesis.

4.3.3. Reconviction

The correlation between percent of sentence served (PCTSRV2) and the number of rearrests (REARR) is moderate ($r = .046$). Even though this analysis reaches statistical significance ($p < .001$) it is hard to say there is a meaningful relationship between percent of sentence served (PCTSRV2) and number of rearrests (REARR) as the coefficient of determination is less than 1%. The correlation between percent of sentence served (PCTSRV2) and number of rearrests (REARR) is $.046$ ($R = .046$). The coefficient of determination is less than 1% ($r^2 = .002$). This coefficient of determination ($r^2 = .002$) indicates that less than 1% of the amount of reconvictions (RCNVCT) can be accounted for by their linear relationship with percent of time served (PCTSRV2). While this result does show that there seems to be a statistically significant ($p < .001$) relationship between percent of time served (PCTSRV2) and number of reconvictions (RCNVCT), the fact that less than 1% of the variance can be accounted for by this relationship suggests that the relationship itself may not be meaningful enough to confidently reject the null hypothesis. The unstandardized regression coefficient suggests that the number of reconvictions increases by $.002$ for every increase in the percent of time served ($B = .002$). Since the unstandardized regression coefficient (B) is positive and therefore any increase by one point in the percent of time served (PCTSRV2) is accompanied by an increase in number of rearrests (REARR) by $.002$.

4.3.4. Resentence to Prison

The correlation between percent of sentence served (PCTSRV2) and the number of resentences to prison (RPRS) is very weak ($r = -0.015$). The analysis reaches statistical significance ($p = .005$), which is less than the alpha of $.05$. However, even though the correlation

is statistically significant, the coefficient of determination ($r^2 = .000$) is so low that it suggests the relationship between percent of time served (PCTSRV2) and number of resentences to prison (RPRS) may not be meaningful. The correlation (R) between percent of sentence served (PCTSRV2) and number of resentences to prison (RPRS) is .015 ($R = .015$). The coefficient of determination is less than 1% ($r^2 = .000$). Even though this analysis reaches statistical significance, the very small relationship between the two variables suggests that the relationship is not meaningful enough to confidently reject the null hypothesis. Percent of time served does not seem to predict recidivism either, as indicated by the unstandardized regression coefficient (B). The unstandardized regression coefficient suggests that the number of resentences to prison (RPRS) increases by $< .001$ for every increase in the percent of time served (PCTSRV2). Since the unstandardized regression is neither positive nor negative ($B < .001$), any increase by one unit in percent of time served (PCTSRV2) can be accompanied by either an increase or decrease in the number of resentence to prison (PCTSRV2) of $< .001$.

4.4. Hierarchical Linear Regression²

The third research question argues “the percentage of sentence served predicts above and beyond known predictors (age, sex, race, criminal history, drug use, etc.) of recidivism with regard to reported instances of rearrest, reconviction, and resentence to prison”. A hierarchical linear regression was done for each one of the recidivism variables for rearrest, reconvictions, and resentence to prison (REARR, RCNVCT, and RPRS respectively) and percent of time served (PCTSRV2). Descriptive statistics for the hierarchical linear regression between percent of time served (PCTSRV2) and number of resentences to prison (RPRS) are reported in Table

² Collinearity statistics were yielded for each hierarchical linear regression analysis to determine whether the independent variables shared too much variance to be included in the analysis. Each statistic indicated collinearity is not an issue within any of the results.

3a.

4.4.1. Descriptive Statistics

There are 38,624 offenders included in the 1994 data set. Looking at Table 3a, after excluding cases that have an 'unknown' value listed in either number of rearrests (REARR), number of reconvictions (RCNVCT), number of resentences to prison (RPRS) or percent of time served (PCTSRV2), the number of subjects included in the analysis for percent of time served and number of rearrests from the original data set is roughly 17% of what it originally was ($N = 6,411$). Percent of time served ranged from .03 to 100 percent. The average percent of time (PCTSRV2) served for offenders included in this level of analysis is just over 40% percent of their sentence ($M = 40.20\%$) with a standard deviation of 24.54 ($SD = 24.54$). The number of rearrests ranges from 0 to 55 arrests in the three years following release from prison. Number of rearrests has a mean of almost 2 ($M = 1.81$) and a standard deviation of 2.51. The number of reconvictions ranges from 0 to 20 in the three years following release from prison. Number of reconvictions has a mean of 0.83 and a standard deviation of 1.32. The number of resentences to prison ranges from 0 to 7 in the three years following release from prison. The number of resentences to prison has a mean of 0.24 and a standard deviation of 0.54.

The other controlled independent variables reported significant ranges, means and standard deviations. Sex had a mean of 1.07 and a standard deviation of .26. Race had a mean of 1.55 and a standard deviation of .54. Ethnicity had a mean of 1.9 and a standard deviation of .30. The variable for drug abuse had a mean of 1.26 and a standard deviation of .44. The number of prior arrests had range of 0 to 98 in the three years following release from prison, a mean of 7.54 and a standard deviation of 8.06. Age ranges from 16 to roughly 85 years of age

with a mean of 32.7 while the standard deviation was 8.72. The range for sentence length was 12 to 1800 months in the three years following release from prison with an average sentence length of 73.12 while the standard deviation was 62.13. Time served in months ranges from .03 to 295.63 in the three years following release from prison with an average of 30.16 and a standard deviation of 32.50. The model summary for the hierarchical linear regression between percent of time served (PCTSRV2) and number of resentences to prison (RPRS) are reported in Table 3b.

4.4.2. Model Summary

Looking at Table 3b shows the model summary for the hierarchical linear regression analysis. For rearrests, the multiple correlation between the dependent variable (number of rearrests) and all of the independent variables (percent of time served, sex, race, ethnicity, drug abuse, number of prior arrests, age, sentence length, time served) is weak to moderate ($r = .380$). The multiple correlation for reconvictions is slightly lower ($r = .331$). The multiple correlation for the number of resentence to prison is the lowest and relatively weak ($r = .218$). The coefficient of determination for the number of rearrests indicates that all of the independent variables share almost 15% of the total variance ($r^2 = .145$). For the number of reconvictions, the coefficient of determination is slightly lower with 11% shared variance ($r^2 = .110$). The coefficient of determination for the number of resentences to prison shares just under 5% of variance with all of the independent variables ($r^2 = .048$). This finding leaves a significant amount of variance unaccounted for in each of the measures of rearrests, reconvictions, and resentences to prison. The Overall Model (ANOVA) results for the hierarchical linear regression between percent of time served (PCTSRV2) and number of resentences to prison (RPRS) are

reported in the note of Table 3b.

4.4.3. Overall Model (Analysis of Variance)

Table 3b shows the analysis of variance results yielded with the hierarchical linear regression analysis. An analysis of variance gives “information about the significance of the regression model, considering the full overlap in variance” (Ross & Shannon, 2008, p. 173). For rearrests, an *F* ratio of 120.218 has a corresponding p-value of $< .001$, which indicates that, when the null hypothesis cannot be rejected, the results will occur .000 times out of 100. For reconvictions, an *F* ratio of 87.573 has a corresponding p-value of $< .001$, which indicates that, when the null hypothesis cannot be rejected, the results will occur .000 times out of 100. For resentence to prison, an *F* ratio of 35.646 has a corresponding p-value of $< .001$, which indicates that, when the null hypothesis cannot be rejected, the results will occur .000 times out of 100. Each of these results for the measures of recidivism indicate that there is a relationship between the dependent variables (rearrests, reconvictions, resences to prison) and the independent variables (percent of time served, sex, race, ethnicity, drug abuse, number of prior arrests, age, sentence length, time served). The results for the hierarchical linear regression between percent of time served (PCTSRV2) and the number of rearrests (REARR), the number of reconvictions (RCNVCT), and the number of resences to prison (RPRS) are reported in the note of Table 3b.

4.4.4. Rearrest

In Table 3b, the standardized regression coefficients (Beta) show just how much each independent variable predicts the dependent variable and therefore how significant each

independent variable is. The beta weights varied greatly. The number of prior arrests (PRIR) accounted for the most variance with a beta weight of .351 ($p < .001$). It therefore had the greatest effect predicting the number of rearrests than the rest of the independent variables. The variable for age (RELAGE) accounted for a significant amount of the variance with a Beta of -0.211 ($p < .001$). The variable for race (RACE1) accounted for a significant amount of the variance with a beta weight of .087 ($p < .001$). The variable for drug abuse (DRUGAB) accounted for a significant amount of the variance with a beta weight of .033 ($p < .001$). Sentence length (SNTLN) accounted for an amount of variance not statistically significant with a Beta of -.029 ($p = .114$). Ethnicity (ETHNIC1) accounted for a significant amount of the variance with a beta weight of .025 ($p < .001$). Time served (TMSRV) accounted for an amount of variance not considered statistically significant with beta weight of .018 ($p = .437$). Percent of time served (PCTSRV2) accounted for an amount of variance considered not statistically significant with a beta weight of -.018 ($p = .334$). Sex (SEX1) accounted for the least amount of variance and is considered no statistically significant with a beta weight of .001 ($p = .334$). The only variables that were statistically significant were race, ethnicity, drug abuse, number of prior arrests, and age. These results do not support the researcher's hypothesis that percent of time served (PCTSRV2) predicts above and beyond other known predictors of recidivism as its associated beta weight is only higher than one other independent variable, the variable for sex (SEX1).

4.4.5. Reconviction

In Table 3b, the standardized beta coefficients (Beta) show just how much each independent variable predicts the dependent variable and therefore how significant each

independent variable is. The beta weights varied greatly. The number of prior arrests (PRIR) has a beta weight of .285. It therefore had the greatest effect predicting the number of rearrests than the rest of the independent variables. The variable for age (RELAGE) accounted for a significant amount of the variance with a beta of $-.168$ ($p < .001$). The variable for race (RACE1) accounted for a significant amount of variance with a beta of $.101$ ($p < .001$). The variable for percent of time served (PCTSRV2) accounted for a significant amount of variance with a beta of $.080$ ($p < .001$). Time served (TMSRV) accounted for a significant amount of variance with a beta of $-.066$ ($p < .05$). Ethnicity (ETHNIC1) accounted for a significant amount of variance with a beta of $-.026$ ($p = .035$). Sentence length (SNTLN) accounted for an amount of variance considered not statistically significant with a Beta of $.008$ ($p = .665$). Sex (SEX1) accounted for an amount of variance considered not statistically significant with a beta weight of $-.008$ ($p < .524$). Drug abuse (DRUGAB) accounted for the smallest amount of variance with a beta of $-.002$ ($p = .883$). The only variables that were statistically significant in predicting reconvictions are percent of time served, race, ethnicity, number of prior arrests, age, and time served. These results do not support the researcher's hypothesis that percent of time served (PCTSRV2) predicts above and beyond other known predictors of recidivism, but percent of time served does predict above and beyond the independent variables for time served, ethnicity, sentence length, sex, and drug abuse.

4.4.6. Resentence to Prison

In Table 3b, the standardized regression coefficients (Beta) show just how much each independent variable predicts the dependent variable and therefore how significant each independent variable is. The beta weights varied greatly. The number of prior arrests (PRIR)

has a beta weight of .171 ($p < .001$). It therefore had the greatest effect predicting the number of resentences to prison than the other independent variables. The variable for age (RELAGE) accounted for a significant amount of variance with a beta weight of -.142 ($p < .001$). The variable for race (RACE1) accounted for a significant amount of variance with a beta weight of .063 ($p < .001$). The variable for ethnicity (ETHNIC1) accounted for a significant amount of variance with a beta weight of -.030 ($p < .005$). Percent of time served (PCTSRV2) accounted for an amount of variance considered not statistically significant with a beta weight of -.034 ($p = .084$). Sentence length (SNTLN) came in sixth with a beta weight of -.023 ($p = .247$). Sex (SEX1) accounted for a significant amount of variance with a beta weight of -.023 ($p = .063$). Drug abuse (DRUGAB) accounted for an amount of variance considered not statistically significant with a beta weight of .004 ($p = .767$). Time served (TMSRV) accounted for an amount of variance considered not statistically significant with a beta weight of .003 ($p = .907$). The only variables that were statistically significant were race, ethnicity, number of prior arrests, age, and sex. These results do not support the researcher's hypothesis that percent of time served (PCTSRV2) predicts above and beyond other known predictors of recidivism, but percent of time served does predict above and beyond the independent variables for sentence length, drug abuse, time served.

4.5. Summary of the Results

A correlation, regression, and hierarchical linear regression were run between the variables percent of time served (PCTSRV2) and number of rearrests (REARR) and between percent of time served and number of convictions (RCNVCT), and percent of time served (PCTSRV2) and number of resentences to prison (RPRS). For the correlation analysis, the

results were statistically significant despite moderate correlations between percent of time served and rearrests and percent of time served and reconvictions and a weak correlation between percent of time served and number of resentence to prison. The simple regression indicated that the variance shared between percent of time served and the measures of recidivism (rearrest, reconviction, resentence to prison) was less than 1% for each level of the analysis but still reached statistical significance. The hierarchical linear regression analysis between percent of time served (PCTSRV2) and the independent variables of percent of time served, sex, race, ethnicity, drug abuse, number of prior arrests, age, sentence length, and time served yielded significant results. Only the number of reconvictions reached statistical significance with regard to percent of time served, while race, ethnicity, number of prior arrests, and age were statistically significant across all measures of recidivism. The levels of significance are controversial as they exist as a function of the sample size of the population included in the analysis.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1. Results Summary

This study is a quantitative examination of whether certainty in time served is related to levels of recidivism, specifically analyzing whether increase in time served predicts lower numbers of recidivism. Previous studies of recidivism were examined to determine what additional independent variables had a definite impact on recidivism to control for these variables in the analyses.

Based on the research results, it is hard to say that lack of certainty in time served has any effect on recidivism even though the results are statistically significant. The results of this research show that the bivariate relationships between percent of time served and measures of recidivism are statistically significant. The results also show that variance shared by percent of time served and measures of recidivism are also statistically significant through the regression analyses. Finally, the results of the hierarchical regression show that, though measures of recidivism share a statistically significant amount of variance with percent of time served, it does not consistently share more than measures of recidivism share with other known predictors of recidivism such as number of prior arrests and age.

5.2. Correlation

The research question associated with the correlation analyses is “As the percentage of time served increases, the reported instances of rearrest, reconviction, resentence, and return to prison will decrease”. The results of the analyses yielded interesting findings, both expected and unexpected.

As expected, the correlation results indicate that the relationship between percent of time served and measures of recidivism (analyzed as number of rearrests, number of reconvictions, and number of resentences to prison) are statistically significant. This suggests that a significant relationship exists between the two variables. In addition, the correlation coefficient increases with the transition from being rearrested to being reconvicted. However, the researcher expected that the Pearson Correlation would increase from rearrest to reconviction to resentence to prison but this was not the case. The unexpected results are discussed next.

An interesting and unexpected finding of the analyses is, though the correlation coefficient is statistically significant for all three measures of recidivism (number of rearrests, number of reconvictions, and number of resentences to prison) and increases as one escalates from rearrest to reconviction, the correlation coefficient for number of resentences to prison is significantly weaker than it is for number of rearrests or number of reconvictions.

Another interesting result is the correlation coefficients in Table 1b are positive for rearrest and reconviction yet negative for number of resentences to prison. According to Ross & Shannon (2008), “when a correlation is negative, the high values for one variable correspond to (or are associated with) low values for the second, and the lower values for the first variable correspond to higher values on the second” (p. 144). The positive correlations associated with rearrests and reconvictions go against the researcher’s hypothesis, which postulates that as percent of time served increases, reported measures of recidivism will decrease while still

reaching statistical significance. This finding suggests that higher numbers of rearrest and reconviction correspond more with a higher percent of time served.

In addition to this point, the correlation coefficients are very weak for each measure of recidivism (number of rearrests, number of reconvictions, and number of resentences to prison) even though they reach statistical significance. Having such low correlation coefficients (each corresponding with a coefficient of determination that suggests the two variables share less than one percent of variance based on their relationship to one another) has a lot to do with the immense size of the data set, as such a large number of cases makes it very easy to reach statistical significance. This point is a limitation of the current study and is discussed in the section dedicated to research limitations.

5.2.1. Discussion

These unexpected results can be explained in a variety of ways based on the findings of the literature review. To start, the criminal justice system is based on a retributive ideology, punishing those who offend and utilizing the threat of punishment to deter potential offenders. The results of this study show that as offenders serve more of their sentence they go on to be rearrested and reconvicted more often. Wright, Caspi, Moffitt, & Paternoster (2004) found in their study that persons who continue to commit crime often view themselves as criminals. Perhaps the positive correlations between percent of time served and the number of rearrests and reconvictions suggest that, despite the criminal justice system being so harsh on criminal offenders, offenders go on to commit additional crimes because they see themselves as criminals and only associate themselves with ideals that go against the current criminal justice system. In addition to this point, most offenders are concentrated in areas that are characterized by high

levels of social disorganization and therefore have a more notable need for formal social controls. These individuals who spend more time in prison may not have the appropriate informal social controls to keep them from breaking the law when they are released from prison.

The correlations between higher instances of rearrest and recidivism and higher percentages of time served may be associated with media portrayal and public opinion. Since the media tends to sensationalize crime and portray criminals in a stereotypical way, the policies of our criminal justice system are affected in a way that reflects the growing fear of crime. For the offenders who spend a higher percentage of their sentence in prison, they may be subject to agents of the correctional institutions that focus their crime prevention efforts on those who are already labeled offenders, making offenders who have spent more time in prison (and more likely well known to law enforcement officials) more likely to come in contact with the criminal justice system again.

The findings of the literature review outlined the economics associated with rational choice theory and how offenders seek the actions that yield the most utility. The criminal justice system is intended to make the costs associated with criminal activity exceed the benefits. The correlation findings, however, do not reflect with this perspective. The research results indicate that spending more time in prison is associated with higher rates of rearrest and reconviction. Messner and Rosenfeld (2007) point out that American culture is focused on money as an indicator of success, and yet spending time in prison limits the opportunities for success. The limitations created by spending longer periods of time in prison could explain why offenders still go on to be rearrested and reconvicted as offenders choose criminal endeavors as a way to achieve the status associated with success which would be blocked or limited by conventional, legitimate means.

With regard to certainty and severity of punishment, the association between spending more time in prison and increased instances of recidivism (through rearrest and reconviction) would indicate that severity may not be an effective deterrent if, even though offenders serve more of their sentence, they still go on to be rearrested and reconvicted. The results suggest, however, that certainty may also not be a factor as spending more time of their sentence in prison does not deter future contact with the criminal justice system.

5.3. Simple Regression

A simple regression analysis is used to “predict scores on some variable based on the individual scores from another variable” (Ross & Shannon, 2008, p. 153). The research question associated with this analysis stipulates that “The percentage of sentence served predicts recidivism with regard to reported instance of rearrest, reconviction, resentence, and return to prison”. The results of the analysis were interesting and yielded both expected and unexpected results.

A simple regression basically answers the question of “Does X predict Y?”. The expected results for this analysis were that percent of time served (the independent variable) would predict the measures of recidivism utilized in this study, specifically the number of rearrests, reconvictions, and resentences to prison. As expected, all the results are statistically significant (indicated in Table 2b). The correlations remained the same as they did in the correlation analyses, as did the coefficients of determination. The variable of percent of time served does predict recidivism, but in ways that differ from what the researcher expected.

Based on the findings of the literature review, the most interesting and unexpected finding associated with this analysis concerns the unstandardized regression coefficient. With

regard to the number of rearrests, the unstandardized regression coefficient of 0.003 indicates that the number of rearrests increases by 0.003 with each point of increase in the percent of time served. The unstandardized regression coefficient for number of reconvictions indicates that the number of reconvictions increases by 0.002 for every point of increase in the percent of time served. In these cases percent of time served does predict number of rearrests and number of reconvictions, but the results are counter to what the researcher expected. With regard to number of resentences to prison, the unstandardized regression coefficient associated with percent of time served and number of resentences to prison indicates that percent of time served does not predict this measure of recidivism with an unstandardized regression coefficient of 0.000. These results are consistent with the reported retributive nature of the criminal justice system, punishing those who reoffend and seem to ignore the warning put out by the criminal justice system.

5.3.1. Discussion

Increases in percent of time served are associated with increases in number of rearrests and number of reconvictions. This finding is easily explained as those who are labeled offenders are more likely to be rearrested and reconvicted because of the nature of our criminal justice system. The retributive nature of our sentencing policies are designed to punish those who break the law and punish severely those who do not learn their lesson the first time they come in contact with the criminal justice system. This practice is especially true for offenders who live in areas characterized by significant social disorganization and heightened presence of agents of formal social control. The media images associated with offenders, recidivists especially, affect the way in which penal policies are designed, enacted, and enforced. Not only does the media

affect the public's perception of crime and the criminal justice system, it promotes continued reoffending through negative representation of the criminal justice system and erosion of social controls just as Reiner (2007) stated.

5.4. Hierarchical Linear Regression

In addition to statistically significant correlation coefficients, the hierarchical linear regression presents expected results. In accordance with the findings of the literature review, criminal history (analyzed as the number of prior arrests) and age (a measure of demographic characteristics) are consistently shown as the as statistically significant predictors of instances of recidivism (measured as number of rearrests, number of reconvictions, and number of resentences to prison). Race and ethnicity are also found to be statistically significant in predicting measures of recidivism, which is in line with what the literature review has covered regarding recidivism. As expected, percent of time served is found to be statistically significant, but only in predicting number of reconvictions above and beyond sex, ethnicity, drug abuse, sentence length, and time served. The hierarchical linear regression is the most important analysis for this study and also yielded some surprising and unexpected results.

The hierarchical linear regression analysis presented unexpected results. Percent of time served is found not to be statistically significant in predicting the number of rearrests or number of resentences to prison above and beyond known predictors of recidivism. This finding goes against the researcher's hypothesis that percent of time served (certainty that an offender will serve a significant amount of the sentence they receive) is an important factor in preventing recidivism. It is surprising that drug abuse is only statistically significant in predicting the number of rearrests but not the number of reconvictions or number of resentences to prison.

Perhaps most importantly, however, is the unexpected finding that sentence length is not statistically significant in any measure of recidivism, nor is time served in prison. Sex, drug abuse, and sentence length are not statistically significant in predicting the number of reconvictions, which goes against the findings of the literature review.

Overall, percent of time served was only statistically significant in predicting the number of reconvictions over other known predictors of recidivism. Sex is not statistically significant in predicting any measure of recidivism over other known predictors of recidivism. Race is also statistically significant in predicting every measure of recidivism above and beyond known predictors of recidivism. History of drug abuse was found to be only statistically significant in predicting the number of rearrests above and beyond other known predictors of recidivism, but was not found to be so in predicting number of reconvictions or number of resentences to prison. The most surprising finding is that sentence length is not statistically significant in predicting any measure of recidivism, while time served is only statistically significant in predicting number of reconvictions over other known predictors of recidivism.

5.4.1. Discussion

The results show that many social processes do act upon an individual who is involved in crime, as evidenced by this study's results in the hierarchical regression analyses. A variety of factors showed consistent relationships that were much more significant than just the relationship between percent of time served and number or rearrests, reconvictions, and/or resentences to prison. The findings of this research show that many of the offenders included in the analysis were already recidivists to begin with, having extensive criminal histories. Extensive criminal histories show that informal social controls and norms have already failed, and perhaps to a

degree formal social controls and norms have too. However, the relationship shared by number of prior arrests and instances of recidivism and age and recidivism show that formal, external social controls have failed as well with number of prior arrests having a consistently significant effect on recidivism for offenders who are released from prison.

The sheer number of offenders who are recidivists shows that many of these individuals will continue to reoffend despite the consequences. If number of prior arrests is much more statistically significant in predicting instances of recidivism, perhaps the media's negative portrayal of the criminal justice system also affects their participation in criminal activity. Therefore not only does the media affect the public's perception of crime and the criminal justice system, it promotes continued reoffending through negative representation of the criminal justice system and erosion of social controls (Reiner 2007). Much of the public's opinions, however, are misled or uninformed based on a variety of sources such as the media. The reality of this fact is disturbing when one considers just how much public opinion affects the policy building of our justice system. The results of the research point to a consistent relationship between number of prior arrests and measures of recidivism, which support the findings in the literature related to recidivism eroding faith in the justice system. The research results show that the average sentence length for offenders (in months in the hierarchical regression analyses) is 73 months. Based on the results of the hierarchical regression, offenders only served 40 percent of their total sentences. This finding means an offender sentenced to 6 years in prison is released, on average, after serving 2.5 years. While sentencing does seem to be harsher, the amount of time they served does not reflect the severity of punishment they receive.

The literature review shows an affinity for longer sentences as punishment for offenders, but the average amount of time served is between 30 and 40 percent of the sentence an offender

receives. The results of the research suggest that longer sentences do not necessarily deter offenders from future criminal activity after contact with the criminal justice system. The results of the hierarchical linear regression suggest that sentence length is not statistically significant while the percent of time served is statistically significant in some measures of recidivism. This finding suggests that certainty of punishment may be more important than severity alone. It is hard to justify longer sentences, however, if individuals are not likely to commit additional crime when released from prison. While the data that was collected for the data set comes before truth-in-sentencing became a popular sentencing model, it does show that certainty in time served of sentence received is important to the punishment of a criminal offender. In all three hierarchical linear regression models, percent of time served was statistically significant in prediction measures of recidivism even though these predictions were not as significant as other known predictors of recidivism.

Recidivism undermines the effectiveness of the criminal justice system and promotes harsher punishment policies. The results show that many of the offenders in the study were recidivists with an active history of criminal activity and represent a variety of demographic characteristics. The results are interesting in that variables the literature defined as significant in predicting recidivism are found to be not statistically significant in the hierarchical linear regression analyses. Drug abuse was only significant in predicting the number of rearrests. Perhaps this result is related to, according to Kleiman (2009), “drug laws and their enforcement make illicit drugs more expensive...[and] those higher prices may increase, rather than decrea[e], nondrug crime” as many criminal have significant substance abuse problems (p. 150). This criminogenic effect has much to do with the fact that drug dealers can be replaced as “taking drug dealers off the streets does not directly prevent drug selling” (p. 155). Sentence length was

not significant in any measure of recidivism, time served was only significant in the number of reconvictions, and sex was not significant in any measure of recidivism. Sentence length was found to account for very little variance in each measure of recidivism and not predict recidivism on a statistically significant level. This result suggests that perhaps the retributive nature of the criminal justice system is not effective, and perhaps the utilization of incarceration as an instrument of deterrence is also not effective or efficient as more time spent in prison is associated with higher levels of recidivism. This suggestion echoes Kleiman (2009) who suggests high rates of incarceration can have a criminogenic effect as an instrument of deterrence, especially if “those [offenders] who are released earlier are more criminally active than those [offenders] who replace them” (p. 95).

Rational choice theory stipulates that offenders see the benefits outweigh the costs of criminal behavior. The number of offenders who have established criminal histories shows that many offenders reoffend despite contact with the criminal justice system. The statistical significance of percent of time served in relation to sentence length not being statistically significant suggests that the current practice of deterrence is ineffective as the threat of punishment (longer sentences) does not seem to deter offenders from repeating their criminal ways. Just as Shover & Copes (2010) state, “effective deterrence requires that the message get through to potential offenders” (p. 143). It is important to find ways which communicate the fear necessary for deterrence to work. Grasmick & Bryjack (1980) state that certainty influences people, but only if severity of punishment is also a factor. Sentence length is not statistically significant in predicting recidivism in any of the hierarchical regression analyses, while percent of time served is only statistically significant in predicting number of reconvictions to prison. This finding suggests that certainty of time served matters while sentence length does not, which

does not support the findings of previous research and suggests that though the deterrence perspective utilizes longer sentences as punishment and threat of punishment to deter future crime, they are not the most effective weapon in combating recidivism.

5.5. Assumptions and Limitations in the Research

The assumptions of the research corresponded with the statistical analyses employed to analyze the data and answer the research questions. With regard to the analyses utilized in this research, the relationships between the independent variable (percent of time served) and the dependent variables (rearrest, reconviction, and resentence to prison) are linear and not curvilinear and that these variables are bivariately normally distributed. The primary limitation in this research relates to measurement of recidivism and sample size. With regard to recidivism, the administrative data that were utilized for this research “measure[s] the post-prison arrest rate, not necessarily the crime-commission rate” (Chen & Shapiro, 2007, p. 9). This research addresses validity and reliability through the utilization of direct measures, which is a data set that was previously collected by separate researchers. A possible primary limitation of this research is the range of the data through the exclusion of missing values because the resulting range of the variables could have an effect on the results in that the results are skewed significantly in one way or the other. In addition, other variables that were not used in the study may predict recidivism on a statistically significant level. The amount of variance unaccounted for in the study suggests that other variables not outlined in the literature review may be significant in predicting recidivism. The utilization of this data set, however, is the study’s primary limitation as there is no way to know whether or not the initial researchers addressed validity or reliability when they initially collected all of the data. The size of the data set is

limiting, and the power of the number of offenders included makes it much easier to reach statistical significance.

5.6. Suggestions for Future Research

For future research, utilizing the data set on a smaller scale is suggested. That is, randomly sampling from the 38,614 cases that are in the data set's population. This practice would reduce the power of the data set and make it more difficult to reject the null hypothesis. To expand upon this research, utilizing a technique called 'bootstrapping' is recommended, which involves repeatedly utilizing random samples from the population of the data set and analyzing them to determine how variables are related to one another on a broad scale. In addition, based on the findings of Deschenes, Owen, and Crow (2007), conducting additional analyses with particular attention to gendered differences may help understand the intricacies of recidivism, deterrence, and rational choice on a more thorough level.

5.7. Future Implications

Though the results do not highlight any particularly significant deterrent effect of percent of time served on recidivism, assuming that no relationship exists between an offender's imposed sentence and the actual percent of sentence served would be foolish. This research adds to the growing body of knowledge on the topic of criminal recidivism and shows that percent of time served is a potentially significant factor when it comes to recidivism, but in tandem with other factors connected to recidivism. No one factor is solely a predictor of potential recidivism for offenders, it is indeed a combination of variables that increases the risk they pose to reoffend when released from prison. Further investigation of the link these factors share would benefit

many and potentially save our criminal justice system a large amount of money.

5.8. Conclusion

This study provides a quantitative analysis of factors related to recidivism, specifically seeking to determine whether or not percent of time served has a notable effect on recidivism (paying particular attention to whether higher percentages of time served are associated with lower levels of recidivism). A correlation, simple regression, and hierarchical linear regression were conducted to address the research questions. The number of offenders who have established criminal histories shows that many offenders reoffend despite contact with the criminal justice system. The statistical significance of percent of time served in relation to sentence length not being statistically significant suggests that the current practice of deterrence is ineffective as the threat of punishment (longer sentences) does not seem to deter offenders from repeating their criminal ways.

The majority of the findings point to longer percentages of sentence served being associated with higher levels of recidivism. These results point to our current justice system model and sentencing policies specifically targeting recidivists as the recipients of harsher punishment. It seems however, based on American culture's fascination with money as an indication of monetary success and the limitations placed on offenders who are released from prison, that our criminal justice system both punishes repeat offenders harshly and pushes them to continue offending by not preparing them for the transition back to the community. In a sense, recidivists are destined for failure based on our current criminal justice model. Harsher punishments do not deter and our society places the burden on the offender to conform despite the lack of assistance given to offenders when they are placed back into their communities (often

areas marked by rampant social disorganization). Shover & Copes (2010) state that “policy advocates ignore the theoretically obvious: Offenders’ behavior can be changed also by increasing their legitimate opportunities” (p. 145). It seems our system sets up offenders to fail, putting recidivists through a vicious cycle that specifically targets criminals and limits their ability to function in society.

Finally, an abundance of the variance in each measure of recidivism is unaccounted, meaning other factors are affecting the recidivism of criminal offenders when they are released from prison. Recidivism is a phenomenon that is a conglomeration of variables. More research needs to investigate and discern what factors outside of the variables included in this study may affect offenders in such a way that they continue to offend. In conclusion, the results point to incarceration being an ineffective instrument of deterrence. The increase in the numbers of reconviction after offenders serve longer sentences in prison disagrees with the amount of literature dedicated to the uses of severity in sentencing as an effective way to combat recidivism and suggest that, as the predominant practice of our criminal justice system, longer sentences are unsuccessful. While percent of time served may have some effect on predicting recidivism, the situational aspects for every offender differ and therefore must be taken into account in order to truly deter future offending.

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APPENDIX

Tables

Correlation
Table 1a

Descriptive Statistics for Correlation Analysis Between Number of Rearrests, Number of Reconvictions, Number of Resentences to Prison, and Percent of Time Served

	<u>Independent</u>	<u>Dependent</u>		
<u>Statistic</u>	<u>% of Time Served</u>	<u>Rearrests</u>	<u>Reconvictions</u>	<u>Resentences to Prison</u>
Mean	38.4866	1.61	0.67	0.23
SD	23.2835	2.26	1.18	0.55

Note. N = 28,539

Table 1b

Results for Correlation Between Number of Rearrests, Number of Reconvictions, Number of Resentences to Prison, and Percent of Time Served

Statistic	Rearrests	Reconvictions	Resentence to Prison
Pearson Correlation (r)	0.032	0.046	-0.015
Coefficient of Determination (r^2)	0.001	0.002	0.000
Significance (p)	0.000	0.000	0.005

Note. Pearson Correlations report results for correlations between number of Rearrests and percent of time served, number of reconvictions and percent of time served, and number of resentences to prison and percent of time served.

1-tailed.

Simple Regression
 Table 2a

Descriptive Statistics for Simple Regression Analysis Between Number of Rearrests, Number of Reconvictions, Number of Resentences to Prison, and Percent of Time Served

	Independent	Dependent		
Statistic	% of Time Served	Rearrests	Reconvictions	Resentences to Prison
Mean (M)	38.4866	1.61	0.67	0.23
SD (SD)	23.2835	2.26	1.18	0.55

Note. N = 28,539

Table 2b

Results for Simple Regression Between Number of Rearrests, Number of Reconvictions, Number of Resentences to Prison, and Percent of Time Served

Statistic	Rearrests	Reconvictions	Resentence to Prison
Pearson Correlation (R)	0.032	0.046	-0.015
Coefficient of Determination (R^2)	0.001	0.002	0.000
Unstandardized (B)	0.003	0.002	0.000
Significance (p)	0.000	0.000	0.011

Note. Pearson Correlations report results for correlations between number of Rearrests and percent of time served, number of reconvictions and percent of time served, and number of resentences to prison and percent of time served.

Hierarchical Linear Regression
Table 3a

Descriptive Statistics for Hierarchical Linear Regression Analysis Between Number of Rearrests, Number of Reconvictions, Number of Resentences to Prison, and Percent of Time Served

Variable	Statistic	
	Mean	Standard Deviation
Dependent		
Rearrests	01.81	02.51
Reconvictions	00.83	01.32
Resentences to Prison	00.24	00.54
Independent		
Percent of Time Served	40.20	24.54
Sex	01.07	00.26
Race	01.55	00.54
Ethnicity	01.90	00.30
Drug Abuser	01.26	00.44
Number of Prior Arrests	07.54	08.06
Age	32.70	08.72
Sentence Length	73.14	62.15
Time Served	30.16	32.50

Note. N = 6,411; Mean sentence length and time served are measured in months. Mean sex of 1.07 corresponds with mostly male offenders. Mean race of 1.55 indicates a roughly even number of African American and Caucasian offenders. Mean ethnicity of 1.90 corresponds with mostly nonhispanic offenders. Mean drug abuse of 1.26 indicates most offenders had a previously recorded drug problem.

Table 3b

Model Summary, Analysis of Variance, and Statistical Results for Hierarchical Linear Regression Analysis Between Number of Rearrests, Number of Reconvictions, Number of Resentences to Prison, and Percent of Time Served

	<u>Rearrests</u>	<u>Reconvictions</u>	<u>Resentences to Prison</u>
Variable	Beta	Beta	Beta
Percent of Time Served	-0.018	0.080*	-0.034
Sex	0.001	-0.008	-0.023
Race	0.087***	0.101***	0.063***
Ethnicity	-0.025*	-0.026*	-0.030*
Drug Abuser	0.033**	-0.002	0.004
Number of Prior Arrests	0.351***	0.285***	0.171***
Age	-0.211***	-0.168***	-0.142***
Sentence Length	-0.029	0.008	-0.023
Time Served	0.018	-0.066**	0.003

Note. N = 6,411. Betas marked with a single asterisk (*) are significant $\alpha < .05$. Betas marked with two asterisks (**) are significant $\alpha < .01$. Betas marked with three asterisks (***) are significant $\alpha < .001$. Rearrests are statistically significant ($F = 120.218, p = .000$) with a multiple correlation of .38 ($r = .380$), and r^2 of .145 ($r^2 = .145$) and r^2 change of .0 ($r^2_{change} = .000$). Reconvictions are statistically significant ($F = 87.573, p = .000$) with a multiple correlation of .331 ($r = .331$), and r^2 of .110 ($r^2 = .110$) and r^2 change of .003 ($r^2_{change} = .003$). Resentences to Prison are statistically significant ($F = 35.646, p = .000$) with a multiple correlation of .218 ($r = .218$), and r^2 of .48 ($r^2 = .144$) and r^2 change of .0 ($r^2_{change} = .000$).