

**Examining the Construct of Prison Adjustment**

by

Michael P. Harrington

A DISSERTATION

Presented to the Faculty of

The Graduate College at the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Doctor of Philosophy

Major: Criminal Justice

Under the Supervision of Dr. Robbin Ogle

Omaha, Nebraska

February 2012

Supervisory Committee:

Dr. Lisa Sample-University of Nebraska at Omaha  
Dr. William Wakefield-University of Nebraska at Omaha  
Dr. Mario Scalora- University of Nebraska at Lincoln

UMI Number: 3502644

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent on the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI 3502644

Copyright 2012 by ProQuest LLC.

All rights reserved. This edition of the work is protected against unauthorized copying under Title 17, United States Code.



ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 - 1346

## **ABSTRACT**

### **EXAMINING THE CONSTRUCT OF PRISON ADJUSTMENT**

Michael P. Harrington

University of Nebraska at Omaha, 2012

Advisor: Dr. Robbin Ogle

Prior research examining how inmates adjust to their prison environment has utilized a variety of measures to quantify individual adjustment. The most often used measure has been the prison misconduct report. This research introduces a new construct to further understand prison adjustment. Utilizing a sample of inmates from the Midwestern State Department of Corrections, this research examines prison isolation as a measure of maladjustment. Results include the use of misconduct reports to further understand the use of isolation. Policy implications and suggestions for future research are discussed.

Keywords: prison adjustment, solitary confinement, prison misconduct, segregation

## ACKNOWLEDGMENTS

This dissertation marks not only the completion of a degree, but also the beginning of a new career. Many people have contributed to my success as a correctional administrator. That success has strongly influenced me in the pursuit of a PhD and a career as a criminal justice scholar. To properly thank those from the first career to the second, would involve numerous pages. In the interest of brevity, I will limit the acknowledgments to those that assisted me in the completion of the degree and the start of an academic career.

First and most importantly, I would like to thank Dr. Robbin Ogle, the chair of my dissertation committee. From my beginning at UNO, her inspiration to pursue this study along with furthering my interest in corrections and gender, has energized my work. Her pragmatic approach to this research has been invaluable. When we first met to discuss the topic and outline the strategy, she made a statement that has echoed in my head: “Michael, you are an expert on this subject. Now you need to write like it”. In addition to this inspiration, I must commend Dr. Ogle for her patience in tracking me across the country, accessibility, and assistance with finding new jobs.

Second, I would like to thank the members of my dissertation committee; Dr. Lisa Sample, Dr. Bill Wakefield, and Dr. Mario Scalora. Dr. Sample’s willingness to step into this project and offer direct, concise, and constructive feedback has been essential to the completion. In addition, her sense of humor and down-to-earth advice about being a graduate student has remained with me after leaving UNO. Dr. Bill Wakefield, who throughout the four years at UNO and the years after, has been a mentor and advocate for me. I can never properly appreciate or acknowledge his accessibility, generosity, and willingness to contribute to this project at a late stage. Lastly, I would like to than Dr. Mario

Scalora of the University of Nebraska-Lincoln. Dr. Scalora has been important from the beginning not only because of his expertise with correctional psychology, but also because of his advice and suggestions regarding the IRB process and working with MSDOC staff.

Navigating the IRB and MSDOC was much easier based, due to his expertise.

Third, I would like to express my gratitude and appreciation to the Midwestern State Department of Corrections for the opportunity to work with them and pursue this research. Their encouragement, guidance, and most importantly their willingness to allow me access to their operations and information systems is unparalleled for a correctional organization, particularly when examining a sensitive topic. Their transparency is a testament to their professionalism.

Fourth, I want to thank my family-including my sister, brothers, and their families-for their support. Equally as important, I want to thank Sue, the mother of our children, and her partner Suzette, both of whom had to adjust their life to allow me to complete this degree. The lack of time and money that I was able to provide to our young adult children and grandchildren was limited. Thank you for stepping up to the plate and always being there, covering for me, and supporting me unwaveringly. To my children, Rachel, Kaelen, and Keaton - there are no words that I can write that will properly express my gratitude. You have never complained, and have always supported me. Hearing my children say that they are proud of me has warmed and motivated me through the many times I felt like abandoning this endeavor.

Fifth, many friends, mentors, and colleagues have helped me in this process including my friends Brian Bartels and the late Mark Otten. I need to thank Dr. Sam Walker and Dr. Bob Meier for their mentorship, friendship and support. To Bill and Ann from my cohort,

thank you for keeping things light when needed as well as being my first true colleagues.

Eric Wodahl has provided me with encouragement, advice and tutoring through the dissertation process and has become a great friend. Also Mary Evans, Scott Chenault and an assortment of other fellow students were and still are good friends and colleagues.

Lastly, aside from my committee, two people throughout these years have been the most important to me finishing this degree. First, I thank my father, who throughout my life has been a role model in so many ways. In 2003, I called him and asked a straightforward question: “Do you think it is crazy for me to leave a successful career as a jail administrator to pursue a PhD?” Without hesitation he replied “No! Go for it Michael.” Had he hesitated or suggested for me to think this through, I would not have completed my PhD. Thank you Dad for your support. And second, I wish to thank my significant other Dr. Mary Chavez. In the last two years there have been so many times when I was filled with self-doubt, overwhelmed with frustration, and experienced stress that I have never felt before. During these times I was not a pleasant person to be around and resisted the support she offered. Yet, she stood strong and stayed with me. To Mary: Gracias mi amor. Te quiero mucho!

This dissertation is dedicated to my late Mother, Mildred Harrington who was unable to see this accomplishment, but nevertheless, inspires me every day.

## **Table of Contents**

List of Tables and Figures.....	viii
Chapter 1 .....	1
Introduction.....	1
Research Questions.....	3
Chapter 2.....	14
Review of Literature .....	14
History of Solitary Confinement.....	14
Perspectives regarding inmate adjustment.....	18
Measures of Prison Adjustment.....	20
Correlates of Prison Adjustment.....	23
Race.....	23
Age.....	24
Marital status.....	24
Dependents.....	24
Education .....	25
Drug use prior to prison .....	25
Criminal History .....	26
Sentence Length.....	28
Prison Adjustment of Female Inmates.....	29
Mentally Ill Inmates in Prison.....	32

Limitations of Prison Rule Infractions.....	33
Chapter 3.....	36
Methodology.....	36
Purpose.....	36
Data Source.....	37
Dependent Variables.....	40
Independent Variables.....	42
Educational Achievement.....	42
Employment.....	43
Marriage and dependent children.....	44
Control Variables.....	45
Mental Illness.....	46
Analytical Strategy.....	47
Chapter 4.....	48
Results and Analysis.....	48
Sampling Strategy.....	48
Representativeness of Samples.....	50
Sample Comparisons.....	58
Male Non-Segregated and Segregated Sample Comparisons.....	60
Female Non-Segregated and Segregated Sample Comparisons.....	64
Comparison of Non-Segregated Males and Females.....	65
Comparison of Segregated Males and Females.....	67
Dismissed Misconduct Violations.....	68

Chapter 5 .....	71
Discussion and Summary .....	71
Control Variables .....	71
Age .....	71
Race .....	72
Criminal History .....	72
Current Sentence .....	74
Mental Illness .....	74
Research Questions .....	76
Commitment .....	78
Involvement .....	78
Attachment .....	79
Strengths and Limitations of the Research .....	82
Implications for Prison Policy .....	83
Implications for Future Research .....	84
Summary .....	85
References .....	87
Appendix A .....	96
Appendix B .....	98
Appendix C .....	99

## List of Tables and Figures

Figure 1-Maladjustment in Prison.....	4
Figure 2-Variou Paths to Segregation.....	6
Table 1-Rates of incarceration in prison and jail per 100,000 residents.....	37
Table 2-Frequency Distributions.....	48
Table 3-Kurtosis Statistics-Male.....	50
Table 4-Kurtosis Statistics-Female.....	50
Table 5-Male Non-Segregated.....	51
Table 6-Male Segregated.....	54
Table 7-Female Non-Segregated.....	55
Table 8-Female Segregated.....	57
Table 9-Frequency Distribution for Samples.....	59
Table 10-Male Non-Segregated and Male Segregated Samples.....	60
Table 11-Fisher’s Exact Results Male and Female Samples.....	62
Table 12-Female Non-Segregated and Segregated Samples.....	64
Table 13-Male and Female Non-Segregated Samples.....	66
Table 14-Male and Female Segregated Samples.....	67
Table 15-Frequency Distribution of Dismissed Misconduct Charges.....	69
Table 20- Pearson’s Correlation Coefficients.....	70

## **Chapter 1**

### **Introduction**

During the last quarter of the 20<sup>th</sup> century the number of prison inmates confined in the United States has skyrocketed. This trend has continued into the new millennium. To illustrate, in 1980 there were approximately 320,000 men and women incarcerated in state and federal prisons (Seiter, 2005). More recent figures reveal that as of the end of 2009, over 1.6 million men and women were confined in state and federal prisons (Bureau of Justice Statistics, 2010). There have been several explanations advanced to explain this growth including increased enforcement of drug violations, penological shifts from rehabilitation to incapacitation, and the adoption of harsher sentencing laws (Austin and Irwin, 2001; Irwin, 2005). The result of these trends is that the United States now has the highest incarceration rate in the world (Pew Center, 2008; Correctional Association of New York, 2003).

Along with the increase in the number of incarcerated persons has been recognition of changes in the type of inmates being housed in state and federal prisons. Prisons today house more violent, impulsive and unpredictable inmates (Bureau of Justice Statistics, 2008; Byrne, Hummer and Taxman, 2008). Irwin (2005) attributes the increase of violent inmates to the influence of street gangs in prison. Additionally, others have noted that the de-institutionalization of the mentally ill has resulted in an increased number of inmates with serious mental illness (Toch and Adams, 2002; McCorkle, 1995).

In response to the increased number of dangerous inmates and incidents of violence, criminal justice policy makers have built more prisons and constructed large additions to

existing prisons (Irwin, 2005). The technology and architectural design of these new prisons has increased the amount of segregation cells available for the punitive and administrative confinement of disruptive inmates (Irwin, 2005). Units for disruptive inmates have been given such names as “Special Housing Units”, “Closed Custody Centers” or “Adjustment Centers” (Shalev, 2009; Toch, 2001; Haney and Lynch, 1997). Many states, as well as the federal prison system, have built high security “supermax” prisons to house large numbers of their most recalcitrant inmates (Toch, 2001; Toch and Adams, 2002). Recent figures suggest that approximately 2% of prisoners in State and Federal custody are held in these ultra-secure environments (Correctional Association of New York, 2003) while Haney and Lynch (1997) report that the figure could be as high as 27%.

This dissertation examines prison segregation and individual adjustment to prison. The research uses both a traditional measure (conduct reports) and a seldom-used measure of inmate segregation (proportion of sentence served in segregation) to examine adjustment to prison. Examination of prison adjustment by way of institutional conduct reports only limits our understanding of prison adjustment to rule violations. More specifically, those with more violations and serious violations are considered to be maladjusted. However, there are a number of other conditions that are of great concern to prison administrators that are often excluded from the official conduct report. These can be of grave concern as they relate to how prison administrators use separation and segregation of inmates from the general prison population as a strategy to maintain order and provide for the safety and security of staff and inmates within the prison (Shalev, 2009; Irwin, 2005).

## Research Questions

As noted above, the most often used measure of inmate adjustment has been the prison conduct report. The strengths of this measure is that official conduct reports are in official prison records and thus are readily available. Moreover, the function of the conduct report is similar across most prison systems and therefore can improve the generalizability of the research findings. The use of segregation for disruptive or potentially disruptive inmates is also a common strategy across prison systems and as such, its measurement shares generalizability similar to that of the conduct report.

As a strategy to further our understanding of inmate adjustment and prison segregation, the following research questions are posed:

Research Question 1: When comparing segregated inmates with non-segregated inmates, is there a significant difference in the rate of misconduct reports?

If decisions regarding segregation are largely independent of officially recorded conduct, then the rate of conduct reports should be consistent across the segregated and non-segregated samples.

Research Question 2: When comparing segregated inmates with non-segregated inmates, are there significant differences among demographic and theoretically derived variables?

Numerous scholars have noted significant differences in how men and women adjust to prison. As stated previously, female inmates are often sanctioned not only for rule violations but also for deviation from socially defined gender roles (Belknap, 2001). The response to these violations may not always involve prison disciplinary actions, but may also include removal from the general prison population.

Research Question 3: When comparing female inmates to male inmates, are there significant differences among the independent variables.

Research Question 4: When comparing female inmates to male inmates, are there significant differences in the rate of misconduct reports and the use of segregation.

**Figure 1-Maladjustment in Prison**

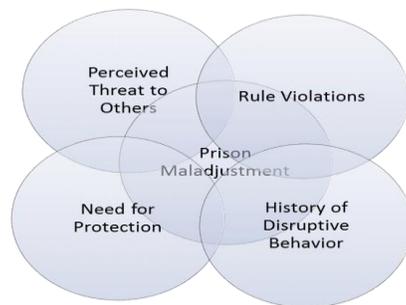


Figure 1 illustrates the concept of maladjustment in prison. Prison maladjustment is of concern to prison officials for a variety of reasons. The overriding concern when examining adjustment to prison is the maintenance of prison order and providing for the safety and security of staff, inmates and visitors. These problems can include violations of rules, a prior history of disruptive behavior during previous prison terms or at other institutions, vulnerability of an inmate, and perceived threats such as participation with prison gangs.

The segregation of prison inmates from the general population is most often accomplished through the isolation and separation of targeted inmates from others. Segregation units often isolate these inmates in their cell for up to 23 hours per day (Mears

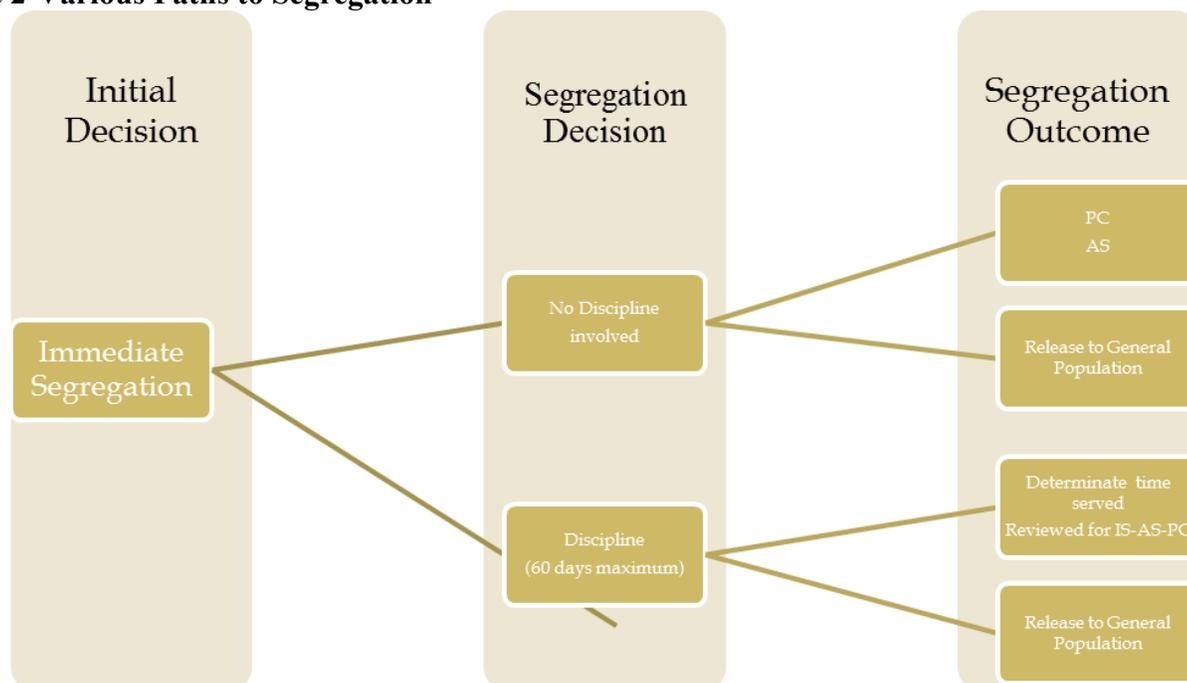
and Reisig, 2006; Irwin, 2005). This usually involves restricted movement, limitations on privileges such as recreation, visitation, and social interaction with other inmates. Most often these inmates are unable to continue or begin attending their prescribed inmate program assignments and institutional work details (Mears and Watson, 2006; Irwin, 2005, Toch, 2001), which can increase the frustration experienced by inmates and exacerbate mental health issues.

There are several paths through which inmates may be placed in segregated confinement. Inmates may be placed in disciplinary segregation after being found guilty of violating prison rules. Often inmates are segregated during the investigation of the violation and until the completion of all due process requirements for prison violations. Moreover, inmates may be placed in segregated confinement if it is determined that their presence in the general prison population presents a danger to themselves, other inmates or prison staff, or the orderly operation of the prison. Finally, inmates may be placed in protective custody to prevent being assaulted by other inmates. This status may not be as restrictive as other segregation statuses in that the inmates are not always confined in their cell. Regardless, protective custody inmates have less recreation, program, and work opportunities than are traditionally available to the general prison population. These last two methods are the decisions of prison supervisors and classification committees which, Toch (2001:380) contends amounts to a “deprivation of fairness” due to the frequent lack of significant evidence that an individual is a danger.

Figure 2 illustrates typical pathways involved in decisions to segregate an inmate. These steps include decisions by classification committees as well as the result of formal disciplinary hearings. As noted on the lower right of the diagram, when an inmate completes

the determinate segregation sanction based on a prison disciplinary hearing, their segregation may be extended based on classification decisions.

**Figure 2-Variou Paths to Segregation**



The study of inmate segregation is also important because the direct and indirect consequences of its use extend beyond prison management. First, the extended isolation of inmates has been shown to have a damaging effect on the mental health of those who are subjected to its use (Mears and Watson, 2006; Mears and Reisig, 2006; Haney, 2003; Toch, 2001; Haney and Lynch, 1997). Inmates who, prior to isolation, had not shown evidence of serious mental illness may develop significant mental health issues when segregated (Haney, 2003; Haney and Lynch, 1997). In addition, those inmates with a history of mental health problems often manifest more serious psychological problems while in segregation. For inmates with a history of serious mental health problems, correctional staffs often respond by issuing disciplinary reports that many times extend an inmate's time in segregated

confinement (Haney and Lynch, 1997). These inmates may also experience increased difficulty when attempting to re-integrate into the general prison population after being isolated (Irwin, 2005; Toch, 2001).

Less discernible are what can be termed “indirect” consequences. First, inmates who are segregated, whether punitively or via classification, lose many of the privileges they had when in the general prison population. For example, segregated inmates lose visitation privileges with family and friends (Shalev, 2009). This increased separation from family exacerbates the separation already experienced when individuals are sent to prison. This restriction can be seen as a deepening of the wound caused by what Sampson and Laub (1993, p. 142) term the “knifing off” of social bonds experienced by those who are sent to prison.

Secondly, inmates who are segregated are unable to obtain or continue with institutional work completed by many inmates in the general population (Irwin, 2005). Although many of these jobs pay meager wages, these earnings offer inmates the opportunity to purchase food and hygiene items that can provide a small improvement in the quality of their life in prison. Similarly, inmates who are segregated are unable to attend the prison programs in which they were enrolled in prior to their segregation (Shalev, 2009; Irwin, 2005). Prison officials often times consider absences due to segregation as unexcused and expel the inmate from current program assignments. In such instances, inmates often must wait to re-apply, sometimes for months, until they may be permitted to enroll in these courses again.

The impact of these consequences can be experienced in two ways. First, inmates who are unable to complete prison programs and are unable to demonstrate positive

adjustment in the general population because of isolation may have greater difficulty in achieving discretionary parole release from prison. This may in turn affect prison crowding and potentially result in longer sentences for those who are placed in segregated confinement (Shalev, 2009). Second, and more importantly, the restrictions on segregated inmates along with their inability to participate in and complete prison programs may impede the process of prisoner re-entry not only to the general prison population but also re-entry into the community following release from prison (Irwin, 2005).

This study differs from previous research in that it examines the more frequent and recurring forms of inmate isolation. Research into the use of isolation in contemporary prisons is limited, and the majority of the recent research has examined long-term confinement in “Super-Max” settings. Although important, this research limits our understanding of inmate segregation by focusing on inmates considered the “worst of the worst” (Toch and Adams, 2002). This potentially overgeneralizes segregation strategies as a technique reserved for long-term, maximum security inmates and institutions. That is to say, the lack of research on the more common and everyday use of segregation may lead some to believe that “Super-Max” is the general standard and practice for isolating inmates.

For a number of reasons, this research may contribute a better understanding of inmate segregation for policy makers and prison administrators. First, the use of administrative segregation has been questioned due to its lack of due process. Inmates may be placed in administrative segregation based on allegations from other inmates or the mere suspicion of correctional officials. Administrative segregation, unlike disciplinary segregation, is indeterminate in length and inmates placed in administrative segregation often have little understanding as to the reasons for their segregation and even less understanding

as to the expectations for release and return to the general prison population (Human Rights Watch, 1999; Kurki and Morris, 2001; Toch, 2001; Irwin, 2005). Moreover, placement in administrative segregation is a non-adversarial process and inmates are not afforded the due process protections guaranteed by *Wolf v. McDonnell* (1974). Kurki and Morris (2001, p. 402) state that the ability to challenge such restrictions are a “conditional precedent of punishment.” The authors criticize that once placed in administrative segregation, inmates are unable to challenge the rationale for their segregation or appeal the decision to prison administration (Kurki and Morris, 2001; Irwin, 2005, Toch, 2001).

Secondly, some have questioned the financial cost of segregation. Rivelend (1999) notes that the number of correctional officers needed to maintain internal and external security, movement of inmates, security searches of cells, and the delivery of food and other supplies and services to individual cells requires higher staff to inmate ratios than general population units. In a political arena of tight State budgets, the use of segregation may significantly influence correctional budgets. This may include the diversion of funding away from inmate programming to support the operational costs of segregation.

Specific financial figures with respect to the cost of segregation is absent from the literature. The operational cost difference between housing general population inmates and segregation inmates is dependent upon a number of factors. Most notably stand-alone segregation facilities cost significantly more than co-located operations (Isaacs and Lowen, 2007). These costs are generally attributed to the need for increased correctional staff (Thigpen et al., 2003). One report by Sullivan (2006) stated that in Arizona the cost of housing an inmate in a segregation unit was two to three times higher than the housing cost in a general population unit.

Third, inmate segregation is important to correctional policy makers because of the intersection of segregation and the mental health of inmates who are segregated. Toch (1992) examined the mental breakdown that often accompanies the use of isolation. He noted that isolated prisoners quite often feel caged, experience feelings of abandonment, and suffocation as well as a tendency to experience episodes of panic, rage, depression, and emptiness. The uncertain duration of isolation may promote a sense of helplessness in prisoners, and create feelings of injustice and victimization. As time goes by these inmates may begin to develop suspicions of persecution and arbitrariness towards correctional staff (Bonta and Gendreau, 1984; Kurki and Morris, 2001; Toch, 2003).

The challenge of mental health and segregation is twofold. First there is concern that inmates who have mental health issues are more likely to be segregated. As noted previously, correctional staff often respond to the behavior of mentally ill inmates with the use of the prison disciplinary system rather than recognizing the behavior as part of the pathology of the mental illness (Haney and Lynch, 1997). And as stated previously, the nature of segregated confinement does little to improve the mental health of inmates with pre-existing mental health problems. Simply stated, the use of segregation with inmates who are mentally ill more often depreciates their mental health and may potentially extend their stay in segregation (Haney, 2003; Haney and Lynch, 1997).

The second aspect of mental health and segregation is the effects isolation has on those inmates who did not present evidence of a mental health problem prior to their placement. As was stated this problem is well documented as to the negative effects of long-term isolation on individual mental health. However, other researchers (Bonta and Gendreau, 1984, 1990; Suedfeld, Ramirez, Deaton and Baker-Brown, 1992; Sestoft,

Anderson, Lilliboeck and Gabrielson, 1998) have noted a lack of empirical evidence that short-term use of isolation and the damaging effects on the mental health. Based on their findings, Bonta and Gendreau (1984) recommend that the isolation of inmates be limited to 14 days. Although the cross sectional design of this research cannot specifically examine the effects of segregation on inmate mental health, it nevertheless presents an opportunity to advance our understanding of segregation and mental health.

The mere presence of mentally ill inmates in segregation is not necessarily an indication of correctional officials failing to meet inmate mental health needs. As is the case with all medical care, inmates have a right to refuse mental health treatment. Often times these refusals involve non-compliance with medication or declining to participate in counseling.

Lastly, as correctional organizations add high security segregation beds, they risk potential over-classification of inmates. DeMaio (2001) has colloquially referred to this as the “Field of Dreams” phenomenon. DeMaio observed that in Wisconsin, after building a highly expensive supermax facility, prison officials needed to demonstrate the need for the beds and began filling the prison with inmates traditionally housed in general population prisons. These included juveniles, mentally ill inmates, and non-violent offenders. It seems logical that if other jurisdictions were under the same pressure, whether to justify the construction or respond to overcrowding in the general prison population, the natural supply for long-term segregation beds would come from the short-term segregation units.

The research presented here also seeks to expand methodologically our understanding of inmate adjustment in prison. Toch and Adams (2002, p. 20) state that the best measure of maladaptive behavior in prison is the prison disciplinary record. This assertion is predicated

on the assumption that the majority of maladaptive behavior is a violation of prison rules and is addressed through the prison disciplinary system. However, focusing solely on rule violations ignores other techniques used by prison officials to identify inmates who may be potentially disruptive, including use of inmate security classification processes and the administrative segregation of inmates. The dissertation presented here examines prison adjustment using two different measures. First is the prison disciplinary record that has been used most frequently. The second measure of adjustment uses inmate segregation, whether as a result of discipline or classification decision. This measure will include those who have experienced difficulty in adjusting to prison but have not necessarily violated prison rules as a result of their adjustment problems: inmates placed in administrative segregation, disciplinary segregation, and protective custody. In short, by examining segregation, this research utilizes a broader view of inmate adjustment.

Finally, this research will add to our understanding of inmate prison adjustment by using a more precise measure in many of the independent variables than the measures used in prior prison adjustment research. The justification for these alternative measures is grounded in Hirschi's theory of social bonds (Hirschi, 2002). As an example, much of the prior research measures education numerically with "12" being an indication that the individual has received a high school diploma; obtained a General Equivalency Degree (GED); or, a High School Equivalency Degree (HSED). From a social bonds perspective, these different forms of accomplishing the same educational goal may involve different levels of commitment to a pro-social lifestyle as defined by Hirschi (2002). More specifically, those individuals that received a traditional high school diploma through matriculation would have demonstrated a stronger commitment to attending school than those who received a GED or

HSED at some later time in their life. Similar justification will be used with a number of independent variables described in Chapter 3.

This dissertation is an examination of prison adjustment intended to further our understanding of how prison officials define maladjustment, the techniques used to manage inmate adjustment and institutional control, and if, a variety of adjustment measures, helps us gain a better understanding of the problem. Chapter 2 of this dissertation will review the history of inmate solitary confinement including the justification for its use as well as contemporary use and rationale for the use of isolation. The chapter will also review leading theoretical explanations of inmate maladjustment as well as the research findings of prior research. It will conclude with a brief description of Hirschi's theory of social bonds and prior research that has applied his theory.

Chapter three will state the research questions used to examine prison adjustment. More specifically, these questions seek to answer whether or not there are significant differences among the demographic traits for inmates who, at some time during their prison term were placed in segregation and those inmates who were never placed in segregation. This chapter will also explain the source of the data and the method for collecting the data. Lastly, Chapter 3 will outline the specific analytical strategy used to answer the expressed research questions.

Chapter four will detail the results of the analysis. In Chapter 5 there is a discussion and summary of the findings, with particular attention to the research questions in given in Chapter 1. The dissertation will close with conclusions and potential research and policy implications regarding inmate segregation.

## **Chapter 2**

### **Review of Literature**

The proceeding review of the literature will provide the reader with a brief history of the use of isolation in prison as well as the differing justifications for its continued use into the 21<sup>st</sup> century. Following this is a brief review of Hirschi's theory of social bonds and some of the recent research examining social bonds in adult offenders. Finally, with respect to Hirschi's theory, a brief examination of social bonds and mentally ill inmates will be discussed.

The review of literature will also discuss the prevailing perspectives that have been used to explain inmate adjustment to prison. The majority of the research on prison adjustment has examined individual inmate characteristics and how these characteristics may influence prison adjustment. Several of the most common characteristics are reviewed. This chapter will conclude with a review and discussion of the various measures used to examine prison adjustment.

#### **History of Solitary Confinement**

The use of solitary confinement as a form of punishment can be traced to religious monasteries. Many monasteries embraced silence and solitude as general principles of everyday life. An individual monk's adherence to these principles was considered an outward sign of piety and purity (Edwards, 1995). Similarly, solitary confinement was adopted by prisons in an attempt to cleanse offenders of moral corruption with the hopes of producing a more compliant and law abiding citizen (Johnson, 2002).

An alternative explanation for the use of solitary confinement is rooted in medieval medicine and social control. According to Foucault (1965) institutions built for the purpose of isolating lepers from society were some of the first and original public facilities used to protect society from individuals who posed a potential threat to the safety and security of the general public. As the threat of leprosy decreased these institutions began to isolate other socially offensive people including the mentally ill, vagabonds, and criminals in large institutions (Foucault, 1965). The early prisons in the United States used the same type of quarantine to protect the public from criminals. Rothman (1971) explained that the growth of large public institutions such as asylums for the mentally ill, prison reformatories, and poor-houses, were intended not so much to protect the public from the “contamination” of these populations as to isolate and protect their residents from the negative influence of the general public. However, by the early part of the 20<sup>th</sup> century the mission of these institutions had developed to reflect the quarantine ideology similar to that described by Foucault (Rothman, 1971).

The use of solitary confinement in the United States was a primary strategy for managing inmates and attempting to reform offenders. Both the Auburn congregate system and the Pennsylvania separate system used silence and isolation to manage inmates and promote individual reform (Allen, Latessa and Ponder, 2009). The use of isolation in prison management has continued and is viewed as an important strategy by contemporary prison administrators. The rationale behind its use has changed reflecting how the philosophical role of the prison has changed from the first penitentiaries of the early 19<sup>th</sup> century to the increased popularity of Supermax prisons in the 21<sup>st</sup> century (Shalev, 2009).

The role of isolation in the prison system can be understood as having four distinct eras. The initial reform era was the primary influence not only in the use of isolation, but of the penitentiary system as a whole. The first penitentiaries in Auburn, New York and Eastern Pennsylvania both managed their entire inmate populations using silence and isolation. Both the Auburn and Pennsylvania strategies emphasized the need to reform the individual inmate. During the early 19<sup>th</sup> century those that violated the law were seen as morally corrupt individuals who were unduly influenced by their poor environment outside of the prison. By separating inmates from the corrupt outside world as well as each other, individual reform was possible through strict discipline, development of positive work habits and religious instruction (Allen, Latessa and Ponder, 2009).

While the reform of the individual offender was the primary goal, the maintenance of prison order and the control of inmate behavior was an additional concern of prison officials. The early operations of prisons relied on the use of minimal prison personnel to manage large numbers of inmates. Historically prisons have been managed using a paramilitary structure and adhered to strict regiments prescribing meal times, recreation, work details and when inmates are permitted to move about the prison. This structure reinforces the importance of order and regiment when small numbers of individuals (prison staff) are used to manage large masses of people (Jacobs, 1977). Without order, prisons have little ability to offer amenities or provide services to inmates (DiIulio, 1987). Those inmates who failed to follow or adapt to the routine were disciplined (Pisciotta, 1994).

By the mid-1800s, the Pennsylvania and Auburn systems fell out of favor. Crowding made the enforcement of silence and the use of solitary cells impractical. Moreover, the development of prison industries and the need for prisons to produce a tangible outcome

forced prison officials to abandon the solitary systems of confinement (Cloward, 1960; Johnson, 2002). This resulted in increased noise levels created by the congregation of small informal groups of inmates. Soon this environment was judged disorderly and prison officials began to use harsh disciplinary tactics to preserve a prison regime and produce a more submissive inmate (Pisciotta, 1994). Disciplinary methods included increased work hours, loss of privileges, and being forced to march in “lock-step”. Those inmates with more serious or repeated offenses were subject to a variety of corporal punishments including whippings, iron gags, use of the ball-and-chain, and solitary confinement (Cloward, 1960; Pisciotta, 1994; Rothman, 1995).

By the late 19<sup>th</sup> century the use of corporal punishments as an official sanction for inmate misconduct began to decrease and prison officials needed an alternative strategy to effectively manage a growing prison population (Glenn, 1984). Prison officials began to isolate recalcitrant offenders away from the general prison population, most often in sparsely furnished solitary cells. The use of solitary confinement soon replaced corporal punishment as the most popular tool to manage disruptive inmates. This second era (era of control) justified the use of solitary confinement as disciplinary technique used to manage offenders who were disruptive of the prison regiment (Shalev, 2009; Rothman, 1995).

By the beginning of the 20<sup>th</sup> century a “psychotherapeutic” model of explaining social deviance gained in popularity (Rotman, 1995, p. 158). Prison systems followed and began to adopt a more therapeutic model towards inmate behavior. This third era in the history of solitary confinement included an overall direction towards the rehabilitative ideal (Rotman, 1995; Shalev, 2009). The use of solitary confinement in this era was intended to re-socialize inmates who continued to disrupt the prison and present a danger to others. The specific

intent of isolation was to strip the offender of his improper behavior pattern and retrain him with new pro-social behavior (Shalev, 2009). Consistent with the rehabilitative ideal, many prison systems introduced behavior modification programs with the intent of rewarding more pro social behaviors of isolated inmates (Shalev, 2009). This era of solitary confinement as treatment lasted until the middle 1970s.

The use of solitary confinement in the present era is driven by what Shalev (2009) refers to as a tool for risk management. Following a series of prison riots, the increased frequency of inmate on inmate and inmate on staff assaults, and a 1983 incident at the Federal prison in Marion, Illinois in which two correctional officers were murdered and four others seriously assaulted, prison officials began to use isolation as a technique to reduce the possibility of similar incidents in the future. The prison in Marion, following the aforementioned assaults, operated under a complete “lockdown” in order to limit inmate contact with other inmates and staff (Shalev, 2009). In addition, officials at the Marion prison introduced an operational model in which inmates could reduce the restrictiveness of their confinement and eventually earn their way back to the general prison population. This process took in excess of three years for an inmate to be released from isolation to the general prison population and was done only under close supervision and restrictive security procedures. This operational paradigm became known as the “Marion Model” and became the prototype for contemporary segregation units and supermax facilities (Shalev, 2009, p. 21).

#### Perspectives regarding inmate adjustment

Beginning with Clemmer’s 1940 book *The Prison Community*, researchers have attempted to explain how prison inmates adjust to their prison experience. One of the

questions central to the research regarding inmate conduct in prison has been what is the source or cause of inmate adjustment (or maladjustment) to prison life? Prior research efforts have attempted to answer this question using two models. The first model is the “deprivation” model. This model was originally defined by Clemmer (1940) and was further defined by Sykes (1958). The deprivation model states that the negative behavior of inmates is a result of the prison environment. More specifically, the nature of the prison environment as a “total institution” (Goffman, 1961) results in the loss of specific liberties (goods and services, heterosexual relationships, autonomy, and security) (Sykes, 1958). This deprivation forces many members of the inmate population to develop roles and relationships in the prison for the purposes of alleviating or minimizing the “pains of imprisonment” (Sykes, 1958). Often times the behavior associated with these roles conflicts with prison rules and is of concern to prison officials. This phenomenon has often times been referred to as “prisonization” (Clemmer, 1940).

The second model to explain inmate behavior was first posited by Irwin and Cressey (1960). The authors claim that inmate maladaptation is an expression of individual values and social histories that inmates bring into the prison. This second model is called the “importation” model. It asserts that inmates adapt to prison based on their experiences and behavior prior to being sent to prison. To elaborate, inmates who display serious violent behavior while in prison are more likely to have a history of violence prior to their incarceration. Furthermore, inmates who have a history of minor or petty crimes are less likely to commit serious rule infractions while in prison.

An alternative to the deprivation/importation debate has been offered by Toch and Adams (2002). Their research examined the role mental illness may have played in the

disciplinary records of inmates. Most importantly their work indicates a significant need to recognize and more closely examine how mentally ill inmates adjust to the strict regimen and stressors inherent in the prison environment. According to the authors, the incidents of misconduct among mentally ill inmates are often attributed to the inability of some mentally ill inmates to understand and comply with prison rules and routines. Other research has suggested that inmates with more serious forms of mental illness have trouble coping in the stressful prison environment and act out when frustrated (Kondo and Ross, 2000).

Additional findings reveal that mentally ill offenders in the general prison population are increasingly vulnerable to assault and exploitation by other inmates. The response by prison officials has resulted in mentally ill offenders spending a disproportionate amount of time isolated in segregated environments compared to inmates without a mental illness (Lurigio and Snowden, 2008). The collateral effects of increased isolation may include a further deterioration in mental health and lack of programming opportunities due to segregated status.

Each of these perspectives seeks to answer two questions. First, how well do inmates adjust to prison? More specifically, what kinds of behaviors do inmates present that potentially disrupt the orderly routine of the prison? This question has historically been addressed through the examination of prison rule violations. The second question has been; what are the relevant characteristics of those inmates who disrupt the prison routine and potentially threaten institutional stability and order?

#### Measures of Prison Adjustment

The previous research studies that have examined prison adjustment have used a variety of constructs to assess the individual correlates of positive and negative institutional

adjustment. The most frequent measure has been the use of prison misconduct reports. Research that has used misconduct reports as a measurement of prison adjustment have hypothesized that those with more conduct reports are maladjusted or have a negative prison adjustment. Additionally, researchers have varied with respect to how misconduct reports are measured. Harer and Steffensmeier (1996) limited their analysis to only violent misconduct reports or misconduct reports alleging that an inmate had violated prison drug or alcohol rules. Jiang and Fisher-Giorlando (2002) examined violent and non-violent rule violations that included misconduct towards prison staff and misconduct towards other inmates. Other researchers have used both minor and major rule infractions as an indicator of maladjusted behavior in prison (Jiang and Winfree, 2006; Camp, Gaes, Langan and Saylor, 2003; Cao, Zhao, and Van Dine, 2003; Flanagan, 1980; Finn, 1995; Myers and Levy, 1978; Wright, 1991).

There also exists several research studies that have utilized inmate questionnaires to examine inmate self-reports of how they have adjusted to prison. Wright (1991) developed a twenty item survey to assess participant's problems with relating to others in prison; self-reports of increased problems with anger and fear; and, physical problems the inmate reports experiencing as a result of injuries or illnesses. This Prison Adjustment Questionnaire was used in his 1991 study of New York State prison inmates (Wright, 1991) as well as by Warren, Hurt, Booker and Chauhan, (2004) when they examined the adjustment of female inmates in federal prison. Other researchers such as Dhimi, Ayton and Loewenstein, (2007), used an inmate survey measuring an inmate's involvement in structured prison activities, frequency of contact with family, frequency of thoughts and emotions related to life outside

of prison, and self-reported misconduct reports. Similarly, Huebner (2004) examined inmate self-reports of violent offenses against prison staff or other inmates.

Prison adjustment has also been examined using a variety of reports from correctional staff. These studies have queried staff regarding inmate job performance, general attitude of inmates, participation in institutional programs, relationship to peers, and negative statements by inmates recorded by officers in the housing units (Wolfgang, 1961; Edwards and Kemp, 1995).

Several studies have examined inmate use of medical services as a measure of prison adjustment. According to Zamble and Poporino (1988), inmates who request and or receive treatment for stress related problems while in prison make the request as a means to mitigate the emotional problems associated with living in a crowded, socially dense environment. In short, those inmates who make more frequent requests for medical services and those that have a higher proportion of days using psychotropic medications have been assessed and labeled as negatively adjusted by prison officials. Similarly, Wright (1991) states that the use of inmate initiated sick call services is indicative of two different dimensions. First, the availability and use of prison medical services is an indication of institutional resources being used to provide comfort for inmates. Wright also states that the use of inmate medical services can be an indication of the need for inmates to seek treatment for physical problems they may suffer due to injury or being taken advantage of by other inmates.

More recent research has recognized the need to assess inmate adjustment using multiple measures (Van Voorhis, 1994). These multiple criterion measures have been seen as an important method of examining construct validity (Hanson, Moss, Hosford and Johnson, 1983, Cook and Campbell, 1979). More importantly, the use of multiple criterions

serves to reinforce the complexity of the phenomenon of institutional adjustment and acknowledge the types of adjustment concerns that are important to correctional administrators.

### Correlates of Prison Adjustment

#### *Race*

Prior research examining race and prison adjustment could be summarized as inconclusive. Harer and Steffensmeier (1996) found that black inmates were involved in violent rule infractions more often than white inmates and less likely to violate rules regarding drug and alcohol use in prison. Other findings suggest that black inmates violate rules more often than whites (Jiang and Winfree, 2006) and commit more nonviolent rule violations than white offenders (Camp et al., 2003). Less specific research has found that non Caucasians are more likely to violate major rules (Cao et al., 2003) and are considered “more intractable” (Myers and Levy, 1978). Huebner (2003) found that among the inmates surveyed, black inmates reported committing violent attacks against staff and fellow inmates more often than white inmates. Research examining other racial and ethnic categories is limited. Both Camp, et al. (2003) and Huebner (2003) did not find a significant relationship between Hispanic and prison adjustment.

Findings of research using multiple indicators to assess prison adjustment including prison staff assessment of inmate adjustment, inmate work performance and program participation, are conflicting. Wolfgang (1961) reported that over time, white inmates did not adjust as well as black inmates, whereas Edwards and Kemp (1995) and Wright (1991) both concluded that race did not influence prison adjustment.

### *Age*

Of the individual demographic correlates of prison adjustment, age remains the most robust predictor of prison maladjustment (Adams, 1992). These observations have shown that younger inmates present significantly more behavioral problems as evidenced by higher rates of violent conduct reports, as well as major and minor disciplinary reports (Adams, 1992; Camp et al., 2003; Cao et al., 2003; Flanagan, 1980; Harer and Steffensmeier, 1996; Jiang and Winfree, 2006; Myers and Levy, 1978; Wolfgang, 1961). Huebner (2003) observed that younger inmates self-reported higher incidents of assaults on staff and inmates. Observations such as these have been replicated in jails as well, state and federal prisons, across States and in Canada, Great Britain and Australia (Adams, 1992).

### *Marital status*

Research examining the role of marital status has shown that inmates who are married have fewer adjustment problems. Married inmates had less rule violations (Jiang and Winfree, 2006; Finn, 1995) and minor rule violations (Cao et al., 2003), self-report better adjustment (Warren et al., 2004), and were more likely to demonstrate positive adjustment (Wolfgang, 1961). Other findings suggest that marital status is not a significant predictor with self-adjustment surveys (Huebner, 2003) or major rule violations (Cao et al., 2003).

### *Dependents*

As of mid-year 2007, nearly 700,000 state prison inmates reported having minor children at the time of their admission. The proportion of female inmates with children is greater than that for male inmates (62% versus 51%). Moreover, women were more likely to live with their children and be the primary care provider (Bureau of Justice Statistics, 2008).

Despite these figures, there is a lack of research examining how children may influence prison adjustment. Jiang and Winfree (2006) found that when measured as a dichotomous variable, there was no statistical difference in the rate of rule violations between inmates with dependent children and those without. Jiang and Fischer-Giorlando (2002) observed a positive relationship between the amount of children and the number of violent rule infractions. That is, as the amount of children an inmate has increases, so does the rate of rule violations. Warren et al (2004) noted that among female inmates, those with children report more institutional distress than those without children.

#### *Education*

Research findings examining the relationship between educational attainment and prison adjustment have consistently shown a negative correlation. Those inmates who self-reported higher levels of grade completion received fewer minor and major conduct reports (Cao et. al., 2003) and reported fewer incidents of violence directed towards staff and inmates (Huebner, 2003). When compared to inmates without a high school diploma, those who graduated high school received fewer conduct reports for violent as well as non-violent rule infractions (Finn, 1995). These findings suggest that educational achievement prior to prison contributes to more positive prison adjustment.

#### *Drug use prior to prison*

Prior research examining the association between drug use prior to prison and inmate adjustment in prison is conflicting. Jiang and Winfree (2006) found that male inmates with a poly-substance history had higher rates of rule violations. Jiang and Fischer-Giorlando (2002) found that both male and female inmates who reported frequent drug and alcohol use prior to their present incarceration had higher rates of violent rule infractions than those with

less frequent reported use. Conversely, the findings of Cao et al. (2003) suggested that prior drug use was not a significant influence for either major or minor prison rule infractions.

One study (Edwards and Kemp, 1995) examined typologies of drug offenders and how prison staff viewed individual inmate adjustment. Their findings suggest that Black offenders who reported using marijuana prior to prison were seen as more favorably adjusted than were white marijuana users and Black and white cocaine users respectively. These results, along with the findings of Jiang and Winfree (2006) suggest that research examining the type of drug use and frequency of use may reveal more important information regarding prison adjustment than those studies that utilize a dichotomous measure of drug use.

### *Criminal History*

The current conviction offense, as well as the criminal history of individual inmates and the importance of this history when examining prison adjustment, has been used applying two separate perspectives. First, those inmates with more serious criminal histories as evidenced by the presence of prior violent conviction can indicate a pattern of maladjustment in society and therefore would suggest the likelihood of violent incidents while in prison. Studies have shown that inmates with longer criminal histories report more frequent incidents of violence to both staff and fellow inmates (Huebner, 2003) and are found guilty of more violent and alcohol related rule violations (Harer and Steffensmeier, 1996) when compared to those with shorter and less serious criminal histories. Other studies have examined how prior violent crimes may influence prison adjustment. These results suggest a positive correlation between prior violent crimes and prison adjustment. More specifically, inmates with prior violent crimes experience more adjustment problems and can be considered chronic and persistent rule violators (Toch and Adams, 2002) when compared to

inmates without a history of violent crime. However, other research found that those inmates with a prior violent crime were more likely to have higher rates of nonviolent rule violations but prior violent crimes did not influence the rate of violent rule infractions (Cao et. al., 2003; Finn, 1995).

Alternatively, those inmates who have more serious criminal histories, as evidenced by prior prison experience, are better able to navigate through their sentence with less conflict with other inmates or prison staff (Wolfgang, 1961). These inmates are often considered to be more positively adapted through staff evaluations (Wolfgang, 1961; Toch and Adams, 2002). Others have reported that inmates with prior prison sentences have higher rates of rule violations (Jiang and Winfree, 2006). Finn (1995) found no significant influence of the number of prior prison terms with the rate of violent and nonviolent prison rule violations.

Similar to serious criminal histories, the type of crime that an inmate is serving time for may affect how individuals adjust to prison life. That is, regardless of the seriousness of an inmate's criminal history, those inmates serving a sentence for a violent crime will have a propensity for serious and potentially violent misconduct when compared to those inmates serving sentences for non-violent crimes (Adams, 1992). Prior research has supported this hypothesis. More specifically, prior research has found that violent offenders have higher infraction rates (Adams, 1992; Toch and Adams, 1989; Flanagan, 1983). Other research has shown that inmates who are serving time for violent offenses report more distress when compared to their non-violent counterparts (Warren et al., 2004). Some notable exceptions do exist. Wolfgang (1961) observed that offenders who committed a non-felony murder or a murder that lacked substantial premeditation demonstrated better adjustment than offenders

with a less serious conviction. Such offenders may not see violence as a meaningful form of problem solving (Adams, 1992). Wolfgang found that inmates who were serving a sentence for felony murder (robbery and murder) had more adjustment problems that included negative staff reports, frequent job changes within the institution and a higher number of misconduct reports. Other research findings suggest that drug offenders have higher rates of violent infractions than non-drug offenders (Jiang and Fischer-Giorlando, 2002). The findings of Finn (1995) revealed that violent offenders were less likely to be involved in non-violent rule violations.

### *Sentence Length*

At first glance the relationship between the length of inmate sentence and prison adjustment would suggest that those with longer sentences would have more adjustment problems. That is, inmates serving longer sentences are more likely to be more serious and violent offenders as well as repeat offenders who receive longer sentences as a result of habitual criminality. Both violent and habitual offenders have demonstrated histories of using violence as a means of problem solving as well as being unable or unwilling to conform to social expectations (Wolfgang, 1961). The research examining sentence length and prison adjustment is, like many of the other correlates, inconsistent. Two studies found that offenders with shorter sentences were more likely to be chronic and frequent rule breakers (Toch and Adams, 1989; Flanagan, 1980). However, although inmates with longer sentences violated rules at a different rate, they were more likely to have serious and violent rule violations (Flanagan, 1980). Much of the more recent research suggests a negative or insignificant relationship between length of sentence and the rate of prison rule infractions (Jiang and Fisher-Giorlando, 2002; Harer and Steffensmeier, 1996; Cao et. al., 2003;

Huebner, 2003; Dhami et al., 2007). Research utilizing inmate self-report surveys found that inmates with longer sentences reported more distress compared to inmates with shorter sentences (Warren, et. al., 2004; Dhami et. al., 2007). Lastly, although their results suggested a negative relationship between sentence length and violent rule infractions, Harer and Steffensmeier (1996) found a positive relationship between sentence length and the rate of alcohol rule violations. This latter finding may indicate that long-term inmates use alcohol to cope with the distress of the prison environment noted by other researchers (Warren, et. al., 2004; Dhami et. al., 2007).

#### *Prison Adjustment of Female Inmates*

In comparison to the study of male prison adjustment, research examining how women adapt to the prison environment is scarce. These studies as summarized by Owen (1998), describe female adaptation as attempts to either recreate traditional familial structures based on their free world experience or to establish traditional gender based roles and relationships that the prison environment prevents. Additionally, Owen observed that many women who were involved in dysfunctional relationships prior to prison attempt to recreate successful and emotionally functional relationships once they are admitted to prison. More specifically, female inmates who strongly identified with their role as a mother prior to incarceration were more likely to adopt younger inmates as their pseudo children. Those women who were often involved in conflicted relationships with their husbands or boyfriends will often enter into romantic relationships in prison that involve similar conflict. Other women with a history of dysfunctional relationships will seek similar dysfunctional relationships in prison as a way to remain connected with their life on the outside (Owen, 1998). These roles and relationships serve to create trust, bonds, and solidarity among the

inmate population, as well as meet the individual need for intimacy and a psycho-sexual need for interaction with males (p. 5). Heffernan (1972) states that women develop argot roles similar to those described by Sykes (1958) in his study of male inmates. Furthermore, much like the findings of Irwin and Cressey (1962), these roles are adaptations of women's lives in the outside world and their involvement in a criminal lifestyle prior to prison, are strategy to navigate the prison social world. Heffernan further found that those women who create a life through "familying" reported being happier and that these family structures were essential to the social order of the prison. These findings, and those reported by Owen (1998), suggest that women are involved in positive relationships as a way of survival and do not use violence and other disruptive behaviors as men do in order to ease the pains of imprisonment.

Pollock (2002) noted that women are more likely to be engaged in caretaking of their children prior to incarceration and as a result experience significantly more stress than male offenders, experience depression, and have greater difficulty in reuniting with their children following their release from prison (Pollock, 2002; Belknap, 2001). Additionally, female inmates with minor children are more likely to be entangled in legal matters regarding child custody and experience significant distress as a result of these battles (Pollock, 2002). These studies suggest that the influence of dependent children on individual adjustment to prison is a phenomenon more important for female inmates than male inmates.

Building on the research discussed by Owen (1998), Jiang and Winfree (2006) compared the prison rule violations for male and female inmates. Their hypothesis considered two types of measurements for social support. The exterior (level 1) variables were directly related to an inmate's life prior to their incarceration. These variables included marital status, number of children, and whether or not there was communication through the

mail, phone or visitation with children while in prison. The interior (level 2) variables examined the participation in voluntary inmate groups that would promote social support such as religious, self-help, drug alcohol groups and ethnic/racial organizations. The only level 1 or level 2 variables that were significant for females was a negative relationship between rule infractions and calls to or from their children. A similar relationship was observed for male inmates as well as married men having less prison rule violations. Marital status was not a significant predictor for female inmates.

Other gender based studies utilizing quantitative strategies are rare. The few studies that include gender analysis appear to do so secondary. Camp et al. (2003) utilizing a large sample of federal inmates, found that females were more likely to violate rules associated with drugs and alcohol. The authors did not observe significant differences for other categories of violations including violence. A similar study by Cao et al. (2003) found that female inmates had a higher probability of more serious rule violations (Class II) than similarly situated male inmates. This finding is counterintuitive to the stereotype of female inmates being docile. The authors explain this phenomenon as being consistent with recent research that report women taking more assertive roles in deviance (p. 112). Belknap (2001) offers an alternative explanation as to why female inmates may have higher incidents of more serious rule violations: female inmates may be treated more harshly than similarly situated male offenders based on their violation of traditional gender roles. This “evil woman” hypothesis (p. 132) purports that women are not only penalized for the rule infraction, but are also sanctioned for violating traditional gender defined roles.

## Mentally Ill Inmates in Prison

Following the deinstitutionalization of mental health-care during the 1960s and 1970s, increasing numbers of mentally ill individuals have become entangled in the criminal justice system (Toch and Adams, 2002; McCorkle, 1995). The presence of mental health issues in prison research has been a direct result of the increased numbers of mentally ill individuals in the prison population since deinstitutionalization (Lurigio and Snowden, 2008). Some studies have suggested that between 10-35% of inmates admitted into state prisons suffer from a serious mental illness (McCorkle, 1995). Self-reports of mental illness suggest this number is closer to 56% (Bureau of Justice Statistics, 2006a). The result of this increase has been large numbers of mentally ill inmates who are in need of treatment while incarcerated in prison. Kupers (1999) and French (1987) have both suggested that prisons have become the largest provider of inpatient mental health treatment for adults in the United States. With this responsibility, prison operations have experienced increased financial costs just to comply with the standards for minimal care of mentally ill inmates.

Correctional budgets have not kept pace with the increase in population and the higher expectations of prisons that include the provision of inmate mental health services. In short, prisons have been expected to “do more with less”. In response, prison officials have diverted funds from unnecessary activities resulting in less inmate access to recreation, visitation, and less funding devoted to inmate programs including education, vocational training, and chemical dependency. At the same time prison officials have increased the use of administrative and disciplinary confinement (Shalev, 2009). The resulting mantra for prisons has become “doing less with more” (Byrne, Hummer and Taxman, 2008, p.2).

Like all prison programs, inmate mental health programs experienced similar funding problems and as a result has made inmate access to mental health services more difficult. Of the more than 700,000 state prison inmates considered to have a mental health problem, approximately one-third received treatment after being admitted into prison. The majority of inmates received treatment in the form of prescribed medication (Bureau of Justice Statistics, 2006a). Thus, the ability of prisons to both treat and involve mentally ill inmates in meaningful activities that promote socialization and self-improvement has decreased significantly.

Mentally disordered inmates including those who are mentally ill, learning disabled and mentally retarded, struggle to navigate the prison environment. These inmates have greater difficulty following prison rules, controlling their anger, and handling the prison social environment. This often results in correctional staff issuing disciplinary infractions that may ultimately result in the transfer to segregation. Once in segregation, these inmates are less able to cope with the severity of the rigor of isolated confinement (Adams and Ferrandino, 2008; Kamel and Kerness, 2003). More often the need to maintain prison order and safety results with mentally disturbed inmates being treated as a risk management problem rather than a person in need of clinical services (Adams and Ferrandino, 2008).

#### Limitations of Prison Rule Infractions

Since the 1974 *Wolf v. McDonnell* decision, prisons have relied on detailed rules generally printed and given to inmates and a due process system to maintain prison order and promote inmate accountability. This system closely reflects the criminal procedure and penal codes used in the free world. That is, correctional officers, like police officers, are responsible for the enforcement of rules and reacting to disturbances. Furthermore,

correctional officers are entrusted with a great deal of discretion as to how they respond to disturbances and rule violations (Flanagan, 1982). When an inmate is charged with a rule violation, most disciplinary systems allow for prehearing detention in segregation similar to pretrial detention in criminal court proceedings (Irwin, 2005). Further due process, as ordered in *Wolff v. McDonnell*, requires that the inmate be afforded a prehearing where he/she is notified of the charges against them. An inmate may challenge the rule violation and have a hearing before a neutral hearing body. These prison courts are often referred to as an adjustment committee or disciplinary committee. According to Flanagan (1982), prison misconduct reports do not experience attrition as is the case in the criminal courts. Instead, most misconduct reports result in some type of formal disposition that include some manner of sanction or loss of privilege.

Inmates charged with rule violations are often allowed to seek disposition through procedure that does not require full due process. According to the decision in *Wolff*, inmates may waive, in writing, many of the procedural due process rights in prison disciplinary hearings. Such waivers allow for an expedited resolution and an outcome seen as more favorable by the inmate. In these situations inmates can explain the circumstances of the alleged misconduct and allow a supervisor to decide the appropriate punishment. These can include verbal reprimand or a brief loss of privilege such as recreation or phone usage. More serious punishments can only be given when the full due process hearing is completed. These serious punishments include disciplinary segregation, extended loss of privileges, monetary restitution and loss of good time credits.

Although informative, the use prison misconduct records as a construct to understand prison adjustment by inmates may be somewhat misleading. The misconduct record is

essentially a record of the frequency of official prison discipline processes. What may be more important is how prison officials respond to the disciplinary violation. In short, the severity of the response to the violation may be a better indicator of maladjustment. The response to the violation can include immediate isolation of the inmate prior to the disciplinary process, disciplinary segregation as punishment for the infraction, and administrative segregation because prison officials have determined the inmate to be a threat to the safety and security of the prison.

Based on the limitations noted by Flanagan (1982), the rationale noted by Van Voorhis (1994) and the multi-purpose role of segregation, this study will utilize several measures of inmate adjustment including minor and major rule infractions and the use of segregation. The use of multiple measures may lead to an alternative understanding of prison adjustment as well as examining the validity of traditional measures.

## **Chapter 3**

### **Methodology**

#### Purpose

The purpose of this research is twofold. First, this research will more closely examine the construct of prison adjustment than used in previous research. That is, prior research has relied heavily on official prison misconduct reports as an expression of prison adjustment. These reports capture only limited behavior, that being, those behaviors prohibited in prison rules. Moreover, misconduct report data are limited to those violations that come to the attention of prison officials and that prison staff choose to use the official conduct report as a response. However, as stated in chapter two, there are many other behaviors that are of concern to prison officials that do not involve the violation of prison rules. These include an inmate's need for protective custody, behavior that presents a potential threat to the safety and security of the prison, and inmates with mental illness who have difficulty adapting to the prison environment. By examining inmate adjustment using segregation as a measure I will capture much of the same behavior that are violations of prison rules but will also include many behaviors and circumstances that are not rule violations. These results may challenge our present understanding of prison adjustment.

A second purpose to this research is to utilize more precise measurements for several of the independent variables. These include the role of child care and custody, commitment to long-term relationships, employment and education attainment.

### Data Source

The data for this study come from the Midwestern State Department of Corrections (MSDOC) and were collected specifically for the present study. When compared to other state prison systems, the MSDOC prison system is smaller than other state prison systems. For example, the MSDOC ranks 39<sup>th</sup> out of 51 State prison systems as far as the total number of incarcerated inmates. It also is one of the ten smallest systems with respect to the number of prison facilities (Bureau of Justice Statistics, 2008). Midwestern State has the 7<sup>th</sup> lowest incarceration rate among all states (MSDOC, 2006). Table 1, adapted from the Bureau of Justice Statistics report (2006b) is a summary of how Midwestern State compares to the Midwest region and the U.S. As could be expected, the incarceration rates for males and females are lower than the national average. However, rates based on race show a lower incarceration rate for whites within both the region and the U.S. The rates for the black and Hispanic population are more consistent with national rates.

Table 1- Rates of incarceration in prison and jail per 100,000 residents

	U.S.	Midwest Region	MSDOC
Males	1,249	1,046	756
Females	121	97	93
White	412	351	290
Black	2,290	2,278	2,418
Hispanic	742	450	739

The generalizability of these finding to other state correctional populations is limited based on the aforementioned differences. However, it is important to clarify that the purpose of this research is not intended to necessarily explain inmate adaptation to prison on a national level. Rather the primary purpose is to examine alternative ways of examining and measuring adaptation to prison.

The decision to place an inmate in segregation, whether punitive or administrative is guided by departmental policy. The MSDOC Policies are consistent with national standards based on accreditation, legal requirements of due process, and the laws of Midwestern State. The MSDOC has sought and received national accreditation from the American Correctional Association in a number of administrative and program areas.

The data used here are from three separate sources. The first portion of the data is a large download from the Midwestern State DOC inmate data system. This data set includes all inmates admitted to the Midwestern State DOC after January 1, 1999 and released from a medium or maximum security prison prior to October 18, 2007<sup>1</sup>. The second source of data is the individual inmate file maintained by the DOC. This “institutional file” follows an inmate throughout his or her incarceration and parole including all intra- and inter- facility transfers. This file contains a myriad of forms and information including copies of inmate disciplinary reports, segregation reports, the pre-sentence investigation and the intake assessment completed by the DOC psychologist. The information contained in this file is used to validate the data contained in the digital data file as well as augment the individual inmate data. For example, the large data file lists the last grade completed for male inmates. The pre-sentence investigation provides information as to whether the inmate completed high school in a traditional manner, or if the inmate obtained some form of a high school equivalency degree. These files were also useful for a better understanding of the individual inmate’s social chronicle including marital status, dependent children, and employment history prior to incarceration. The presentence investigation also contains information on past alcohol and drug treatment participation as well as voluntary and involuntary mental

---

<sup>1</sup> The date of January 1, 1999 represents the time when inmate segregation records were maintained using the DOC inmate data management software. The date of October 18, 2007 is the date of the download and is therefore an arbitrary date.

health interventions. The third and final source of data is the inmate mental health file maintained by the Behavioral Services Unit at Midwestern State DOC. Information from this file includes prison staff referrals for mental health evaluation, psychological needs assessments, and psychiatric diagnoses.

When developing this study and the Institutional Review Board proposal, a preliminary assessment was made to determine what type of data would be available for examination. During this assessment it was determined that the Midwestern State DOC regularly purges inmate records. Of importance for this study is that the DOC Records office only maintains institutional files for three years after release. The files available for review included inmates who entered the prison system after January 1999, and were released during the period January 1, 2005 and October 18, 2007. Therefore, the larger data set will only include inmates released during this time period as well.

The collection of this data, and specifically the file review collection, is time consuming. Therefore the analysis is limited to 200 inmates and data collection occurred in three chronological steps. The first step, using the file management tool included with SPSS 15.0, was the random selection of 100 cases (70 male and 30 female) representing inmates who were not segregated at any point during their incarceration. A second sample of 100 cases (70 male and 30 female) representing inmates who, at some point during their incarceration were placed in segregated confinement, has been randomly chosen for comparison. After these 200 cases were identified, institutional files were reviewed for the previously mentioned social history information. Upon completion of step 2, a review of the inmate mental health file (step 3) was completed. The female population in this research is over sampled. That is, the female population in the MSDOC population is 8.9%. This

research uses a sample population of 30% female, far greater than both the Midwestern State and U.S. prison populations. The over-sampling of female inmates was necessary to provide a more robust sample of cases for analysis.

### Dependent Variables

This research uses two separate variables to measure maladjustment. The first variable examines prison rule infractions and is measured as the number of rule infractions per month of incarceration. This measurement is identical to that used by Toch and Adams (2002). These infractions capture rather minor violations such as failure to make one's bed, being late for a work or education assignment and possession of another inmate's property. These infractions also include more serious offenses such as violence or threats of violence, substance use and sexual misconduct. To better examine this phenomenon, rule infractions are separated into two categories, the first being conduct reports that were handled by the Unit Disciplinary Committee (UDC). This committee traditionally handles more minor rule infractions. Based on their frequent interaction with inmates, this committee may be able to better judge the threat an inmate presents to the unit as well as the institution. Misconduct reports that are handled by the UDC are limited to less serious forms of punishment and cannot place an inmate in disciplinary segregation (IDC) or remove good time credits. The second category is conduct reports handled by the institutional disciplinary committee. These infractions are often times more serious and potentially involve the imposition of the harshest punishments used by prison officials.

As stated previously, individuals in prison can present challenges to prison officials that are not addressed through the prison disciplinary system, including mental illness, past history of disruption, concerns regarding suicide, vulnerability to assault by others and

suspected affiliation with identified threat groups or gangs. These concerns are often times processed using administrative actions such as re-classification to a higher security status, transfer to a more secure prison, and removal from the general population and placed in segregation. Therefore a second dependent variable is the proportion of an inmate's sentence served in segregation and is measured by adding the time spent in disciplinary confinement, protective custody, administrative segregation, and temporary segregation. It is important to note that the various segregation statuses often intersect with each other. More specifically, a single inmate may simultaneously be classified in more than one segregation status. For example, an inmate classified and placed in protective custody may violate prison rules and be subject to disciplinary segregation. Inmates are also many times placed in more than one segregation status consecutively. For example, an inmate who is suspected of assaulting another inmate can be placed in immediate segregation pending investigation and the outcome of the misconduct report. If the punishment for the rule violation includes disciplinary segregation, the disciplinary segregation time is run consecutive to the immediate segregation and the inmate is afforded credit for the time served in immediate segregation. This process mirrors actions often taken in the criminal court system. When defendants are sentenced they are traditionally awarded sentence credit for pre-trial detention. Also, an inmate who has served a determinate punishment in disciplinary segregation may immediately be reclassified and placed in administrative confinement because he/she poses a danger to the general prison population. The intricacies of segregation status are illustrated in Figure 2 (Chapter 1). Furthermore, those inmates with longer sentences have more opportunities to be placed in segregation and could potentially have more days in segregation which may reflect the length of the sentence rather than prison

adjustment. To illustrate, an inmate serving a 24 month sentence could potentially serve 730 days in segregation, whereas, an inmate serving 48 months could serve 1460 days in segregation. For these reasons the measurement of segregation will involve the total number of days spent in any segregation status and is operationalized as a proportion of the total sentence spent in segregation. This is similar to the rationale to use a rate of rule infractions rather than the number of rule infractions.

### Independent Variables

The independent variables used in this research are similar to those used in other research examining prison adjustment. Four of the variables utilize a more descriptive measurement than is traditionally used by researchers. This research draws from Hirschi's (2002) theory of social bonds as a rationale for the more precise measures. In short, Hirschi's theory posits that those individuals who are tightly bonded to social groups such as family, peers, school and employment are less likely to engage in deviant behavior (Vold, Bernard, and Snipes, 2002).

#### *Educational Achievement*

According to Hirschi (2002) commitment to a pro-social lifestyle involves the completion of sequential tasks that conclude with involvement in the adult social world. Education, and more specifically the completion of high school, is one of these sequential tasks. When measuring education, researchers often use a continuous variable with 12 meaning the completion of high school and values greater than 12 representing secondary educational achievement. Furthermore, researchers often assign the same value of 12 for those individuals who have received a high school equivalency diploma (HSED) or a general education diploma (GED). This latter achievement measure ignores the commitment

required to complete a traditional high school education that results in the granting of a traditional diploma. The present research will measure educational achievement that recognizes the different commitments required to obtain a traditional high school diploma, a HSED or GED, or less than a high school education. This variable is a categorical variable defining whether or not a high school diploma was granted traditionally, through the completion of an HSED or GED program or not at all (no diploma; HSED or GED; traditional HS Diploma). With respect to adjustment in prison, those inmates who have demonstrated a pre-prison commitment to a pro-social lifestyle by earning a high school diploma may choose to navigate their prison sentence pro-socially through adherence to prison rules and expectations. A positive adjustment to prison may offer inmates several benefits including better paying jobs while in prison and improved chances of a favorable parole decision.

### *Employment*

This research utilizes employment as a proxy for involvement in conventional activities. In Hirschi's research on juvenile delinquency, the operationalization of involvement asked in what after school activities youths were involved. Including school sponsored sports and recreation, hobbies and employment. The operationalization of involvement used by Hirschi is less appropriate for adult subjects; therefore involvement is examined through the offender's participation in employment at the time of the offense that resulted in the present incarceration.

Additionally, the measurement of employment should expand beyond the traditional dichotomous measure. The employment variable is measured as a categorical variable consisting of three categories (unemployed, employed part-time or sporadically, and full-time

employment for a year or more). The rationale for the use of this measurement can be found in the previous work of Fagan and Freeman (1999). These authors noted that the participation in legitimate wage earning activities decreases individual involvement in crime and increases the involvement in conventional (legal) activities. Wadsworth (2006) similarly notes that participation in meaningful employment is more than just an avenue to improve individual financial income. The author states that “Work does more than just pay the bills, put food on the table, and facilitate recreation-it can provide a sense of involvement in a larger organization, impart a sense of accomplishment, offer goals and rewards, and provide a sense of stability and security. (p. 346)” Those inmates that have used pre-prison employment as a way to improve their quality of life on the outside, may seek to continue this while in prison through participation in prison programs and avoiding disciplinary restrictions and isolation.

#### *Marriage and dependent children*

In this research, Hirschi’s (2002) notion of attachment is examined through marital status with those individuals that are married having a stronger attachment to and affection for others than those who are single or divorced. More recent research has expanded this measure. Horney et al (1995), Griffin and Armstrong (2003), Li and MacKenzie (2003), and Hepburn and Griffin (2004) measured romantic relationships to include not only married and unmarried, but also those that are cohabiting. In this research, marital status is measured categorically as single or divorced; cohabitating or married. Some caution must be used when interpreting marital status with prison research such as that presented here. This measure of attachment is a status present prior to incarceration. Moreover, the measurement does not assess the quality of the relationship (good marriage, dysfunctional relationship,

etc.), or speak to the quality of the interaction between the inmate and his/her spouse while incarcerated. To the degree to which these relationships persist while incarcerated, however, they may exert some social control over inmates' behavior while imprisoned as an effort to maintain visitation and communication rights with loved ones.

A second measure of attachment examines custody and care of minor children. The prison data gathered at admission records how many dependent children an inmate has at the time of admission. The data do not specify whether or not the inmate lived with or cared for his/her dependent children. That is to say, not all inmates who have children are involved in their care and custody. More specifically, children could be cared for by other relatives, foster care, or become wards of the State when parental rights are terminated. With that in mind this second measure examines whether an inmate has dependent children and if they were directly involved in their care and custody at the time they committed the crime which resulted in their present incarceration. The influence of dependent children is measured categorically (no children; children but not under their care; and care and custody of children) and could possibly exert the same affect on inmate adjustment as marital status.

### *Control Variables*

The decision to include other control variables is justified through prior empirical findings in research examining prison adjustment. The control variables include the demographic descriptors of age as a continuous measurement; racial categories including white, black, Hispanic, Native American and other; and sex (0=female, 1=male). Criminal history will be measured as the number of prior prison terms. A second measure of criminal history is a dichotomous measure for conviction of a violent offense not including present prison term. The nature of the current prison sentence is examined in three ways. The

primary observation is the length of the current prison sentence measured in months. A second measure will address the number of conviction charges for which the inmate is presently incarcerated. Lastly, a dichotomous measure is used for whether or not the offender is serving time for a violent offense.

### *Mental Illness*

The MSDOC, like many other prison systems, has developed specific policies to address the growing mental health needs of its population. Specific portions of these policies detail how prison mental health staff is to detect, diagnose and treat inmates with mental health problems. MSDOC Administrative Regulation 115.3-Mental Health Services specifically outlines the responsibilities of the Behavioral Health Unit and the provision of mental health services. Section VI-A defines inmates with a major mental illness as those who have received a Diagnostic and Statistical Manual-IV (DSM-IV) diagnosis of a psychotic disorder, schizophrenia-spectrum disorder, or a mood disorder with psychotic features. The regulation contains secondary criteria for the identification of others with serious mental illness. Accordingly those inmates who have been diagnosed with bipolar disorder, depressive disorder, other mood disorder, posttraumatic stress disorder, obsessive compulsive disorder, panic disorder, or other anxiety disorder, and who meet the threshold for high severity (multiple prior hospitalizations, civil commitments, or multiple suicide attempts) are defined as having a major mental illness. Therefore mental illness will be measured as a categorical variable (no mental illness; presence of one of two secondary criteria; major mental illness). This measurement is taken from the MSDOC mental health file.

### Analytical Strategy

This study utilizes two random samples of inmates who have been placed in segregated confinement at least once during their incarceration and a separate sample of inmates who were never placed in segregation during their incarceration. Each sample will consist of 100 inmates (30 female, 70 male). The initial analysis will focus on how well the samples reflect the larger subject pool. In short, do the random samples represent the population under study and what, if any, are the significant differences? Following the analysis of the representative quality of the samples, a variety of comparison measures are used including chi square, t tests, and analysis of variance.

Several strategies of bivariate analysis examine the association between the variables. The initial strategy uses Pearson's Product Moment Correlation to examine covariance between the dependent and independent variables as well as the correlation among independent variables and between the two dependent variables. A list of variables used in the research is displayed in Appendix A.

Further bivariate analysis involved the comparison of independent variables for the two separate samples to determine if there are significant differences in the variable distribution for the non-segregated sample compared to the segregated sample ( $p \leq .05$ ). For the categorical variables chi square ( $X^2$ ) is used. To examine the differences between samples for the ratio variables, the appropriate technique to use is the t test for independent samples. The analysis concludes with the comparison of male inmates to female inmates in both the segregated and non-segregated samples.

## Chapter 4

### Results and Analysis

The primary purpose of the present study was to compare the characteristics of inmates who were placed in segregated confinement at some time during their incarceration with inmates who had not been placed in segregation to address whether or not the alternative measure of inmate adjustment (time spent in segregation) better captures the concept than the more common outcome measure of rule violations. This chapter begins with a brief discussion of the sampling results and presents the descriptive statistics for these samples. Following this is a presentation and discussion of the bivariate analysis. Finally, a summary of the findings is presented.

#### Sampling Strategy

The descriptive statistics for segregated and non-segregated samples are displayed in Table 2. Although comparisons are not made between these groups, it is worth noting that 43% of inmates spent some portion of their sentence in segregated confinement.

Table 2-Frequency Distributions

	Variable	Non-Seg (N=1844) 57%	Seg (N=1395) 43%
Dependent Variables	UDC RATE	5.08	7.5
	IDC RATE	4.7	5.1
	Proportion of sentence in seg	NA	.18
	Single	58%	63%

Independent and Control Variables	Married or Cohab	25%	22%
	Divorced	17%	15%
	Mean # of Dependents	1.68	1.47
	Mean Age	32.3	29.6
	Proportion Male	.83	.87
	White	61%	58%
	Black	17%	23%
	Hispanic	17%	12%
	Native American	5%	5%
	Other	1%	2%
	Proportion with Prior violence	.52	.63
	Current Sentence Mean Maximum Months	43	78
	Mean # of conviction charges	1.63	1.96
	Proportion With Present Violent Offense	.19	.26

Four separate samples were then created from these two pools. The intent was to gather seventy male and thirty female cases from each pool for a total of 200. After these cases were identified, a review of the inmate institutional file was completed to gather more detailed data. During the course of this review several inmate files were unable to be located. This required second and third random samplings to replace those cases with missing inmate files.

The descriptive statistics for several variables indicated a high kurtosis. Three variables in particular appeared to have a peaked distribution (rate of UDC violations, rate of IDC violations and the proportion of sentence served in segregation). A common strategy to address the problems with variables that have abnormal distributions is to use a logical transformation (natural log) of the variable (Greene, 1997). The kurtosis statistics for these variables is reported in Table 3 for males and Table 4 for females. When conducting the t-tests of independent samples, any conflict of the results with the non-transformed and transformed variables will be noted in the individual tables.

Table 3- Kurtosis Statistics-Male

	Male non-segregated population	Male non-segregated sample	Male segregated population	Male segregated sample
UDC Rate	16.64	15.57	12.91	2.38
lnUDC Rate	-1.125	-1.317	-.799	-.617
IDC Rate	15.31	3.64	10.46	5.83
lnIDC Rate	-1.085	-1.345	-.271	.083
Proseg	NA	NA	1.58	.843
lnProseg	NA	NA	.732	.112

Table 4- Kurtosis Statistics-Female

	Female non-segregated population	Female non-segregated sample	Female segregated population	Female segregated sample
UDC Rate	32.85	.024	2.92	10.08
lnUDC Rate	-.989	-1.71	-.915	-.995
IDC Rate	25.21	8.56	32.346	22.09
lnIDC Rate	-.379	-1.08	.013	1.462
Proseg	NA	NA	15.67	5.01
lnProseg	NA	NA	11.16	4.06

#### Representativeness of Samples

Samples gathered should reflect the population under examination. Although this sample was gathered randomly, it is unrealistic, based on the number of parameters in the study, that the samples would not differ from their respective populations on all parameters

(Shadish, Cook and Campbell, 2002). Based on the purposive nature of the samples, samples are compared to the specific population from which they were drawn. Table 5 compares the sample of non-segregated males with the population of non-segregated males. When conducting secondary data collection using inmate files, one case was incorrectly listed in the non-segregated sample. A more in-depth file review revealed that in that case, the inmate had actually been segregated at some point during their incarceration. This resulted in unequal sample sizes for non-segregated inmates (n=69) and segregated inmates (n=71).

Table 5-Male Non-Segregated

	Population N=1461		Sample n=69		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
Dependent Variables					
UDC Rate	5.35	8.38	4.98	7.27	.717
IDC Rate	5.07	8.44	3.78	5.64	.208
Independent and Control Variables					
Maximum Sentence in Months	45.49	34.63	40.35	25.64	.224
Number of Charges	1.62	1.03	1.65	.95	.798
Present Violent Offense	.20	.40	.28	.45	.196
Prior Violent Offense	.59	.49	.59	.49	.992
Age	32.52	10.23	32.32	8.43	.875
Number of Dependent Children	1.65	1.74	1.81	1.81	.445

Chi Square Tests					
	N	(%)	n	(%)	
Race					$X^2 = .875^\dagger$
White	861	(59%)	40	(58%)	
Black	259	(18%)	12	(17%)	
Hispanic	284	(19%)	14	(20%)	
Native American	49	(3%)	3	(4%)	
Other	8	(1%)	0	(0%)	
Marital Status	N	(%)	n	(%)	$X^2 = .381$
Single	863	(59%)	44	(64%)	
Married or Cohabiting	360	(25%)	12	(17%)	
Divorced	238	(16%)	13	(19%)	

\* $p < .05$

† Two (2) cells in the Chi Square analysis have a count less than 5. Therefore Chi Square results are not valid.

The comparison analysis included t-tests for independent samples for the continuous variables and Chi Square analysis for the categorical variables (race and marital status). Using an alpha of .05, no statistically significant differences were observed between the population of non-segregated males and the samples for non-segregated males.

The Chi Square statistic for race, however, revealed that two categories of race (Native American and “other”) had numbers in the sample that were inadequate for Chi Square. One of the assumptions of Chi Square is large sample sizes (Sheskin, 2007). There are only three Native Americans and no “other” in the sample of male non-segregated inmates. An alternative analytical tool for small samples is the Fisher’s Exact Test. The Fisher’s exact test is the same as a Chi Square but is better suited for small samples and can only be done using a 2x2 table (Sheskin, 2007). This procedure requires recoding of the race variable for the alternative analysis. To examine if there were significant differences in the distribution of Native Americans and those in the “other” category, the distribution of Native Americans were compared to all categories of races individually and excluding those races

that were not in the comparison. For example the distribution of Native Americans and whites in the population were compared with Native American and whites in the sample and excluded black, Hispanic, and those in the “other” race categories. This process was repeated alternating the various race categories for a total of ten different Fisher’s Exact comparisons. The results revealed that for the male non-segregated cases, the distribution of race was not statistically significant when comparing the sample to the population.

The results of the t-tests, Chi Square, and the Fisher’s Exact indicate that the sample of non-segregated males properly reflects the population of non-segregated males for the variables measured. Therefore any observed differences in these groups are most likely not due to chance or sampling error.

Table 6 displays the results of the sample population comparison for males who were segregated. Among the continuous variables, the t-tests indicate no significant difference between the population parameters and the sample. The same problem with Native American and “other” race categories observed in the non-segregated comparison was present with males who were segregated. The Fisher’s Exact analyses for male segregated inmates reveals the distribution of race was not statistically significant when comparing the sample to the population.

The results of the t-tests, Chi Square, and the Fisher’s Exact indicate that the sample of segregated males properly reflects the population of segregated males for the variables measured. Therefore any observed differences in these groups are most likely not due to chance or sampling error.

Table 6-Male Segregated

	Population N=1146		Sample n=71		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
Dependent Variables					
UDC Rate	7.31	9.29	6.24	6.25	.338
IDC Rate	5.25	6.48	5.34	6.71	.911
Segregation	.19	.265	.22	.294	.453
Independent and Control Variables					
Maximum Sentence in Months	73.74	354.38	63.27	42.34	.804
Number of Charges	1.94	1.33	1.94	1.308	.998
Present Violent Offense	.28	.449	.34	.476	.286
Prior Violent Offense	.69	.459	.70	.460	.901
Age	29.60	9.73	27.93	8.03	.096
Number of Dependent Children	1.42	1.67	1.38	1.62	.833
Chi Square Tests					
	N	(%)	N	(%)	$X^2 = .791^\dagger$
Race					
White	671	(59%)	37	(52%)	
Black	263	(23%)	17	(24%)	
Hispanic	150	(13%)	12	(17%)	
Native American	53	(5%)	4	(6%)	
Other	10	(1%)	1	(1%)	
Marital					
	N	(%)	n	(%)	$X^2 = .144$

Status				
Single	737	(64%)	53	(75%)
Married or Cohabiting	247	(22%)	13	(18%)
Divorced	162	(14%)	5	(7%)

\*p< .05

† Two (2) cells in the Chi Square analysis have a count less than 5. Therefore Chi Square results are not valid.

The results for female inmates are displayed in Tables 7 and 8. When comparing the population of non-segregated females with the sample of non-segregated females (Table 7), a statistically significant difference for the rate of IDC rules violations was observed. This was observed only when the natural log form of the variable was compared. The statistically significant difference is most likely due to statistical outliers in the sample of female non-segregated inmates (n=30). When examining the Chi Square results for race, this comparison also had cells that were too small and violated the Chi Square assumption of large sample (black, Hispanic and “other”) (see Appendix B for results). These results indicate that Native Americans are over-represented in the sample of non-segregated female inmates. The results indicate that other than the rate of IDC violations and Native Americans, the sample of non-segregated females represents the population from which it was drawn.

Table 7-Female Non-Segregated

	Population N=278		Sample n=30		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
Dependent Variables					
UDC Rate	3.59	6.49	5.35	1.11	.158
IDC Rate	2.79	5.58	7.10	11.62	.054**
Independent and Control Variables					
Maximum Sentence in Months	30.90	30.03	38.20	5.08	.172

Time Served in Months	10.13	14.62	14.3	14.62	.137
Number of Charges	1.69	1.25	1.73	1.31	.845
Present Violent Offense	.11	.31	.20	.41	.238
Prior Violent Offense	.12	.32	.167	.379	.450
Age	31.23	8.20	30.63	8.06	.706
Number of Dependent Children	1.76	1.68	2.07	1.60	.333
Chi Square Tests					
	N	(%)	n	(%)	$X^2 = .173$ †
Race					
White	199	(72%)	20	(67%)	
Black	38	(14%)	2	(7%)	
Hispanic	13	(5%)	1	(3%)	
Native American	26	(9%)	7	(23%)	
Other	2	(1%)	0	(0%)	
Marital Status					
Single	153	(55%)	16	(53%)	
Married or Cohabiting	73	(26%)	6	(20%)	
Divorced	52	(19%)	8	(27%)	

\* $p < .05$

\*\* logged is significant ( $p = .019$ )

† Four (4) cells in the Chi Square analysis have a count less than 5. Therefore Chi Square results are not valid.

When examining the results comparing the population of segregated females with the sample (Table 8), the only significant difference was observed with the age variable. The

sample of segregated females had a considerably higher mean age (35.13) than the population pool (29.62). The difference can be attributed to sampling error. As was the case with the previous population comparisons, the sample of segregated females had small cell numbers for the race variable. The results of the Fischer's Exact test indicated that there was no significant difference for the distribution of races between the population of segregated female inmates and the sample (results are in Appendix B).

Table 8-Female Segregated

	Population N=154		Sample n=30		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
<b>Dependent Variables</b>					
UDC Rate	6.48	7.53	6.61	10.88	.934
IDC Rate	4.34	5.69	4.92	9.52	.654
Segregation	.08	.15	.07	.10	.723
<b>Independent and Control Variables</b>					
Maximum Sentence in Months	123.38	961.93	40.03	29.38	.636
Number of Charges	1.91	1.43	3.07	5.50	.263
Present Violent Offense	.156	.364	.200	.407	.552
Prior Violent Offense	.169	.376	.267	.450	.271
Age	29.62	8.16	35.13	9.50	.001
Number of Dependent Children	1.83	1.68	1.77	2.05	.853

Chi Square Tests					
	N	(%)	n	(%)	
Race					$X^2=.432†$
White	91	(59%)	19	(63%)	
Black	35	(23%)	6	(20%)	
Hispanic	10	(6%)	2	(7%)	
Native American	15	(10%)	1	(3%)	
Other	3	(2%)	2	(7%)	
Marital Status					$X^2=.785$
Single	83	(54%)	17	(57%)	
Married or Cohabiting	45	(29%)	7	(23%)	
Divorced	26	(20%)	6	(20%)	

\* $p < .05$

\*\* logged is significant ( $p=.019$ )

† Four (4) cells in the Chi Square analysis have a count less than 5. Therefore Chi Square results are not valid.

### Sample Comparisons

The next step in the analytical strategy is to compare the samples. As was noted, after the sample were identified, file reviews were conducted to gather additional information that was not available in the large data file in stage one. These include measures of the number of prior prison terms, the last grade completed, educational achievement (no HS diploma, GED, high school diploma), major mental illness criteria as defined by MSDOC (no major mental illness, one of two secondary criteria, major mental illness as defined by policy), employment status at time of offense (unemployed, employed part-time, employed full-time), and dependent care and custody (no children, children but no care or custody, children with care and custody). The frequency distributions of the samples are displayed in Table 9. It is important to note that for both the male non-segregated sample and the female non-

segregated sample, neither sample had an inmate with a major mental illness as defined by policy. With this lack of variation in the cells, no Fisher's Exact analysis is conducted.

Table 9-Frequency Distribution for Samples

	Male Non- Segregated n=69	Male Segregated n=71	Female Non- Segregated n=30	Female Segregated n=30
	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$
<b>Dependent Variables</b>				
UDC Rate	4.98	6.24	5.34	6.61
IDC Rate	3.78	5.34	7.10	4.92
Segregation		.22		.10
<b>Independent Variables</b>				
<b>Marital Status</b>				
Single	42 (61%)	42 (59%)	20 (67%)	19 (63%)
Married or Cohabiting	17 (25%)	20 (28%)	6 (20%)	7 (23%)
Divorced	10 (14%)	9 (13%)	4 (13%)	4 (13%)
<b>Education</b>				
None	36 (52%)	31 (44%)	8 (27%)	15 (50%)
GED	17 (25%)	23 (32%)	13 (43%)	6 (20%)
Diploma	16 (23%)	17 (24%)	9 (30%)	9 (30%)
<b>Employment at time of offense</b>				
Unemployed	44 (64%)	49 (69%)	22 (73%)	17 (57%)
Part-Time	9 (13%)	3 (4%)	4 (13%)	7 (23%)
Full-Time	16 (23%)	19 (27%)	4 (13%)	6 (20%)
<b>Dependent Care</b>				
No Children	20 (29%)	30 (42%)	7 (23%)	12 (40%)
Children no care	44 (64%)	37 (52%)	14 (47%)	17 (57%)
Care and Custody of Children	5 (7%)	4 (6%)	9 (30%)	1 (3%)
<b>Mental Illness</b>				
None	59 (86%)	48 (68%)	24 (80%)	15 (50%)
Secondary Criteria	10 (14%)	21 (30%)	6 (20%)	14 (47%)
Major MI	0 (0%)	2 (3%)	0 (0%)	1 (3%)

Control Variables				
Age	32.32	27.93	30.63	35.13
Race				
White	40 (58%)	37 (52%)	20 (67%)	19 (63%)
Black	12 (17%)	17 (24%)	2 (7%)	6 (20)
Hispanic	14 (20%)	12 (17%)	1 (3%)	2 (7%)
Native American	3 (4%)	4 (6%)	7 (23%)	1 (3%)
Other	0 (0%)	1 (1%)	0 (0%)	2 (7%)
Maximum Sentence in Months	40.35	63.27	38.30	40.03
Number of Offenses	1.65	1.94	1.73	3.07
Present Violent Offense	.28	.34	.20	.20
Prior Violent Offense	.59	.70	.17	.27
Prior Prison	.30	.66	.30	.40

*Male Non-Segregated and Segregated Sample Comparisons*

The t-test results for the comparison of male non-segregated and male segregated samples are displayed in Table 10.

Table 10-Male Non-Segregated and Male Segregated Samples

Dependent Variables	Male Non-Segregated n=69		Male Segregated n=71		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
UDC Rate	4.98	7.27	6.24	6.25	.273
IDC Rate	3.78	5.64	5.34	6.71	.138
Maximum Sentence in	40.35	25.63	63.27	42.34	.000*

Months					
Number of Charges	1.65	.95	1.94	1.31	.135
Present Violent Offense	.27	.45	.33	.47	.425
Prior Violent Offense	.59	.49	.70	.46	.175
Prior Prison	.30	.62	.66	1.17	.026*
Age	32.32	8.47	27.93	8.03	.002*

\*p< .05

These results indicate a statistically significant difference in the length of sentence between non-segregated and segregated males. That is, males who were segregated had sentences almost two years longer than males who were not segregated. Furthermore, males who were segregated had more prior prison terms and were an average of 4.4 years younger than males who were not segregated. It is interesting to note that males who were segregated did not receive a higher rate of rule infractions (either UDC or IDC) than males who were not segregated.

As was observed in previous analysis, the small sample sizes involved in the research violates the assumption of large samples required for traditional Chi Square analysis. Therefore the Fisher's Exact strategy was applied to the sample comparisons. These results are displayed in Table 11.

Table 11-Fisher's Exact Results Male and Female Samples						
Category	Variable	Male No-Seg and Seg	Female No-Seg and Seg	Male and Female No-Seg	Male and Female Seg	
Race	White and Black	.226	.167	.139	.334	
	White and Hispanic	.524	.500	.034*	.132	
	White and Native American	.473	.064	.033*	.466	
	White and Other	.487	.256	†	.286	
	Black and Hispanic	.257	.661	.473	.340	
	Black and Native American	.630	.020*	.009*	.633	
	Black and Other	.600	.622	†	.215	
	Hispanic and Native American	.463	.152	.002*	.624	
	Hispanic and Other	.481	.600	†	.121	
	Native American and Other	.625	.067	†	.286	
	Marital Status	Single and Married	.494	.574	.236	.248
		Single and Divorced	.032*	.412	.511	.048
		Married and Divorced	.101	.427	.248	.249
	Education	None and GED	.178	.031*	.019*	.197
		None and HS Diploma	.389	.254	.088	.531
GED and HS Diploma		.391	.210	.392	.197	
Employment	Not Employed	.066	.203	.566	.009*	

	and Part Time Not Employed and Full Time	.516	.283	.197	.547
	Part Time and Full Time	.077	.608	.381	.016*
Care and Custody	No Children and No Care	.079	.390	.530	.468
	No Children and Care	.305	.008*	.020*	.574
	No Care and Care	.613	.014	.006*	.514
Mental Illness	None and Secondary Criteria	.020*	.021	.341	.074
	None and Major MI	.208	.400	†	.572
	Secondary Criteria and Major MI	.479	.741	†	.660

---

†= two cells within the 2x2 analysis were constant and a comparison was not possible

Two variables were significantly different when comparing non-segregated and segregated males. For the marital status variables, slightly more males in the non-segregated sample were either single (2%) or divorced (1%). This suggests that when comparing males who were single with males who were divorced, non-segregated males were more often single. The second significant variable was observed when comparing the distribution of those without a mental illness diagnosis and those who had one of the two secondary conditions necessary for being categorized as having a major mental illness. To be specific, males who were segregated had a higher frequency of having a secondary condition than those who were not segregated.

*Female Non-Segregated and Segregated Sample Comparisons*

When comparing the female non-segregated sample with the female segregated sample (Table 12). It is important to note that although the average age of females in the segregated sample was significantly higher than that of the population from which they were drawn from, the difference in the average age of females in the non-segregated sample and the age of females in the segregated sample (4.5 years) was not statistically significant. This observation further convolutes the interpretation of the effects of age with the female samples. Similarly, when comparing Native American females, and black females the higher frequency of Native American females in the non-segregated sample and the higher frequency of black females in the segregated sample may be a reflection of the sampling error previously discussed.

Table 12-Female Non-Segregated and Segregated Samples

	Female Non-Segregated n=30		Female Segregated n=30		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
Dependent Variables					
UDC Rate	5.35	6.06	6.61	10.88	.580
IDC Rate	7.10	11.62	4.92	9.52	.430
Control Variables					
Maximum Sentence in Months	38.20	27.86	40.03	29.38	.805
Number of Charges	1.73	1.31	3.06	5.50	.201
Present Violent Offense	.20	.41	.20	.41	1.00

Prior Violent Offense	.167	.38	.27	.45	.356
Prior Prison	.30	.95	.40	.72	.649
Age	30.63	8.01	35.13	9.50	.052

\*  $p < .05$

When examining the education variable among non-segregated females and segregated females, those who were not segregated more frequently had received their GED and those who were segregated more often had less than a high school education (-23%). When examining the distribution of the dependent care variable, the results indicate that when comparing women who had dependent children but were not caring for them at the time of their offense with those who had dependent children and were responsible for their care, a smaller proportion of women who had care and custody were segregated (+27%) than women who had no care and custody of their dependent children (-10%). Finally, similar to results observed for the male samples and mental illness, females who were segregated had a higher frequency of having one of the two necessary conditions needed for a major mental illness classification, than those who were not segregated.

#### *Comparison of Non-Segregated Males and Females*

When comparing non-segregated males with non-segregated females (Table 13), significant differences were observed for prior violent offense. Thirty-two percent more of the non-segregated males had a prior violent offense compared to the non-segregated females. The observed differences in race, specifically racial category of Native American females is likely due to the overrepresentation of this category in the sample compared to the population. Other observations from the Fisher's Exact tests in Table 11 show that for educational achievement the distribution of inmates who have not completed high school and

those who received a GED is significantly different for non-segregated males compared to non-segregated females. To elaborate, females more frequently completed a GED rather than not completing high school when compared to males. Lastly, when examining the variable for dependent children, smaller proportions of non-segregated males had dependent children than females, and if they did have children, fewer males had care and custody of them.

Table 13-Male and Female Non-Segregated Samples

	Male Non-Segregated n=69		Female Non-Segregated n=30		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
Dependent Variables					
UDC Rate	4.98	7.27	5.35	1.11	.811
IDC Rate	3.78	5.64	7.10	11.62	.145
Control Variables					
Maximum Sentence in Months	40.35	25.63	38.20	27.86	.710
Number of Charges	1.65	.95	1.73	1.31	.730
Present Violent Offense	.27	.45	.20	.41	.433
Prior Violent Offense	.59	.49	.17	.38	.000*
Prior Prison	.30	.62	.30	.95	.979
Age	32.32	8.47	30.63	8.01	.356

\* p < .05

*Comparison of Segregated Males and Females*

Finally, with respect to sample comparisons, male segregated inmates were compared to female segregated inmates. These results are displayed in Table 14 and in Table 11.

Table 14-Male and Female Segregated Samples

	Male Segregated n=71		Female Segregated n=30		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
<b>Dependent Variables</b>					
UDC Rate	6.24	6.25	6.61	10.88	.800
IDC Rate	5.34	6.71	4.92	9.52	.830
<b>Control Variables</b>					
Segregation	.21	.294	.07	.100	.000*
Maximum Sentence in Months	63.27	42.34	40.03	29.38	.007*
Number of Charges	1.94	1.31	3.06	5.50	.277
Present Violent Offense	.33	.47	.20	.41	.169
Prior Violent Offense	.70	.46	.27	.45	.000*
Prior Prison	.66	1.17	.40	.72	.259
Age	27.93	8.03	35.13	9.50	.000*

\* p < .05

For the measures of prison adjustment, there was no significant difference in the rate of rule infractions handled informally (UDC Rate) or the rate of rule infractions handled

formally (IDC Rate). However, when comparing segregated males with segregated females, males served 14% more of their sentences in segregation than did females. Males also had a statistically significant longer sentence (over 23 months longer) and served over a year longer in prison than females. Among the segregated samples, males more frequently (70% versus 27%) had a prior violent conviction than did females. For marital status, slightly more segregated females were single rather than divorced compared to males who were segregated. Lastly, when examining those who were unemployed to those who were part-time employed, segregated females had greater proportions of employed part-time when compared to males. Interestingly, when comparing part-time employment to full-time employment, segregated males were more frequently employed full-time than the segregated females. Finally, the t-test indicates that segregated females were over seven years older than the males. The statistical significance of this difference may be due to the sampling error of the female segregation sample discussed earlier.

#### Dismissed Misconduct Violations

As was noted by Flanagan (1982), prison rule violations are subject to a great deal of discretion and as such, prison rule violations often experience a high attrition rate similar to criminal offenses. That is, prison rule violations may be decreased in their severity or dropped altogether as part of the inmate due process system. Evidence of this can be found in the decision to handle rule violations formally (IDC) or informally (UDC). Based on this discretion and attrition, it is important to examine rule violations that have been dismissed either through the informal hearing (UDC) or formal hearing (IDC). Therefore variables were created to examine the rate of UDC dismissals and IDC dismissals. For proper comparison with the non-dismissed violations, the natural log of the dismissed variables was

also used. The frequency distribution for the dismissed variables among the samples is displayed in Table 15.

Table 15-Frequency Distribution of Dismissed Misconduct Charges

	Male Non-Segregated	Male Segregated	Female Non-Segregated	Female Segregated
Dismissed UDC Rate	.207	.395	.013	.017
(ln)Dismissed UDC Rate	.165	.288	.012	.015
Dismissed IDC Rate	.250	1.01	.029	.021
(ln)Dismissed IDC Rate	.191	.590	.025	.019

T-tests were conducted comparing the distribution of dismissed rule violations. The results for all four models are displayed in Tables 16 through 19 (Appendix C). When comparing the male samples, the rate of UDC dismissals was slightly higher for the segregated sample and the IDC dismissal rate for the segregated sample was over four times greater than the non-segregated. When comparing the females samples the results indicate no significant difference in IDC or UDC dismissal rate for the female samples.

When comparing the rate of dismissal among male and female inmates the rate for both UDC and IDC were significant. In fact, the results suggest that male rule violations are dismissed at a rate ten times greater than for female inmates. The results of these models suggest that the discretion inherent in both the inmate disciplinary process and the decisions to place an inmate in segregation interact in an important way. More specifically, for male inmates, there was no significant difference between the non-segregated and segregated inmates for the rate of rule infractions. The higher rate of dismissed violations among segregated males may be an indication that prison officials use the behavior detailed in the

misconduct report to segregate an inmate, but do not find them culpable for the actual rule violation.

As a final analysis, a Pearson's Correlation Coefficient was calculated examining the rate of rule violations and the proportion of sentence served in segregation. Since the samples used are purposive, this calculation was conducted using the population of inmates under study (N=3239). The results of the Pearson's Correlation are displayed in Table 20.

Table 20- Pearson's Correlation Coefficients

	Rate of UDC Violations	Rate of IDC Violations	Proportion of Sentence in Segregation
Rate of UDC Violations	1	.290*	.052*
Rate of IDC Violations	.290*	1	-.064*
Proportion of Sentence in Segregation	.052*	-.064*	1

\*=Correlation is significant at the .01 level (2-tailed)

These findings suggest a moderate positive correlation between the rate of UDC violations and the rate of IDC violations. Additionally, the rate of UDC violations has a weak correlation with the proportion of sentence served in segregation and only a slight negative correlation between the rate of IDC violations and the proportion of sentence in segregation. This last finding suggests that an increase of IDC violations do not necessarily equate to increased time in segregation for those inmates who violate the rules.

A further discussion of these results follows in Chapter 5. Furthermore, Chapter 5 will address the specific research questions posed in Chapter 1 as well as a further discussion of the findings.

## **Chapter 5**

### **Discussion and Summary**

In this chapter the results of the analysis are discussed starting with the control variables of age, race, criminal history, and current sentence followed by a discussion of independent variables (marital status, education, employment, dependent children and mental illness). After this is an examination of the research questions posed in Chapter 1. Finally, the limitations of the research, potential policy implications, and future research are discussed.

#### Control Variables

As was stated in Chapter 3, the control variables examined were based on their presence in prior research of prison adjustment. Their use here is important because in addition to measuring inmate adjustment through rule violations, the research also examines an alternative measure (segregation). Their inclusion is also necessary to examine the generalizability of the research findings. More clearly stated, these variables are needed to compare these findings with that of prior research.

#### *Age*

The influence of the age of the offender at time of admission was significant only when comparing non-segregated and segregated males. Among the female inmates the sampling results discussed earlier revealed that the sample of female segregated inmates was significantly older than the population (5.5 years). This precludes any discussion of the

importance of age among female inmates in this study. However the significant difference among males is consistent with prior research. As stated earlier, age has been the most significant predictor of inmate adjustment in prior research with younger inmates demonstrating more difficulty in adjustment including more misconduct violations as well as violence towards staff and inmates. The observation that inmates who have been segregated are younger than those who have not been segregated is consistent with other studies and other measures of adjustment. Prior research has noted that younger inmates have more rule violations. This research suggests that prison officials may use segregation as a primary strategy for managing young and disruptive inmates. An alternative explanation is that younger inmates may see themselves as more vulnerable to exploitation by older inmates and use segregated confinement as a way to protect themselves from predatory inmates.

### *Race*

Prior research has concluded that race has an inconsistent influence on prison adjustment. The results here for male inmates show no significant difference with respect to race when comparing non-segregated and segregated inmates. The sampling results observed in the female samples (the over representation of Native American Females) do not permit conclusions regarding Native Americans. The Fisher's Exact results for the white, black, Hispanic, and other categories found no significant differences of the racial distribution. It can be concluded therefore that other than Native Americans, race had no significant influence for either males or females.

### *Criminal History*

The number of prior prison terms was significant only in the model comparing the male samples with segregated males having more prior prison terms than those that were not

segregated. This observation is somewhat contrary to that made by Wolfgang (1961). He observed that inmates with prior prison experience were better able to navigate through their sentence with less conflict with other inmates or staff. The higher rate of prior prison terms among male segregated inmates may be an indication that for these inmates segregation may be one way inmates choose to manage their prison sentence and avoid conflict. An alternative explanation may be that segregated male inmates more often have an anti-social history that includes prior criminal behavior which resulted in prison than non-segregated males. This explanation reflects findings of Toch and Adams (2002) as they suggested that those with adjustment problems are often times chronic and persistent rule violators.

A conviction for a prior violent offense was significant only when comparing the non-segregated males with non-segregated females and when comparing the male and female segregated samples. The lack of significant difference among the gendered samples, and specifically the male samples, is inconsistent with prior research findings. More specifically, prior studies indicate that these inmates with more serious criminal histories, as evidenced by both length of criminal history and prior violent crimes, have more adjustment problems than do those who lack these types of criminal histories. The research presented here does not differentiate the type of rule violations or the rationale for segregating an inmate. It is quite possible that inmates with more serious criminal histories could have rule infractions and be segregated for non-violent reasons. This explanation is consistent with the findings of Cao et. al. (2003) and Finn (1995) that those who had previously committed a violent crime had more non-violent prison adjustment problems and less violent problems.

### *Current Sentence*

Sentence severity was measured in two ways. First, the length of the current sentence was examined using the maximum months an inmate could potentially serve. In the model comparing male inmates, those who were segregated averaged almost two years longer than non-segregated males. For the female model, there was no significant difference in the sentence length. For the models comparing males to females, segregated females had a significantly shorter sentence than segregated males (2 months). Second, when examining the number of conviction charges for the current sentence, none of the models revealed a statistically significant difference. The last measure of current sentence examined whether or not the current conviction charges included a violent offense. The findings showed no statistically significant difference in the proportion of inmates serving a sentence for a violent crime. This observation was consistent across all sample comparisons.

These findings suggest two things. First, because there was some difference in traditional measures when comparing male inmates, these findings indicate that traditional research strategies used to examine inmate adjustment may also be used when examining segregation as a construct for prison adjustment. Secondly, these results indicate that traditional strategies for examining the adjustment of male inmates may not be the most accurate at capturing the adjustment of female inmates.

### *Mental Illness*

The distribution of mental illness reveals rather interesting results. First, very few inmates in the samples had through diagnosis, a major mental illness. Only two males in the segregated sample and one female in the segregated sample had a DSM IV diagnosis that would result in a major mental illness consistent with MSDOC policy. However, a

considerable number of inmates met one of the two diagnostic criteria for mental illness as written in MSDOC policy. These criteria include a secondary DSM IV diagnosis or a mental health history that included multiple hospitalizations and/or involuntary commitment for mental health reasons. The results show that males with secondary criteria were more frequently segregated than were non-segregated (30% v 14%) and that this difference was statistically significant. Among the female samples 47% of those segregated had a secondary criteria compared to 20% of the non-segregated inmates. This observation was also statistically significant. When comparisons were made across genders, there was no significant difference.

These results can be interpreted in a number of ways. First, these results could indicate that the mental health policy implemented by MSDOC may be inadequate when it comes to inmates with mental health needs. Viewed this way, the policy may be so narrowly constructed that it does not sufficiently identify the mental health needs of inmates and that these inmates are subsequently segregated as a strategy to manage their mental health condition that manifests in disruptive behavior.

Conversely, the results, specifically that lack of significant distribution of those with a major mental illness, may be an indication that the MSDOC policy identifying those with serious mental illness works appropriately. That is, MSDOC manages seriously mentally ill inmates in a way that does not require the use of isolation. Such strategies may include medication or other interventions that avoid the use of isolation. Lastly, the data here does not have information regarding what actions are taken by MSDOC mental health staff with respect to the mental health needs of inmates. It is possible that the correctional staff, less trained in the identification of inmate mental health needs, responds to disruptive mentally ill

inmates as they would any other inmate. MSDOC policy requires that inmates held in segregation be regularly evaluated by mental health staff. As a result of these evaluations mental health staff may more effectively identify those inmates who are mentally ill than corrections officers.

### Research Questions

The main purpose of the study is to examine how maladjustment in prison, when measured using inmate segregation, compares to the more traditional measurement of prison misconduct. A secondary purpose is to examine the differences in male and female adjustment using these measures. Four separate research questions were posed in Chapter 1.

Research Question 1: When comparing segregated inmates with non-segregated inmates, is there a significant difference in the rate of misconduct reports?

The comparison of non-segregated males with segregated males shows no significant difference in either the rate of UDC or IDC violations. Additional analysis suggests that the relationship between rule violations and segregation is complicated. First, the correlation matrix revealed that the relationship between rule violations and segregation is weak at best and is a negative. Second, when examining the rate of dismissed rule violations, those males who were segregated have a significantly higher rate of dismissal of IDC violations. These results suggest that for male inmates, being found guilty of prison rule violations plays a small role in the decision to segregate an inmate as well as for how much segregation is appropriate. The data do suggest a more salient relationship between charging an inmate with rule violations and decisions regarding segregation. It is realistic that segregation decisions, often made as a classification decision and not based on rule violations, are made using suspected rule violations as well as official rule violations. In short, the filing of

charges of rule violations may be more important for segregation decisions than the findings of Institutional Disciplinary Committee decisions.

When examining rule violation and female inmates, the results are less clear. First, the rate of IDC rule violation with the female segregation sample was outside the parameters of the rate for the population. Therefore the comparison of the rate of IDC rule violations between non-segregated and segregated females is not possible. However, the observation that females experience far less attrition of charges of rule violations compared to males offers some interesting insights. First, females are charged with fewer rule violations. This may be an indication that females violate fewer rules than do males. However, females have fewer charges of rule violations dismissed than do males. This may be an indication that rule violations by females are more obvious and easier to prove during the disciplinary hearing process. Although it is not part of the analysis in this research, female rule violations may not only be considered a violation of prison policy but also a violation of their traditional gender role. The use of segregation may then be a response not only to individual inmate disruption but a response to a perception of what Belknap (2001) calls an “evil woman.” In short, women could be penalized, once for a rule violation and also for violating social expectations.

Research Question 2: When comparing segregated inmates with non-segregated inmates, are there significant differences among the independent variables?

As previously discussed these independent variables are based on Hirschi’s theory of social bonds. This research uses three of the four principles of social bonds discussed by Hirschi.

### *Commitment*

Commitment in this research is examined through completion of educational goals. Comparisons were made with those who obtained a traditional high school diploma, received a GED, or had less than a high school education. The comparison among male inmates revealed no significant difference in educational achievement among non-segregated and segregated inmates. Among female inmates, when comparing those who had less than a high school education with those who completed a GED, fewer females with a GED were segregated. When comparing males and females, for those who had not been segregated, greater numbers of females had a GED instead of no high school education than male inmates. These findings may have less to do with the role of educational achievement and segregation and be more of an indicator of the differences in male and female inmates in general.

### *Involvement*

The comparison of male and female segregated inmates reveals how involvement in employment at the time of offense, may influence whether or not an inmate is segregated during their prison term. Females who were employed part-time rather than unemployed were less often segregated than males. However, males who were employed full-time were more frequently segregated than were females. The results for involvement in employment, as is the case in educational achievement, may reflect the differences in male and female offenders generally rather than their adjustment to prison.

*Attachment*

This research uses two variables as a measure of attachment to others. First, with respect to marital status, when comparing males who are single with those who are divorced, slightly more non-segregated males were single than divorced. There was no statistical difference among males who were married or cohabitating. Additionally, differences in marital status were not significant for female inmates. When comparing males to females, females who were segregated were more often single than were males who were segregated.

The second measure of attachment, dependent care, was only significant in the female model. When comparing women without dependent children to those with care and custody of dependent children, the results suggest that fewer women who have care and custody of children are segregated than those without dependent children. Additionally, having children but not the responsibility for their care, is not significant when it comes to the frequency of females being segregated. The lack of significant differences among the male population indicates attachment to dependent children does not influence whether or not a male will be segregated during their incarceration.

Although this research does not directly test the social bonds theory with prison adjustment, it nevertheless offers some insight into how pre-incarceration lifestyle may influence prison adjustment. Social bonds, as examined here, appear to influence prison adjustment along gender lines. That is, measures of social bonds appear to affect females' adjustment. This may suggest that women inmates adjust to prison based on their lifestyle before prison as evidenced by employment and child custody measures. Women who were involved in pros-social activities such as employment, and those who had a demonstrated

attachment to their dependent children, were less often placed in segregated confinement than those without these bonds.

For males, the role of social bonds prior to their incarceration appears to have little if any influence on prison adjustment. It may very well be the case that male inmates adjust to prison based more on their immediate environment rather than pre-incarceration bonds. Although only speculative, this observation would be consistent with a deprivation model of prison adjustment.

Research Question 3: When examining female inmates to male inmates, are there significant differences among the independent variables?

When comparing male inmates who were not segregated to female inmates who were not segregated the only significant difference is males were more likely to have a prior violent conviction compared to females. This finding is consistent with findings of Pollack (2002) that women offenders in general tend to be less violent and have less serious criminal histories than male inmates.

When examining segregated inmates, women had significantly shorter sentences than males (23 months shorter) and had a smaller proportion of inmates who had a conviction for a prior violent offense (.27 versus .70). As was the case with the non-segregated inmates, segregated males are more likely to be repeat offenders and have more serious criminal histories than do females.

Lastly, research question 4 sought to examine the difference between male and female inmates with respect to both the traditional measure of prison adjustment (misconduct report) and the alternative measure examined here (segregation).

Research Question 4: When comparing female inmates to male inmates, are there significant differences in the rate of misconduct reports and the use of segregation?

When comparing segregated males to segregated females, there was no significant difference in the rate of either UDC or IDC violations. This finding might suggest that among segregated inmates, females violate prison rules at the same rate as males. However, when examining the rate of UDC and IDC violations that were dismissed because of lack of evidence or discretion, men who were segregated had almost twenty-three times as many UDC violations and fifty times as many IDC violations dismissed. There are two potential explanations for these findings. First, the disciplinary process used with male inmate is much more discretionary than it is with females. Disciplinary procedures used with segregated males, may be a way to justify the extension of time in segregation through the more subjective inmate classification system. That is, although not revealed in the data, disruptive males may spend more time in administrative segregation than disciplinary segregation. The criteria for administrative confinement is more subjective and classification decisions may be based more on suspected behavior rather than misconduct that is proven in a quasi-adversarial process. In short, for male inmates, misconduct reports may be used to support classification into a segregated status (with indeterminate length) rather than to place an inmate in disciplinary segregation for a determined length.

Female inmates experience fewer overall reports of rule violations and far less attrition once they have been accused of a violation. This suggests that, compared to the process for male inmates, the disciplinary process for females is “cleaner” and more precise. Whereas the discretionary decisions for male inmates happen later in the disciplinary process, the discretion used for female inmates may be more at the front end of the process.

This would result in fewer accusations of rule violation and a higher proportion of guilt findings in disciplinary hearings.

With respect to the amount of time spent in segregation, the results show that women who were segregated spent an average of seven percent of their sentence in segregation status compared to twenty-one percent for males. This may be due to females being less violent in general. In addition, because women are accused of fewer rule violations, there may be less subjective support for segregation decisions based on classification, which are indeterminate in length and may be longer in duration than decisions regarding disciplinary segregation.

#### Strengths and Limitations of the Research

The research presented here has improved upon prior research in a number of ways. First, there are relatively few research studies that examine the use of segregation in the prison setting with most research focusing on super-max confinement. This research has improved our understanding of the more common use of segregation in prison, which includes inmates segregated for short and long periods of time. Secondly, this research utilized a construct of adjustment that has been absent in the literature regarding inmate adaptation to their environment. Much of the value of the findings here is the examination of segregation within the context of inmate rule violations and allows for a more functional approach to the study of inmate adjustment. Third, the research design has made it possible to compare the adjustment of both male and female inmates simultaneously. This offers a clear comparison of a gendered understanding of prison adjustment. Lastly, the research is important for its utilization of some alternative measures for independent variables. Those variables that examine education, employment, child care and custody, and marital status offer greater detail concerning these concepts than some of the traditional measures.

The research is not without its limitations. First, the population under study is limited to an eight year period between January 1999 and October 2007, and then only those released from January 2005 to October 2007. This time frame excludes offenders who have served longer sentences. Those that serve longer sentences are often more violent and more serious offenders. Secondly, the sample size limits some analyses. This limitation is especially important for the analysis of females (limited to samples of 30). However, even in the male samples the analytical strategy was altered to adjust for the effects of small samples. This was most evident in the need to use a Fisher's Exact test rather than traditional Chi Square analysis.

Lastly, the generalizability of the results is not clear. Although the study utilized the most common measure of inmate adjustment, the observation of the number of dismissed rule violations is somewhat startling. Prior research has not acknowledged or examined the influence of dismissed rule violation as part of inmate adjustment. The important question is "do other prison systems experience the same amount of attrition for prison rule violations". In short, is MSDOC unique with respect to the attrition rate for rule violations?

#### Implications for Prison Policy

The findings presented here may assist prison officials in the development and revision of prison policies. First, the frequent use of segregation among the population under study should be considered when prison officials examine both the direct and indirect effects of segregation on inmates. Specifically an examination of how segregation influences security classification, participation in prison programs, and discretionary release. Decisions to segregate inmates, if segregated unnecessarily or too long, may negatively influence discretionary release decisions. Second, when segregation decisions are based on more

subjective criteria and involve long terms of isolation, those inmates who were subjected to these decisions may be unnecessarily considered a high risk to the public and less likely to be released. Moreover, if segregation restricts inmate participation in prescribed prison programs, the lack of completion of these programs may negatively affect release decisions and makes the process of post release re-entry more challenging for those who were unable to complete prison programs. Problems during reentry, caused by a failure to participate in prison programming, has implications for public safety and the degree to which returning inmates commit new crimes.

#### Implications for Future Research

The research presented here has provided evidence that inmate segregation is an important topic for future research. Furthermore, segregation as a construct of inmate adjustment provides an additional way to understand a complex phenomenon. Future research can expand on this study in several ways. First, the research here does not closely examine the length of time in segregation. Such an examination, utilizing linear models, would provide more precise analysis of how individual variables influence the amount of time inmates spend in segregation. Second, based on the results for the independent variables, these variables could be combined to provide an index of the strength of social bonds. For example, the measures of attachment (marital status and dependent children), could be combined to create a comprehensive measure based on attachment to others.

This research has examined a prison system rather than a single prison. Each prison within this system more than likely has some differences that may influence how segregation is used as well as how individual inmates adjust to prison. These differences can include staffing patterns, architecture, program availability and inmate demographics. For example,

some prison systems have designated specific prisons for younger offenders. This is done for a number of reasons that include rehabilitative programs that address the specific needs of youthful offenders. This strategy also concentrates statistically, the most disruptive group of offenders. The result of this concentration could potentially lead to a more stressful and violent incarceration. What may be of value is research that examines how segregation decisions are made and how segregation is used in individual prisons.

Lastly the research presented here does not differentiate the type of rule violations other than whether it is handled with limited due process (UDC) or formal full due process hearings (IDC). What may be equally important is the type of rule violation (weapon, assault, drug, property, etc.). When comparing segregated to non-segregated inmates it would be useful to determine if inmates who are segregated are violating serious rules such as assault and weapons possession or if they are more often violating rules related to more minor offenses such as excess property, being in the wrong area, or disobeying simple orders.

#### Summary

The use of segregation as a measure of prison adjustment offers additional insight into not only characteristics of inmates who may be considered maladjusted but also how prison officials respond to inmates who present management problems in prison. The results here also offer additional insight into the use of prison misconduct reports as a measure of prison adjustment. When allegations of misconduct are considered, it is clear that at least in the case of the Midwestern Department of Corrections, prison officials have a great deal of discretion when employing responses, other than disciplinary segregation, to misconduct. As has been mentioned, the decision to place an inmate in administrative segregation is more subjective in not only the decision to restrict the inmate but also as to the length of the

confinement. Although such decisions may provide prison officials more flexible management of inmates, they do not necessarily hurt those inmates who are confined in administrative segregation. To elaborate further, the subjective nature of administrative segregation decisions has been criticized for its lack of due process (Human Rights Watch, 1999; Kurki and Morris, 2001; Toch, 2001; Irwin, 2005) and the lack of defined release criteria. Disciplinary segregation on the other hand is defined and is determinate in length. Disciplinary segregation generally offers prison officials less discretion in granting additional privileges to inmates in disciplinary status. For example, in the case of MSDOC, disciplinary segregation is limited to 60 days at a time and has strict limits on inmate property and privileges. When inmates are placed in administrative segregation, prison officials often have more flexibility regarding what property and privileges are given to inmates. For example, inmates placed in administrative segregation may be able to, through demonstration of pro-social behavior, earn access to more property and increased privileges not available to inmates in the more restrictive disciplinary segregation.

Such strategies were initially introduced at the Marion Federal Prison as a behavior modification strategy, and are sometimes referred to as the “Marion Model”. In this respect, the subjective nature and vague release criteria may ultimately benefit inmates. The alternative scenario would be less discretion in the disciplinary process, which may result with inmates being found guilty on more disciplinary violations and increased determinate sanctions.

## References

- Adams, K. (1992). Adjusting to prison life. *Crime and Justice* 16, 275-359.
- Adams, K. & Ferrandino, J. (2008). Managing mentally ill inmates in prisons. *Criminal Justice and Behavior* 35(8): 913-927. doi 10.1177/0093854808318624
- Allen, H.E., Latessa, E.J. & Ponder, B.S. (2009). *Corrections in America: An introduction (12<sup>th</sup> ed.)*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Austin, J. & Irwin, J. (2001). *It's about time: America's imprisonment binge*, 3<sup>rd</sup> Edition. Belmont, CA: Wadsworth.
- Baron, R.C. and Salzer, M.S. (2002). Accounting for unemployment among people with mental illness. *Behavioral Sciences and the Law*, 20: 585-599.
- Belknap, J. (2001). *The invisible woman: Gender, crime and justice*. Belmont, CA: Wadsworth.
- Bonta, J & Gendreau, P. (1984). Solitary confinement is not cruel and unusual punishment: People sometimes are!. *Canadian Journal of Criminology* 26:467-78.
- Bonta, J & Gendreau, P. (1990). Reexamining the cruel and unusual punishment of prison life. *Law and Human Behavior* 14: 347-72.
- Bureau of Justice Statistics. (2008). *Prison inmates at midyear 2007*. (NCJ221944). Washington DC: U.S. Department of Justice.
- Bureau of Justice Statistics. (2010). *Prisoners at yearend 2009-advance counts*. (NCJ230189). Washington DC: U.S. Department of Justice.
- Bureau of Justice Statistics. (2009). *Prisoners in 2008*. (NCJ2288417). Washington DC: U.S. Department of Justice.

- Bureau of Justice Statistics, (2006a). *Mental health problems of prison and jail inmates*. (NCJ213600). Washington DC: U.S. Department of Justice.
- Bureau of Justice Statistics (2006b). *Prisoners in 2005*, (NCJ215092). Washington D.C.: U.S.
- Bureau of Justice Statistics. (2004). *State prison expenditures, 2001*. (NCJ202949). Washington DC: U.S. Department of Justice.
- Byrne, J.M., Hummer, D. and Taxman, F.S. (2008). Editor's introduction : Prison violence, prison culture, and offender change. *The culture of prison violence*. J.M Byrne, D. Hummer, and Taxman, Faye S. Boston: Pearson Education.
- Camp, S.D., Gaes, G.G., Langan, N.P., & Saylor, (2003). The influence of prisons on inmate misconduct: A multilevel investigation. *Justice Quarterly* 20(3), 501-533.
- Cao, L., Zhao, J., & Van Dine, S. (2003). Prison disciplinary tickets: A test of the deprivation and importation models. *Journal of Criminal Justice* 25, 103-114.
- Clemmer, D. (1940). *The prison community*. New York: Holt, Rinehart and Winston.
- Cloward, R. A., Ed. (1960). *Social control in the prison: Theoretical studies in social organization of the prison*. New York, Social Science Research Council.
- Cook, T.D. & Campbell, D.T. (1979). *Quasi-experimentation: Design and analysis for field settings*. Boston: Houghton-Mifflin.
- Correctional Association of New York, (2003). *Lockdown New York: Disciplinary confinement in New York State prisons*. The Correctional Association: Correctional Association of New York.

- DeMaio, J.R. (2001). Comment: If you build it, they will come: The threat of overclassification in Wisconsin's supermax prison. *Wisconsin Law Review 1*: 270-311.
- Dhami, M.K., Ayton, P., & Loewenstein, G. (2007). Adaptation to imprisonment: Indigenous or imported. *Criminal Justice and Behavior 34*(8), 1085-1100.
- DiIulio, J. J. (1987). *Governing prisons: A comparative study of correctional management*. New York, The Free Press.
- Edwards, J.J., & Kemp, G.C. (1995). Race, drug of choice, and adjustment to incarceration among male detainees. *Journal of Offender Rehabilitation 22*(3/4), 55-63.
- Finn, M.A. (1995). Disciplinary incidents in prison: Effects of race, economic status, urban residence, prior imprisonment. *Journal of Offender Therapy 22*(1/2), 143-156.
- Flanagan, T.J. (1980). Time served and institutional misconduct: Patterns of involvement in disciplinary infractions among long-term and short-term inmates. *Journal of Criminal Justice 8*, 357-367.
- Foucault, M. (1965). *Madness and civilization: A history of insanity in the age of reason*. New York, Vintage Books.
- French, L. (1987). Victimization of the mentally ill: The unintended consequences of deinstitutionalization. *Social Work*, November-December: 502-505.
- Goffman, E. (1961). *Asylums: Essays on the social situation of mental patients and other inmates*. New York: Random House.
- Greene, W.H. (1997). *Econometric analysis*. Upper Saddle River, NJ: Prentice-Hall
- Haney, C. (2003). Mental health issues in long-term solitary and "supermax" confinement. *Crime and Delinquency 49*(1):124-156.

- Haney, C. and Lynch, M. (1997). Regulating prisons of the future: A psychological analysis of supermax and solitary confinement. *New York University of Law and Social Change* 23: 477
- Hanson, R.W., Moss, C.S., Hosford, R.E., & Johnson, M.E. (1983). Predicting inmate penitentiary adjustment: An assessment of four classificatory methods. *Criminal Justice and Behavior* 10(3), 293-309.
- Harer, M.D., & Steffensmeier, D.J. (1996). Race and prison violence. *Criminology* 34(3), 323-355.
- Heffernan, E. (1972). *Making it in prison: The square, the cool, and the life*. New York: John Wiley and Sons.
- Hirschi, T. (2002). *Causes of delinquency*. New Brunswick, NJ: Transaction Publishers.
- Horney, J., Osgood, D.W., & Marshall, I.H. (1995). Criminal careers in the short-term: Intra-individual variability in crime and its relation to local life circumstances. *American Sociological Review*, 60(5): 655-673.
- Huebner, B. M. (2003). Administrative determinants of inmate violence: A multilevel analysis. *Journal of Criminal Justice* 31, 107-117.
- Human Rights Watch. 1997. Cold storage: Super-Maximum security confinement in Indiana. New York: Human Rights Watch.
- Hutcheson, G. & Sofroniou, N. (1999). *The multivariate social scientist*. London; Sage.
- Irwin, J. (2005). *The warehouse prison: Disposal of the new dangerous class*. Los Angeles: Roxbury publishing.
- Irwin, J. & Cressey, D.R. (1962). Thieves, convicts and the inmate culture. *Social Problems* 10(2): 142-155.

- Isaacs, C. & Lowen, M. (2007). *Buried alive: Solitary confinement in Arizona's prisons and jails*. Tucson, AZ: American Friends Service Committee.
- Jacobs, J.B. (1977). *Stateville: The penitentiary in mass society*. Chicago: University of Chicago Press.
- Jiang, S., and Fisher-Giorlando, M. (2006). Inmate misconduct: A test of the deprivation, importation and situational models. *The Prison Journal* 82(3), 335-358.
- Jiang, S., & Winfree, L.T. (2006). Social support, gender, and inmate adjustment to prison life: Insights from a national sample. *The Prison Journal*, 86(1), 32-55.
- Johnson, R. (2002). *Hard time: Understanding and reforming the prison*. Belmont, CA; Wadsworth.
- Kamel, R. & Kerness, B. (2003). *The prison inside the prison: Control units, supermax prisons, and devices of torture*. Philadelphia: American Friends Service Commission.
- Kondo, L. L. & Ross, D. (2000). Therapeutic jurisprudence: Issues, analysis, and applications: Advocacy of the establishment of mental health specialty courts in the provision of therapeutic justice for mentally ill offenders. *Seattle Law Review*, 24(Fall): 373-465.
- Kupers, T.A. (1999). *Prison Madness: The mental health crisis behind bars and what we must do about it*. San Francisco: Josey-Bass Publishers.
- Kurki, L. & Morris, N. (2001). The purposes, practices and problems of supermax prisons. *Crime and Justice*, 28: 385-424.
- Li, S. D. (2004). The impacts of self control and social bonds on juvenile delinquency in a national sample of midadolescents. *Deviant Behavior*, 25(4): 351-373.

- Li, S. D. & MacKenzie, D.L. (2003). The gendered effects of adult social bonds on the criminal activities of probationers. *Criminal Justice Review*, 28(2): 278-298.
- Longshore, D., Chang, E. & Messina, N. (2005). Self-control and social bonds: A combined control perspective on juvenile offending. *Journal of Quantitative Criminology*, 21(4): 419-437. doi 10.1007/s10940-005-7359-2
- Longshore, D., Chang, E., Hseih, S. & Messina, N. (2004). Self-control and social bonds: A combined control perspective on deviance. *Crime and Delinquency*, 50(4): 542-564.
- Lurigio, A.J & Snowden, J. (2008). Prison culture and the treatment and control of mentally ill offenders. *The culture of prison violence*. J.M Byrne, D. Hummer, and Taxman, Faye S. Boston: Pearson Education: 164-179.
- Mears, D.P and Reisig, M.D. (2006). The theory and practice of supermax prisons. *Punishment and Society*. 8(1):33-57. Doi:10.1037/0278-6133.24.2.225
- Mears, D.P. and Watson, J. (2006). Towards a fair and balanced assessment of supermax prisons. *Justice Quarterly*, 23(2):232-270.
- McCorkle, R.C. (1995). Gender and psychopathology, and institutional behavior: A comparison of male and female mentally ill inmates. *Journal of Criminal Justice*, 23(1): 53-61.
- Myers, L.B., & Levy, G.W. (1978). Description and prediction of the intractable inmate. *Journal of Research in Crime and Delinquency* 15, 214-228.
- Owen, B. (1998). *In the mix: Struggle and survival in a women's prison*. Albany, NY: State University of New York Press.

- Peters, E. M. (1995). Prison before prison: The ancient and medieval worlds. In N. Morris & D.J. Rothman (Eds.), *The oxford history of the prison: The practice of punishment in western society*. New York, Oxford University Press: 3-43.
- Pew Center for the States. (2008). *One in 100: Behind Bars in America 2008*. Retrieved from [http://www.pewcenteronthestates.org/report\\_detail.aspx?id=35904](http://www.pewcenteronthestates.org/report_detail.aspx?id=35904)
- Pisciotta, A. W. (1994). *Benevolent repression: Social control and the American reformatory-prison movement*. New York: New York University Press.
- Pollock, J. (2002). *Women, prison and crime*. 2<sup>nd</sup> Ed. Belmont, CA: Wadsworth Thomson Learning.
- Riveland, C. (1999). *Supermax prisons: General overview and considerations*. National Institute of Corrections. Washington DC: U.S. Department of Justice.
- Rotman, E (1995). The Failure of Reform; United States, 1865-1965. In N. Morris & D.J. Rothman (Eds.), *The oxford history of the prison: The practice of punishment in western society*. New York, Oxford University Press: 151-177.
- Rothman, D. J. (1995). Perfecting the prison: United States, 1789-1865. In N. Morris & D.J. Rothman (Eds.), *The oxford history of the prison: The practice of punishment in western society*. New York, Oxford University Press: 100-116.
- Rothman, D. J. (1971). *The discovery of the asylum: Social order and disorder in the new republic*. Glenview, IL, Scott, Foresman and Company.
- Sampson, R.J. and Laub, J. H. (1993). *Crime in the making: Pathways and turning points through life*. Cambridge, MA: Harvard University Press.
- Seiter, R.P. (2005). *Corrections: An introduction*. Upper Saddle River, N.J.: Prentice Hall.

- Sestoft, D.M., Andersen H.S., Lilleboek, T. and Gabrielsen, G. (1998). Impact of solitary confinement on hospitalization among Danish prisoners in custody. *International Journal of Law and Psychiatry* 21: 99-108.
- Shadish, W.R., Cook, T.D., & Campbell, D.T. (2002). *Experimental and quasi-experimental designs for generalized causal inferences*. Boston, MA: Houghton Mifflin.
- Shalev, S. (2009). *Super max: Controlling risk through solitary confinement*. Devon, U.K.: Willan.
- Stack S., Wasserman, I., & Kern, R. (2004). Adult social bonds and the use of internet pornography. *Social Science Quarterly*, 85(1): 75-88.
- Sullivan, L. (2006). "As populations swell, prisons rethink supermax. *National Public Radio*, July 27, 2006. <http://www.npr.org/templates/story/story.php?storyId=5587644>.
- Sykes, G. M. (1958). *The society of captives: A study of a maximum security prison*. Princeton, New Jersey, Princeton University Press.
- Toch, H. (2001). The future of supermax confinement. *The Prison Journal* 81(3): 376-388.
- Toch, H. & Adams, K. (2002). *Acting out: Maladaptive behavior in confinement*. Washington DC, American Psychological Association.
- Toch, H. & Adams, K. (1989). *The disturbed violent offender*. New Haven, CT: Yale University Press.
- Van Voorhis, P. (1994). Measuring prison disciplinary problems: A multiple indicators approach to understanding prison adjustment. *Justice Quarterly*, 11(4): 679-708.
- Vold, G.B., Bernard, T.J., & Snipes, J.B. (2002). *Theoretical criminology*. New York: Oxford University Press.

- Wadsworth, T. (2006). The Meaning of Work: Conceptualizing the Deterrent Effect of Employment on Crime Among Young Adults. *Sociological Perspectives*, 49(3): 343-366.
- Warren, J.I., Hurt, S., Booker, A., & Chauhan, P. (2004). Exploring prison adjustment among female inmates: Issues of management and prediction. *Criminal Justice and Behavior* 31(5), 624-645
- Wolfgang, M.E. (1961). Quantitative analysis of adjustment to the prison community. *The Journal of Criminal Law, Criminology, and Police Science* 51(6), 607-618.
- Wright, K. (1991). A study of individual, environmental, and interactive effects in explaining adjustment to prison. *Justice Quarterly* 8(2), 217-242.
- Zamble, E. and F. J. Porporino (1988). *Coping, behavior, and adaptation in prison inmates*. New York: Springer-Verlag.

#### Cases Cited

- Wolf v. McDonnell* 418 U.S. 539 (1974)

## Appendix A

Table of Variables

	Type of Measurement	Coding
<b>Dependent Variables</b>		
Rate of UDC Violations	Ratio	$\frac{\textit{Total UDC Violations}}{\textit{Months Served}}$
Rate of IDC Violations	Ratio	$\frac{\textit{Total IDC Violations}}{\textit{Months Served}}$
Proportion of Sentence in Segregation	Ratio	$\frac{\textit{Total Days in Segregation}}{\textit{Number of Days Served}}$
<b>Independent Variables</b>		
Marital Status	Nominal	1=Single 2=Married or Cohabiting 3=Divorced
Dependent Children	Nominal	1=No Children 2=Children but no Care 3=Children with Care
Number of Dependent	Ratio	Total number of dependents at admission*
Education	Nominal	1=No high school diploma 2=GED 3=Traditional HS Diploma
Employment	Nominal	1=Unemployed 2=Employed Part-Time 3=Employed Ful-Time
Mental Illness	Nominal	1=No Mental Illness 2=Secondary Criteria 3=Major Mental Illness
<b>Control Variables</b>		
Age	Ratio	Age at time of admission

Race	Nominal	1=White 2=Black 3=Hispanic 4=Native American 5=Other
Sex	Nominal	0=Male 1=Female
Prior Violent Offense	Nominal	0=No Prior Violent Offense 1=Prior Violent Offense
Number of Prior Prison Terms	Ratio	Number of terms
Maximum Sentence Length (months)	Ratio	Number of months
Number of Conviction Charges	Ratio	Number of conviction charges for present sentence
Present Violent Offense	Ratio	0=No violent offense 1= Violent offense

---

\*= variable used only for sample comparisons

## Appendix B

### Fisher's Exact Results Population-Sample Comparisons (Race)

Category	Variable	Male Non-Seg Population and Sample	Male Seg Population and Sample	Female Non-Seg Population and Sample	Female Seg Population and Sample
Race	White and Black	.574	.349	.306	.454
	White and Hispanic	.480	.183	.634	.660
	White and Native American	.421	.365	.044*	.233
	White and Other	.697	.421	.827	.225
	Black and Hispanic	.520	.359	.602	.588
	Black and Native American	.445	.488	.040*	.357
	Black and Other	.700	.479	.906	.203
	Hispanic and Native American	.476	.594	.234	.389
	Hispanic and Other	.684	.554	.875	.330
	Native American and Other	.646	.566	.635	.128

## Appendix C

### T-tests for Independent Samples –Dismissed Rule Violations

	Male Non-Segregated n=69		Male Segregated n=71		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
Dismissed UDC Rate	.207	.285	.395	.395	.005*
(ln)Dismissed UDC Rate	.165	.206	.288	.286	.004*
Dismissed IDC Rate	.250	.358	1.01	1.17	.000*
(ln)Dismissed IDC Rate	.191	.206	.590	.437	.000*

\*p< .05

Variable	Female Non-Segregated n=30		Female Segregated n=30		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
Dismissed UDC Rate	.013	.042	.017	.075	.817
(ln)Dismissed UDC Rate	.012	.039	.015	.063	.724
Dismissed IDC Rate	.029	.102	.021	.066	.769
(ln)Dismissed IDC Rate	.025	.085	.019	.059	.872

\*p< .05

Variable	Male Non-Segregated n=69		Female Non-Segregated n=30		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
Dismissed UDC Rate	.207	.285	.013	.042	.000*
(ln)Dismissed UDC Rate	.165	.206	.012	.039	.000*
Dismissed IDC Rate	.250	.358	.029	.102	.000*
(ln)Dismissed IDC Rate	.191	.206	.025	.085	.000*

\*p< .05

APPENDIX C  
(continued)  
T-tests for Independent Samples –Dismissed Rule Violations

Variable	Male Segregated n=71		Female Segregated n=30		p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	
Dismissed UDC Rate	.395	.479	.017	.075	.000*
(ln)Dismissed UDC Rate	.288	.286	.015	.063	.000*
Dismissed IDC Rate	1.01	1.17	.021	.066	.000*
(ln)Dismissed IDC Rate	.590	.437	.019	.059	.000*

\*p< .05