EXPLORING THE RELATIONSHIP BETWEEN PRISON EXPERIENCE AND PRISON

MISCONDUCT AMONG INMATES WITH MENTAL HEALTH PROBLEMS: ARE THEY

BAD, MAD, OR UNFORTUNATE?

_____

A Dissertation

Presented to

The Faculty of the Department of Criminal Justice & Criminology

Sam Houston State University

_____

In Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

_____

by

Ahram Cho

August, 2019

EXPLORING THE RELATIONSHIP BETWEEN PRISON EXPERIENCE AND PRISON

MISCONDUCT AMONG INMATES WITH MENTAL HEALTH PROBLEMS: ARE THEY

BAD, MAD, OR UNFORTUNATE?

by

Ahram Cho

_____

APPROVED:

Jurg Gerber, PhD
Dissertation Director

Michael S. Vaughn, PhD
Committee Member

Danielle Boisvert, PhD
Committee Member

Phillip Lyons, PhD
Dean, College of Criminal Justice

ABSTRACT

Cho, Ahram , *Exploring the relationship between prison experience and prison misconduct among inmates with mental health problems: Are they bad, mad, or unfortunate?*. Doctor of Philosophy (Criminal Justice), August, 2019, Sam Houston State University, Huntsville, Texas.

An increasing number of inmates with mental health problems have become a critical challenge to the criminal justice system, and critical concerns regarding these inmates' adjustment problems in prison have been stressed in both research and practice. Existing studies, however, primarily considered mental health problems as one broad construct encompassing many different mental disorders or symptoms, and compared inmates with and without mental health problems in examining risks of prison misconduct. Consequently, little is known about how mental illnesses and associated problems shape the risk of disciplinary behavior among inmates with mental health problems.

The purpose of the current study was to broadly investigate a heterogeneous prison population to uncover embedded mechanisms of the relationship between mental health problems and prison misconduct. Specifically, the current study examined whether inmates' misconduct was a manifestation of mental disorders or related to other individual risk factors, including victimization, substance abuse, and/or suicide attempts. Furthermore, it examined how incarceration experiences shape the relationship between individual risk factors and institutional rule-breaking behavior.

The current study used self-reported data obtained from *Survey of Inmates in State and Federal Correctional Facilities, 2004*. The sample included state inmates with a history of various mental health problems (i.e., diagnoses of depression, psychoses, post-traumatic stress disorder (PTSD), anxiety disorder, or personality disorder, medication

use, and hospitalization for mental health problems) during their life time (n = 4,246). To answer four research questions pertaining to the effects of inmates' mental health problems, other relevant risk factors, and prison experiences on violent and nonviolent misconduct, univariate, bivariate, and multivariate analyses, including logistic and negative binomial regressions were conducted.

The results showed that 21% of the inmates with mental health problems were written-up for violent misconduct and 49% received a nonviolent infraction. Findings of the current study revealed meaningful variations among inmates with mental health problems. Personality disorder was positively associated with the likelihood and number of violent infractions, net of controls. Additionally, having a history of depression, psychoses and hospitalization increased the rate of violent infractions and PTSD decreased the risk of violent misconduct, net of controls. At the same time, none of the mental health indicators were significantly predictive of nonviolent misconduct. Rather, other individual-level risk factors, such as substance abuse and victimization, significantly predicted increased risks of nonviolent misconduct. Interestingly, mental health treatment and program participation were associated with the increased risk of both violent and nonviolent misconduct, while work assignment in prison and visitation only reduced the risk of violent misconduct. Limitations of the current study and policy implications are discussed.

KEY WORDS: Prison misconduct, Mental health problems, Prison experiences.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

Introduction

Over the past three decades, incarceration rates have increased throughout the United States. At the end of 2016, over 1.5 million prisoners were incarcerated in state and federal prisons (Carson & Anderson, 2016). Along with skyrocketing prison populations, an increasing number of inmates with mental health problems have become involved in the criminal justice system (Toch & Adams, 2002; McCorkle, 1995; Morgan, Fisher, Duan, Mandracchia, & Murray, 2010; Raphael & Stoll, 2013; Torrey, Kennard, Eslinger, Lamb, & Pavle, 2010). Researchers have indicated that the closing of mental health hospitals in the United States has led to the increased numbers of mentally ill inmates in society and now housed in the criminal justice system (Earley, 2007; Harcourt, 2011; Lurigio & Snowden, 2008; Reiter & Koeing, 2015). Researchers have voiced concerns about "criminalizing" individuals with mental health problems (Lamb & Weinberger, 1998; Perez, Leifman, & Estrada, 2003; Slate, Buffington-Vollum, & Johnson, 2013), and data show the existence of disparities in the arrest and incarceration rates of mentally ill individuals (Akins, Burkhardt, & Lanfear, 2015). Across the United States, the criminal justice system has housed 10 times more mentally ill individuals than patients in state mental health hospitals (Torrey et al., 2014), regulating "America's jails and prisons … [as] our new mental hospitals" (p. 1).

According to the most recent BJS report, over half of state and federal prisoners reported either serious psychological distress or a history of having a mental disorder (Bronson & Berzofsky, 2017) – a proportion alarmingly high considering only five percent of the total U.S. general population are estimated to possess mental health

problems (Center for Behavioral Health Statistics & Quality, 2011). Despite the fact that individuals with mental health problems are overrepresented in state and federal prisons, their institutional behaviors and incarceration experiences have received relatively little scholarly attention (Fellner, 2006; Morgan, et al., 2012; Vitiello, 2010). At the same time, critical concerns regarding these inmates' vulnerabilities in adjusting to challenging prison environments have been highlighted in both research and practice (Adams, 1983, 1992; Adams & Ferrandino, 2008; Lindquist & Lindquist, 1997; O'Keefe & Schnell, 2007).

Prior researchers explored the relationship between mental health problems and prison misconduct, providing evidence that mental health problems are consistent and strong predictors of prison misconduct (e.g., Adams, 1983; Houser & Belenko, 2015; Houser, Blenko, & Brennan, 2012; Lurigio & Snowden, 2008; O'Keefe & Schnell, 2007; Toch & Adams, 2002; Warren & South, 2009). That is, inmates with mental health problems have disproportionately higher disciplinary infractions than inmates without mental health problems. A recent systematic review of previous prison misconduct research (Steiner, Butler, & Ellison, 2014) found that two-thirds of the models showed a positive link between misconduct and mental health problems, and one-third of the models showed null findings. However, the existing studies primarily considered mental health problem as one broad category encompassing many different mental disorders or symptoms (e.g., Jones, Miller, & Lynam, 2011) and compared between inmates with and without mental health problems in examining risks of prison misconduct (e.g., Cao, Zhao, & Van Dine, 1997; Houser & Welsh, 2014; Houser et al., 2012; Toch, Adams, & Grant, 1989; Wood & Buttaro, 2013). Consequently, how mental illness and its associated

problems shape the risk of rule-breaking behavior among inmates with mental health problems is largely unknown. As prison scholars stressed, more nuanced approaches to investigating the heterogeneous prison population and experiences are needed to uncover embedded mechanisms of the relationship between mental health problems and prison misconduct (Mears, 2012).

Certainly, adapting to a stressful prison environment is a challenging process for any inmate. When being admitted into a prison, inmates experience a host of stressors, including the loss of autonomy, material goods, heterosexual relationships, and many other general comforts of life that were enjoyed in free world (see Sykes, 1958; Sykes & Messinger, 1960). Being restricted, with numerous rules and orders and confined in an overcrowded environment, requires inmates to cope with correctional environments, which often result in rule-breaking behaviors. Inmates with mental health problems may encounter additional difficulties in adhering to institutional rules and order with their impaired coping mechanisms and limited resources available to meet their unique needs (Adams, 1992; Lindquist & Lindquist, 1997; Lurigio & Swartz, 2000; Toch & Adams, 1986). Comparing inmates with and without mental health problems may mask important individual differences as previous research suggests that inmates with mental health problems are a distinctive subgroup of the general prison population with respect to their characteristics and experiences in and out of prison (Hiller, Knight, Broome, & Simpson, 1996; Houser et al., 2012). Indeed, prior work has well established the vulnerabilities of mentally ill inmate populations (Hartwell, 2004; Messina, Burdon, Hagopian, & Prendergast, 2004; Wilson, Draine, Hadley, Metraux, & Evans, 2011).

Broadly, individuals with mental health problems are unique in that they often face higher risks of poverty, homelessness, family breakdown, drug addiction, suicide, victimization, and crime, which in turn increase the risk of entering into the criminal justice system (Bloom, Owen, & Covington, 2004; Bonta, Blais, & Wilson, 2014; Gendreau, Goggin, & Law, 1997; Grace, Batterham, & Cornell, 2008; Jordan, Schlenger, Fairbank, & Caddell, 1996; Radatz & Wright, 2016; Wood, 2013). Further, a complex relationship between criminality and mental illness had been identified in prior work, suggesting that mentally ill individuals are a vulnerable population that share common demographic characteristics of the general offending population (Lurigio & Swartz, 2000; Monahan & Steadman, 1983; Monahan, 1992). Both criminals and individuals with mental illness tend to be young, male, undereducated, unemployed, and substance abusers (Veysey & Bichler-Robertson, 2002). Importantly, these factors related to criminality have been also found to be associated with rule-breaking behavior in prison (Blevins, Listwan, Cullen, & Jonson, 2010; Morris et al., 2012).

In addition, mentally ill inmates may be facing more extensive hardships, in part, due to their distinctive background characteristics (e.g., substance abuse, criminal history, victimization) that may be related with risks of mental illness as well as institutional misconduct behavior (Carr, Eggenberger, Crawford, & Rotter, 2013; O'Keefe & Schnell, 2007; Toch & Adams, 1986). Though a disproportionately large number of mentally ill inmates may be at higher risks of prison misconduct when compared to the general prison population, not all mentally ill inmates engage in rule-breaking behaviors. Rather, understanding prison misconduct of inmates with mental health problems may be complicated by their unique characteristics and experiences. The existing prison

misconduct research, however, is limited in identifying unique risk and protective factors of prison misconduct among mentally ill inmates, and whether their heightened levels of misconduct stem from challenging institutional experiences in conjunction with their mental disorder and disrupted life trajectories.

Considering that imprisoned individuals with mental health problems present various unique risk factors, in addition to their mental health issues, it is important to disentangle how such risk factors shape their institutional behaviors as well as prison experiences. In other words, it is uncertain whether mentally ill inmates' disruptive behavior simply reflects their symptoms of mental illness within harsh prison condition or their disruptive behavior may be indicative of their disrupted life trajectories and experiences, in addition to mental illness, prior to incarceration and unmet needs due to limited resources in prison. Adams (1992) underscored that not only individual-level risk factors, but also their prison experiences should be carefully considered in understanding adjustment problems of inmates with mental health problems.

Operational priority of prisons is not focused on the mentally ill prison population. Additionally, several studies have indicated that mentally ill inmates are particularly vulnerable to stressful prison experiences or their disruptive tendencies may worsen the prison experiences (Mears, 2012). Researchers report that disruptive behavior of inmates with mental health problems are more likely to lead to punitive disciplinary outcomes, such as disciplinary segregation or in higher security settings (Lurigio & Snowden, 2008; O'Keefe et al., 2010; Shalev, 2009; Stewart & Wilton, 2014; Wexler, 2003), which further limit their access to programs, work assignments, and other privileges. It is also recognized that not all prisoners enjoy equal opportunities to

participate in programming or to receive treatment in prison with limited resources in prison (Cochran, Mears, & Bales, 2014). While inmates with mental health problems may be in need of more structured and prosocial activities and programs in prison, they are often precluded from these opportunities due to their disruptive tendencies (O'Keefe et al., 2010). A body of literature also highlights how the prison system has failed to provide the necessary quantity and quality of services and programs for mentally vulnerable prison population in particular (Fazel & Seewald, 2012). Limited program and treatment accessibility for inmates with mental health problems have important implications not only for their institutional behaviors, but also for their reentry outcomes (Cochran, Mears, Bales, & Stewart, 2014; Walter & Crawford, 2014).

With concerns over the mass incarceration, prisoner reentry is regarded as the most important challenge facing the United States (Kubrin & Stewart, 2006; Pratt, 2018; Travis & Visher, 2005). There has been considerable research devoted to understanding the reintegration of prisoners into society (Mears, Wang, Hay, & Bales, 2008; Visher & Travis, 2003), highlighting that institutional behaviors and other in-prison experiences (i.e., visitation, employment, education programming) have important implications for their successful reentry from prison (Brennan, 2012; Bushway & Apel, 2012; Cochran et al., 2014; Lahm, 2009; Makarios, Steiner, & Travis, 2010; Mears, 2012; Siennick et al., 2013; Petersilia, 2003). Noting that research reports that released prisoners with mental illness have a higher risk for recidivism, homelessness, and unemployment, compared to general prison populations (Baillargeon et al., 2009; Bonta, Law, & Hanson, 1998; Mallik-Kane & Visher, 2008; Metraux & Culhane, 2004; Walter & Crawford, 2014), the

importance of understanding the effects of prison experiences of inmates with mental health problems is not limited to inmate management, but extend to public safety.

Research goals

Current prison misconduct research provides limited understanding of adjustment problems of inmates with mental health problems. The general goal of this dissertation is to expand our understanding of institutional behavior and experiences of inmates with a history of mental health problems. Specifically, this study examines inmate adjustment to prison environments by evaluating self-reported inmate misconduct behaviors among pre-diagnosed mentally ill inmates. While prior work consistently identifies that mental illness or mental health related problems are a significantly predictive risk factor of prison misconduct, we know very little about the heterogeneous group of prison population – those with a history of mental health problems. The objective of this research is to advance the literature by focusing on within group differences among mentally ill inmates in order to identify the unique factors predicting institutional misconduct behavior. The current study will provide knowledge on whether misconduct behavior of inmates with mental disorders are a manifestation of mental disorder or closely related to other individual risk factors (e.g., victimization, substance abuse, suicide attempts), and how incarceration experiences shape the relationship between individual risk factors and institutional rule-breaking behavior.

To advance our understanding of prison misconduct, the current study will focus on a subgroup of prison population, inmates with a history of mental health problems, by considering largely unexamined individual-level risk factors (e.g., types of mental disorder, victimization, substance abuse, suicide attempts) as well as prison experiences

(e.g., treatment and program participation, visitation, work assignments). Nuanced measures of mental health problems, reflecting not only the types of mental disorder, but also seriousness of the mental health problems, will be included, which is an improvement over a dichotomous measure used a majority of prior research (Berk, Kriegler, & Back, 2006; Cao et al., 1997; Stacer & Solinas-Saunders, 2015). Drawing from previous literature, various risk factors, such as victimization, substance abuse, suicide attempts, which are highly correlated with mental health problems are used to identifying their contributions to prison misconduct since these factors may aggravate the adjustment process of inmates with mental health problems. Although the literature establishes that mental illness is highly correlated with these various risk factors, no research has addressed the potential exacerbating effect of these risks on prison misconduct among this vulnerable prison population. Noting that a high correlation between mental health problems and other risk factors, substance abuse for example, may be indicative of institutional treatment and more structured program needs, the current study will examine how imprisonment experiences shape the effects of individual-level risk factors on the adjustment process of inmates with a history of mental health problems. At the conclusion of the analyses, the following research questions will be answered:

1. What is the distribution of disciplinary infractions among inmates with a history of mental health problems?

2. Is there a relationship between different types of mental disorders and other mental health indicators and disciplinary infractions?

3. Is there a relationship between other individual-level risk factors (e.g., victimization, substance abuse, and suicide attempts) and disciplinary infractions among inmates with a history of mental health problems?

4. Is there a relationship between prison experiences (e.g., treatment and program participation, work assignment, visitation) and disciplinary infractions among inmates with a history of mental health problems?

5. Is the relationship between mental health problems as well as other risk factors and disciplinary infractions shaped by prison experiences?

The chapters of this dissertation will provide an overview of issues associated with mental health problems in understanding inmate adjustment and discuss theoretical background and empirical studies of prison misconduct. A description of the methods, results, and discussion will follow. Chapter 2 begins with a discussion on issues involved with mental health problems in prisons and mentally disordered inmates' rule-breaking behavior. Chapter 2 will then outline previous findings on prison misconduct, focusing on the two most often adopted theoretical perspectives (i.e., deprivation and importation theories) and review prior empirical studies using the general prison population. The review of the literature will provide a broad understanding of prison misconduct, and then will explore prison misconduct behavior of inmates with mental health problems. Limitation of the current knowledge of prison misconduct of inmates with mental health problems will also be included in Chapter 2. Next, Chapter 3 will describe the data, measures, and analytical strategy used for the current study. In Chapter 4, the results of the analysis will be presented. Finally, Chapter 5 will discuss key findings from this work, policy implications, and limitations of the dissertation.

CHAPTER II

Literature Review

Mentally Ill Inmates in Prisons

Mental health problems are prevalent among the prison population. The most recent nationally representative study shows that more than a half of the state and federal prisoner population had either serious psychological distress or a history of having a mental disorder (Bronson & Berzofsky, 2017). The overrepresentation of individuals with mental illnesses in prisons has been highlighted in prior works, revealing that from 10% to 68% of incarcerated inmates suffer from various mental illnesses (Prins, 2014). Discrepancies across study findings are likely due to various criteria applied in capturing mental illness behaviors. For example, Prins (2014) and Torrey et al. (2014) reported that when conservatively estimated, over 16% of the inmates with serious mental illness are incarcerated in prisons and jails in the United States.

Indeed, the criteria of mental illness have varied across studies. In particular, some researchers have conceptualized mental illness as a single construct by capturing various symptoms of mental health problems, histories of professionally diagnosed mental disorders, use of medications, or hospitalizations (e.g., Adams, 1992; Baskin, Sommers, & Steadman, 1991; Houser et al., 2012; Matejkowski, 2017; Steiner & Meade, 2016), whereas other researchers have differentiated types of mental disorders, such as posttraumatic syndrome disorder, bipolar, major depression, personality disorder, and mania (Prins, 2014; Felson, Silver, & Remster, 2012). With respect to specific types of mental disorders, James and Glaze (2006) reported that 43% of state prisoners met the criteria for depression, 23% met the criteria for mania, and 15% met the criteria for

psychotic disorders. Also, 18% of inmates with a history of mental health problems reported various symptoms of mental illness while in prison.

Although the estimated number of mentally ill inmates in correctional facilities varied across studies, a consensus is that the number of inmates with mental illness is increasing over time (Fazel & Danesh, 2002; Matejkowski, 2017). Accordingly, the importance of understanding unique problems among incarcerated mentally ill inmates has been highlighted across the studies (Perez et al., 2003). Many individuals with mental illness are unable to properly address mental health problems prior to incarceration, which often become grounds for being taken into the criminal justice system (Fisher, Silver, & Wolff, 2006; Perez et al., 2003). Moreover, inmates with mental illness are more likely than those without mental illness to report a history of victimization (Silver, Felson, & Valneseltine, 2008; White, Chafetz, Collins-Bride, & Nickens, 2006), engage in risk-taking behavior including substance abuse and self-harm (Bersot & Arrigo, 2010; Cain, Steiner, Wright, & Meade, 2016; Diamond, Wang, Holzer, & Thomas, 2001), and commit violent crimes (Flynn, Rodway, Appleby, & Shaw, 2014; Rueve & Welton, 2008; Silver, 2006).

White and his colleagues (2006) stressed that frequent contact with the criminal justice system, due to either crimes or victimizations, further exacerbate mental illness, and vice versa. Further, Edwards (2000) noted that attitudes toward mentally ill inmates are detrimental in ways that mentally ill inmates are often stigmatized in the criminal justice system. Considering such risk factors, it is not surprising that mentally ill individuals more often churn in and out of the criminal justice system (O'Keefe, Klebe,

Stucker, Strum, & Leggett, 2010) and they return to prison at faster rates than those without mental disorders (Cloyes, Wong, Latimer, & Abarca, 2010).

Prisons are certainly not designed for mentally disordered individuals. Prior research indicated that mentally ill inmates are more vulnerable in the prison environment compared to inmates without mental illness (Adams, 1983; Lindquist & Lindquist, 1997; Toch, 1982; Toch & Adams, 1986). Inmates experiencing mental illness are more likely to experience difficulties in following prison rules, complying with correctional officers, interacting with other inmates, and controlling their temper (Adams, 1983; Toch & Adams, 1986). Not surprisingly, managing mentally ill inmates is one of the most difficult challenges facing correctional officers (Adams, 1983; Lord, 2008; O'Keefe & Schnell, 2007; Toch & Adams, 1986).

Research indicated that correctional officers are overwhelmed with the amount of daily tasks in maintaining institutional control and order, with limited resources given the high inmate-to-staff ratio (Adams & Ferrandino, 2008; Marquart, 1986). For correctional officers, more broad concerns about security, safety, and control of the institution may outweigh the demands of mental health related problems (Fellner, 2006). Also, prison officers have few options dealing with mentally ill inmates because they are neither well-trained with respect to mental illness nor equipped with the resources to deal with mentally ill inmates (Peterka-Benton & Masciadrelli, 2013; Toch & Adams, 1986). Rather, problematic behaviors of mentally ill inmates are often controlled with punitive disciplinary actions, such as administrative or disciplinary segregation (O'Keefe et al., 2010; Shalev, 2009; Stewart & Wilton, 2014; Wexler, 2003).

Despite the fact that potential problems and difficulties in dealing with mentally ill inmates have been a widely recognized issue, prisons are not equipped for mentally ill inmates (Torrey et al., 2010, 2014). Additionally, research indicated that prison conditions may exacerbate mental health problems (Houser & Belenko, 2015; O'Keefe et al., 2010). Indeed, daily lives of inmates, particularly those with mental illness, are susceptible to several confinement environments, including overcrowding, presence of violence, lack of meaningful programs and activities, limited mental and physical health services, and isolation from family and friends. For example, overcrowded prisons generate additional challenges to inmate management and security, in part, because symptoms and conditions of mental illness are often left untreated or unnoticed (Griffin & Hepburn, 2013; Fellner, 2006). Further, researchers revealed that over 1 in 3 state inmates who had mental health problems received treatment (James & Glaze, 2006; Torrey et al., 2010; 2014). Specifically, 23% of state prisoners received mental health counseling and 27% used psychotropic medication (James & Glaze, 2006).

The scarce resources available for mentally ill inmates have severe consequences for their incarceration experiences. For example, in balancing institutional order and control, mentally ill inmates are often precluded from institutional programming or work assignment because of either their disruptive tendency or higher security level confinement as a result of their behavior (Houser & Belenko, 2015; Lovell & Jemelka, 1996; Reisig, 1998). Limited opportunity to participate in programs and assignments not only creates additional strains on inmates, but also prevent them from earning good-time credits for early release and any other privileges (Lovell, Allen, Johnson, & Jemelka, 2001). Indeed, this is particularly problematic as prior studies indicated that such

program participation and work assignment opportunities shape inmates' behavior in positive ways (Lovell et al., 2001).

The impact of imprisonment experiences includes worsening the symptoms and conditions of mental illnesses and inmates' institutional behavioral problems (Adams & Ferrandino, 2008; Glancy & Murray, 2006). Although adjusting to stressful prison environments is a difficult process for all inmates, inmates with mental health problems may encounter an additional challenge in adapting to the demands of the prison environment and adhering to institutional rules (Adams, 1983; O'Keefe & Schnell, 2007; Toch & Adams, 1986). Indeed, researchers have consistently recognized mental illness as a strong risk factor of institutional behavioral problems (Adams, 1986; Hildebrand, DeRutter, & Nijman, 2004; O'Keefe & Schnell, 2007; Toch & Adams, 1986). Specifically, a nationally representative study indicated that 57% of inmates with mental health problems were charged with rule violations, whereas 43% of inmates without mental health issues had disciplinary problems in state prisons (James & Glaze, 2006). As research consistently revealed that large proportions of prison misconduct behavior are committed by a relatively small group of inmates (Acevedo & Bakken, 2003; Adams, 1983; Lovell & Jemelka, 1996; Lindquist, 1980; Toch & Adams, 1986; Toch et.al., 1989), Jamelka and her colleagues (1996) stressed that only a small fraction of the general inmate population who have mental health problems were responsible for almost a half of the total number of infractions that occurred in a prison.

Some researchers indicated that mentally ill inmates are more likely to experience difficulties in coping with stressful prison experiences and thus are disproportionately involved in institutional misconduct behaviors (Lovell, Cloyes, Allen, & Rhodes, 2000;

Houser et al., 2012; Toch et al., 1989). Further, prior work revealed that mentally ill

inmates tend to be incarcerated in prisons for longer periods of time than are other

prisoners due to their behavioral issues, which include disturbing the order and security

of the institution and committing physical attacks on other inmates or correctional

officers (O'Keefe & Schnell, 2007). Though research assessing the effect of mental

illness on misconduct has consistently revealed that mental illness is one of the strongest

risk factors of institutional rule violating behaviors (Adams, 1983; Houser & Belenko,

2015; Houser et al., 2012; Matejkowski, 2017; McCorkle, 1995; O'Keefe & Schnell,

2007; Steiner et al., 2014), little is known about how mental health problems pose unique

challenges to inmates in their ability of controlling behaviors in prison environments. To

better understand adjustment processes of inmates with mental health problems, it is

important to review a broad body of literature on prison misconduct.

Prison Misconduct

With the ever-increasing prison population over the past decades, one of the

major concerns, and goals, of the correctional facilities focuses on maintaining safety and

order (Dilulio, 1987; Goetting & Howsen, 1986, O'Keefe & Schnell, 2007; Welsh,

McGrain, Salamatin, & Zajac, 2007). In conjunction with the rising prison population,

the growing number of inmates with mental illness or a mental disorder in the criminal

justice system generates additional challenges to inmate management and maintaining

safety and order of the institution (O'Keefe & Schnell, 2007). The rules of conduct in

prison are designed to restrict behaviors that may hinder orderly operation of the

institution. From a practical standpoint, institutional safety and order are assessed to the

extent to which the likelihood of inmate misconduct occurs within facilities (Steiner,

2009). To maintain social order in prison and control inmate behaviors, institutional rules have been established and prisons rely on the "threat and use of infractions as primary means of official social control" (Lovell & Jemelka, 1996, p. 165).

Prison misconduct encompasses a wide range of rule-breaking behaviors, from the least serious type of misconduct, such as disobeying the orders of correctional officers to the most serious type, such as physically attacking other inmates or correctional officers. Prior research has captured prison misconduct in different ways by some relying on self-reported misconduct (see Celinska & Sung, 2014; Huebner, 2003; Jiang, 2005; Jiang & Winfree, 2006; McCorkle, 1995; Steiner & Wooldredge, 2009b) and others on official records of institutional infractions that were recorded by correctional officers (see Jiang & Fisher-Giorlando, 2002; Morris et al., 2012; Siennick, Mears, & Bales, 2013; Steiner & Wooldredge, 2014; Worrall & Morris, 2011). The majority of prior works has focused on overall prison misconduct (Camp, Gaes, Langan, & Saylor, 2003; Siennick et al., 2013; Toman et al., 2015), while others examined specific types of misconduct, such as violent, nonviolent, or drug rule violations (Bales & Miller, 2012; Finn, 1995; Morris et al., 2010; Steiner & Wooldredge, 2015)

The process by which inmates adjust to an institution has received attention in the scholarly literature. At large, prison misconduct is viewed as an indicator of maladjustment to the prison environment (Toch & Adams, 1986; Toch et al., 1989; Wright, 1991). Living the prison experience is a stressful situation for most individuals, and, upon incarceration, inmates encounter difficulty in coping with environmental constraint and pressure. The patterns of rule violations reflect the extent to which an individual has adapted or failed to adapt to prison. Just as small numbers of people

commit crimes in free world, a small group of inmates fail to cope with prison environments and engage in prison misconduct behaviors. In this regard, understanding this subgroup with a higher risk of misconduct behavior has important implications for social order and safety of correctional facilities, inmate management, and successful reentry into society (Bonta et al., 1998; Cochran et al., 2014; Craddock, 1996; Walter & Crawford, 2014).

To respond to practical needs, numerous empirical studies have been conducted to identify predictive risk and protective factors of inmate misconduct (Acevedo & Bakken, 2003; Adams, 1983; 1992; Craddock, 1996; Flanagan, 1983; Jensen, 1977; Thompson & Loper, 2005; Toch & Adams, 1986; Toch et al., 1989; Myers & Levy, 1978; Wright, 1991). However, the question of inmates' mental health problems and associated behavioral problems has received far less attention in the literature (Adams, 1983; 1986; Hildebrand et al., 2004; Toch & Adams, 1986; Toch et al., 1989; McCorkle, 1995; Wright et al., 2007). At the same time, the existing research has revealed that mentally ill inmates disproportionately engage in misconduct behavior (Adams, 1986; Hildebrand et al., 2004; O'Keefe & Schnell, 2007; Toch & Adams, 1986) and are more likely to be housed in segregation units (Bersot & Arrigo, 2010; Lovell & Jemelka, 1996).

Research examining the effects of mental illness on misconduct has questioned whether mentally ill inmates' misconduct reflects their symptoms and conditions of their impairment (Wexler, 2003). Human Right Watch (2003), however, claims that symptoms of inmates' underlying disorders are of less concern to criminal justice officials; rather, their disruptive behaviors are often handled with punitive disciplinary actions, which may worsen their mental health problems given the limited human and physical resources

available from mental health staff (O'Keefe & Schnell, 2007). Moreover, negative

attitudes toward disruptive behaviors of mentally ill inmates prevail among correctional

officers (Edwards, 2000; Houser & Belenko, 2015).

With the increasing numbers of inmates with mental health disorders, behavioral

problems related with mental illness pose additional concerns and challenges to the

criminal justice system. Mentally ill inmates are more likely to be involved in prison

misconduct behavior, and the types of misconduct in which these inmates engage are

likely to be more violent, obstructing institutional safety and order (Lovell et al., 2000).

Researchers have suggested that the relationship between criminality and mental illness

can be spurious, noting that criminals and mentally ill individuals often share common

demographic characteristics (Lurigio & Swartz, 2000; Monahan & Steadman, 1983;

Monahan, 1992). For example, both criminals and law-abiding individuals with mental

illness tend to be young, male, undereducated, unemployed, and substance abusers

(Veysey & Bichler-Robertson, 2002); these same factors can also be used to understand

risk factors associated with prison misconduct. That is, mentally ill inmates may enter

into the criminal justice system with more risk factors relating to prison misconduct

compared to those inmates without mental illness. In addition, researchers highlighted

that mentally ill inmates are vulnerable due to not only their mental illnesses, but also

their unique histories (e.g., substance abuse, prior incarceration), and the stressful prison

conditions that further challenge inmates' coping skills (Human Right Watch, 2003; Toch

& Adams, 1986).

To better understand unique risk and protective factors of prison misconduct

behavior that mentally ill inmates bring into the prison and/or may experience in prison,

the following section will review prison misconduct literature more broadly and discuss how each factor shapes behaviors in prison. Theories of deprivation and importation are two frequently discussed perspectives to explain why inmates engage in institutional misconduct. Drawing upon these two theories, researchers have attempted to understand how inmates adjust to prison experiences and identify factors that can predict inmate adjustment or maladjustment to prison.

Theoretical Implications

Deprivation theory. In one early ethnographic study of prison life, *The Prison Community*, Clemmer (1940) referred to the process of adapting to prison as "prisonization." Prisonization is conceptualized under an assumption that inmates experience frustrations, mortification, and deprivation. According to Clemmer (1940), inmate behavior or misbehavior is shaped by the stressful prison environment. Upon incarceration, inmates are socialized with the values and rules of the inmate subculture, and they learn how to behave "appropriately" in prison.

Expanding on Clemmer's work, Sykes (1958) asserted that inmates create their subculture, which is inherently reflective of criminality and anti-sociality, because of the harsh conditions of incarceration (Sykes, 1958; Sykes & Messinger, 1960). Specifically, inmates experience a host of strains as they enter into prison. Being incarcerated causes deprivation of basic needs, such as autonomy, material goods, heterosexual relationships, loss of a sense of safety, security, and personal identity, and many other general comforts of life (Sykes, 1958). Sykes argued that these deprivations, "pains of imprisonment," are inevitable and influence the behavior, or misbehavior, of inmates as an adaptation to the strains of confinement (Sykes, 1958). These depriving conditions of confinement force

inmates to have a shared sense of strains, which in turn, develops subculture in the prison in an effort to alleviate or minimize the pains of imprisonment (Sykes & Messinger, 1960).

Goffman (1961) described the difference of being a member of the free society and the frustrating prison environment, stating that "on the outside, the individual can hold objects of self-feeling – such as the body, his immediate actions, his thoughts, and some of his positions… but in total institutions, these territories of the self are violated" (p. 23). Similarly, Toch (1977) has posited that inmate misbehavior is a result of failed adaptation to the stressful confinement. There are several reasons why incarceration negatively affects the behaviors of prisoners. The prison experience is a stressful situation for most individuals. In addition to the fact that inmates experience loss of freedom and strains of confinement, they often report mental and physical abuse while imprisoned. These stressors and abuses are not isolated because these patterns were revealed in various correctional facilities across the country. This view on prison misconduct behavior as a response to the constraints inmates experience is grounded within strain theories of crime and delinquency.

As introduced by Merton (1938), crime is understood as a reaction to the strain caused by the inability to obtain valued societal goals. Strain brings on negative emotions leading individuals to engage in criminal and deviant behavior as a coping mechanism (Agnew, 1992). The likelihood that strains can lead to crime is increased when strains are high in magnitude, frequent, of long duration, and expected to be repeated in the future. Also, strains that threaten central goals, needs, values, activities, and identities of individuals play critical roles in leading to negative responses. In

particular, the chronic or repeated exposure to strains may create negative emotional characteristics, which in turn affect the individual's general predisposition to crime and deviance. Upon incarceration, inmates, especially those who are serving lengthy sentences, suffer from the constant exposure to strains, and thus exhibit deviant behavior (Johnson & Toch, 1982).

Strain does not always lead to crime and deviance. However, when individuals perceive legitimate coping mechanisms as impossible or ineffective, they may seek alternative methods, likely illegitimate or criminal strategies, to cope with strain and negative emotions. Agnew (2009) referred to this change as criminal coping and explains that whether individuals chose criminal coping to abate strains depend on their availability to engage in legal and illegal coping methods, the costs of crime, and their predisposition for crime. These specific factors are further conditioned by a broad range of personal and societal factors, including an individual's personality, antisocial attitudes, peer associations, social support, and social control (Agnew, 2009). For example, studies have suggested that inmates with personality disorder or traits can both directly and indirectly influence the risk of criminal and deviant behaviors (Agenw, 1997; Listwan, Sperber, Spruance, & Van Voorhis, 2004; Warren et al., 2002). Individuals with antisocial attitudes or who associate with criminal peers are more likely to hold a negative worldview and have criminal coping tendencies, which in turn, increase the likelihood of crime (Agnew & White, 1992; Agenw, Brezina, Wright, & Cullen, 2002; Baron, 2004; Hoffmann & Cerbone, 1999). Thus, deprivation theory argues that inmates share a sense of suffering with other inmates in the prison community. Inmates

assimilate into prison subcultures that are usually anti-staff and anti-system oriented, and they often value criminalistics ideology or toughness.

Taken together, inmates who are denied access to the legitimate means that satisfy their needs have an inclination to seek out illegitimate alternatives, such as institutional rule violating behavior (Clemmer, 1940; Sykes, 1958; Sykes & Messinger, 1960). In the prison context, inmates may have various goals, such as obtaining privileges, participating in programs, and receiving visitors; however, these opportunities are not offered to all prisoners. Denial or removal of positive stimuli include the loss of personal control and privacy over daily activities (e.g., limited opportunity for privileges). Researchers discussed that imprisonment (e.g., loss of freedom) may generate negative stimuli for inmates, especially for those incarcerated in the harshest conditions of prison (e.g., overcrowding and higher security levels). Indeed, the institutional environment included debilitating negative consequences because incarceration can increase perceived pains of imprisonment and inmates may react to the strains of the prison environment with misconduct.

Correlates of deprivation theory. In testing the deprivation model, prior work has shown the unique institutional characteristics may influence inmates' subculture assimilation within the prison (Lawson, Segrin, & Ward, 1996). Although empirical studies on the deprivation model tend to focus on testing the predictive factors of prison-level variables on misconduct, including prison crowding (Gaes, 1994; Gaes & McGuire, 1985; Griffin & Hepburn, 2013; Nacci, Teitelbaum, & Prather, 1977; Ruback & Carr, 1983; Steiner & Wooldredge, 2009a), security levels of the prisons (Camp et al., 2003; McCorkle, Meithe, & Drass, 1995; Poole & Regoli, 1983), staff-to-inmate ratios (Biere,

2012; Camp et al., 2003; Gaes & McGuire, 1985; Steiner, 2009), and level of surveillance and management styles (Patrick, 1998; Reisig, 1998), several researchers have underscored the importance of understanding individual-level prison environmental factors that could shape the risk of prison misconduct (Griffin & Hepburn, 2006; Gover, McKenzie, & Armstrong, 2000; Morris et al., 2012). Noting that inmates engage in misconduct when their needs are not met, an individual's institutional experience may be more informative in explaining misconduct behavior as responses to the individual-level of strains experienced in prison (Listwan, Sullivan, Agnew, Cullen, & Colvin, 2013).

According to deprivation theory, the increased level of adequate resources available to inmates should correspond with decreased prison infractions as the resources could promote effective coping mechanisms in prison (Morris et al., 2012). For example, inmates' routines and activities, such as work or education shape the levels of deprivations and strains, which in turn, influence the level of prison misconduct (Griffin & Hepburn, 2006; Gover et al., 2000; Lahm, 2009). Considering inmates' daily routines and activities are strictly controlled and monitored by correctional officers, denied access to inmate resources may correspond with heightened levels of strains, and thus exacerbate the risk of prison misconduct (Drury & DeLisi, 2011; Toch, 1977; Wooldredge, 1999). Cochran and Mears (2013) highlighted that the discretion prison officers use in making decisions when enforcing institutional rules may result in disparities in institutional infractions and in inmates' privileges. In addition, occupying time of inmates in structured activities, instead of suffering from extreme boredom in a loud cell, may reduce the propensity for rule-breaking behaviors (Colvin, 1992; McEwen, 1980; Toch, 1977).

Researchers assessing the effect of daily routines and activities provide mixed findings (Drury & DeLisi, 2011; Gover, Pérez, & Jennings, 2008; Steiner & Wooldredge, 2015; Wooldredge, 1999; Wooldredge & Steiner, 2015). In addition, previous researchers have measured structured routines and activities with hours per week in terms of recreation, watching TV, or work assignments (Kerley, Copes, Tewksbury, & Dabney, 2011; Steinke, 1991; Steiner & Wooldredge, 2014; Wooldredge, 1999). Although a handful of researchers reported a significantly negative association between the increased hours spent in structured routines and activities and the decreased risk of misconduct (Gover et al., 2008; Steiner & Wooldredge, 2014), other researchers have reported no significant relationship or an inverse relationship (Wooldredge, 1999; Wooldredge & Steiner, 2015). For example, Wooldredge and Steiner (2014) acknowledged that involvement in recreation was associated with lower occurrences of violent misconduct and higher occurrences of non-violent misconduct.

In addition to the role of reducing exposure to situations that may promote deviant behaviors, inmates' access to institutional programs may teach inmates new skills and behaviors to use during and after incarceration (Chamberlain, 2012; Lowenkamp, Latessa, & Holsinger, 2006; Bushway & Apel, 2012). However, prisons simply do not have sufficient resources to adequately provide positive interpersonal skills training to the entire incarcerated population. Rather, the resources are selectively dictated by correctional officers. In this regard, participating in an institutional program may be perceived as a privilege to inmates. As a result, some inmates may be discouraged from engaging in prison misconduct behavior to stay in desired programs (Celinska & Sung, 2014; Day, Brauer, & Butler, 2015; Lowenkamp et al., 2006). The same explanation can

be applied to understanding the effect of prison visitation. Maintaining social ties with family and friends while incarcerated provides inmates with legitimate means to meet their needs (Celinska & Sung, 2014; Lahm, 2008). Noting that inmates value visiting privileges, they do not want to jeopardize their privileges by engaging in rule-breaking behaviors. Also, researchers suggested that contact with family and friends helps to reduce the pains of imprisonment, which decreases rule-breaking behaviors (Cochran & Mears, 2013; Bowker 1989; Siennick et al., 2013; Toch & Johnson, 1982).

Similar to the empirical findings regarding involvement in structured activities, investigations on the effect of vocational and educational programs and visitation have yielded mixed results (Celinska & Sung, 2014; Goetting & Howsen, 1986; Lahm, 2009; Siennick et al., 2013; Simon, 1993; Wooldredge, 1999). Interestingly, Steiner and Wooldredge (2015) explained that non-significant findings were reported because the researchers often neglected to consider special needs among inmates. In other words, the effect of such "potentially" protective institutional factors may differ depending on the risks and needs of inmates and their characteristics. Similarly, noting the various risks and needs of inmates, Chamberlain (2012) stressed that the prison environment may have more destructive impact on those "needy" inmates who are already at greater risk, such as those with mental illness.

Some researchers demonstrated that inmates engage in rule-breaking behaviors because of their unmet treatment needs (Chamberlain, 2012; Andrews et al., 1990). Considering that a large proportion of the prison population has dynamic criminogenic needs, such as substance abuse and mental health problems (Andrews & Bonta, 2003; MacKenzie, 2006; Mears, 2004), researchers suggested that institutional treatment

programs that address risks and needs of inmates play an important role in suppressing

risks of misconduct (Chamberlain, 2012; Celinska & Sung, 2014; Mears, 2004;

Wooldredge & Steiner, 2015). For example, Langan and Pelissier (2001) examined the

effects of drug and alcohol programs in prison among inmates with substance abuse

problems, finding that inmates who participated in treatment were less likely to receive

institutional infraction tickets compared to those who did not undergo treatment.

Previous research also indicated that prison treatment programs not only shape the

likelihood of institutional behavior while in prison, but also reduce the risk of recidivism

(Cochran et al., 2014; French & Gendreau, 2006; Walter & Crawford, 2014). Yet, not all

inmates who are in need of treatments can benefit because of limited resources available

in prisons and such treatment opportunities are filtered through correctional officers

(Belenko & Peugh, 2005; Lurigio & Swartz, 2000; Rhodes, 2005; Steadman & Veysey,

1997).

According to the deprivation theory, length of incarceration and time served are

meaningful factors with respect to prison misconduct (Cao et al., 1997; Gaes & McGuire,

1985; Goodstein & Wright, 1989; Jiang & Fisher-Girolando, 2002). Researchers

explained that inmates with longer sentences may be more likely to experience intense

levels of strains in prison over time compared to the inmates with shorter sentences

because exposure to the stressful prison environment for an extended period of time may

increase the risk of prison misconduct (Camp et al., 2003; Craddock, 1996; Cunningham

& Sorensen, 2006; Flanagan, 1981; Siennick et al., 2013; Thompson & Loper, 2005). On

the other hand, some researchers identified an inverse relationship between sentence

length and prison misconduct, suggesting that inmates who are sentenced to prison for a

short period of time may experience greater difficulties in adjusting (Coe, 1961; Fernandez & Neiman, 1998; Cunningham et al., 2005). Prior work also revealed that a U-shaped curve is present in the correlation between prison misconduct and time-served. At the beginning of inmates' prison terms, they are less likely to negatively react to the pains navigating the new prison environment. Over time, inmates learn and adapt to the inmate subculture, and they are more likely to engage in misconduct behavior. However, as inmates approach the end of a prison term, they have more incentive for rule-abiding behavior than for rule-breaking behavior (Welford, 1967).

Importation theory. Although deprivation theory emphasized the functions of the prison environment and conditions on inmates' behaviors and subcultures, importation theory posits that the institutional behaviors and subcultures are a reflection of the social and personal characteristics, beliefs, attitudes, and values that inmates brought with them to prison (Carroll, 1974; Irwin & Cressey, 1962; Jacobs, 1977). According to the authors of deprivation theory, the dynamics and environments of prisons change as the population of prisons change, rather than the prison itself. In direct contrast to the deprivation theory, which posits that inmate subculture is created because of the pains of imprisonment, Irwin and Cressey (1962) argued this inmate subculture is in fact oriented and reflective of a broader criminal subculture that inmates bring into the system. Noting that not all inmates respond to the strains of imprisonment in uniform ways, the values and patterns that inmates bring into prison shape the way in which they deal with the prison environment. Under this model, prisons remain uniform, but the individuals confined in prisons vary. In other words, the characteristics of the inmate population has shaped the overall climate and culture of prisons, but not vice versa.

Some researchers viewed that the safety and order of the correctional institution was threatened with the increasing prison population, especially a disproportionate number of racial and ethnic minority inmates from disadvantaged neighborhoods (Carroll, 1974; Irwin, 1980; Western, 2006). Noting that correctional staff members were predominantly White, the racial and ethnic stratification of inmate groups generated challenges and conflicts between correctional officers and inmates (Carroll, 1974; Irwin, 1980; Poole & Regoli, 1980). In support of the importation theory, Innes (1997) contended that the predictors of crime, in general, are predictive of prison misconduct. The fundamental assumption of the theory is that negative characteristics of an individual that have led to incarceration contribute to rule-breaking behaviors inside of prison. Negative characteristics and values imbedded within individuals that led to incarceration do not vanish upon incarceration. Rather, pre-existing characteristics, beliefs, attributes, and values of inmates shape the way in which inmates adjust to and behave in prison (Thomas, Peterson, & Zingraff, 1978; Wright, 1991). In other words, the likelihood of committing misconduct in prison is predetermined prior to incarceration because of criminal subculture values that inmates bring into prison (DeRosia, 1998; Irwin & Cressey, 1962).

According to the importation theory, the inmate subculture is a mere reflection of broad criminal subcultures to which inmates adhered in the free world (Carroll, 1974; Jacobs, 1977; Irwin & Cressey, 1962). Irwin and Cressey (1962) posited that there are three different subcultures to which inmates adhered and imported into prison (i.e., criminal subculture, thief subculture, or conventional/legitimate subculture). Inmates who adhered to the criminal or convict subculture tend to view prison as an opportunity

to continue criminal activity and to manipulate, coerce, intimidate, and exploit others to achieve higher status in prison. Conversely, inmates oriented toward the thief subculture view prison as an obstacle to their criminal careers. Misconduct behavior of inmates with the thief subculture is often driven by a desire to make their time in prison easier (Irwin & Cressey, 1962). Lastly, inmates with the legitimate and conventional subculture tend to focus on maintaining pro-social values outside of prison, such as marriage; therefore, those inmates are less likely to engage in prison misconduct and they are more likely to participate in prosocial prison programs, such as educational or vocational programs (Irwin & Cressey, 1962).

Correlates of importation theory. Although these proposed subcultures of inmates have not been examined directly (e.g., Mears, Stewart, Siennick, & Simmons, 2013), a number of prison misconduct researchers have indirectly tested the importation model by considering various characteristics and experiences of inmates as proxies of the subcultures that may influence their behaviors in prison (Adams, 1992; Berg & DeLisi, 2006; Cao et al., 1997; Flanagan, 1983; Gendreau et al., 1997; Gover et al., 2008; Jiang & Fisher-Giorlando, 2002; Kuanliang, Sorensen, & Cunningham, 2008; Mears et al., 2013; Poole & Regoli, 1983; Wooldredge, 1991). Previous research, for example, indicated that under-educated, young, minority males who likely exhibit lower class values and the criminal subculture carry their negative values and characteristics with them into prison, which, in turn, increase the risk of prison misconduct. Likewise, researchers measured preexisting cultural and criminal values and beliefs of inmates by using various individual factors as proxies, including age, gender, race, and educational achievement (Gover et al., 2008; Toch et al., 1989), current offense (Berg & DeLisi,

2006; Harer & Langan, 2001; Reidy et al., 2012), marital status (Acevedo & Bakken, 2003), criminal history (Flanagan, 1983; Goetting & Howsen, 1986; Light, 1991; Myers & Levy, 1978; Winfree, Mays, Crowley, & Peat, 1994; Wooldredge, 1991), employment stability (Goetting & Howsen, 1986; Thomas, 1977; Toch & Adams, 1986; Toch et al., 1989), and mental health (Adams, 1983; Houser et al., 2012; Toch & Adams, 1986).

An inmate's age at the time of incarceration is the most consistent predictor that has been found to be related with his or her disruptive behavior in prison (Cunningham & Sorensen, 2006; Flanagan, 1983; Petersilia, Honig, & Hubay, 1980; Porporino & Zamble, 1984; Proctor, 1994; Valentine, Mears, & Bales, 2015). An increase in the age of inmates is associated with a decreased risk of prison misconduct. Younger individuals, incarcerated or not, are more likely to commit crimes and break institutional and societal rules. Just as in society, younger inmates may behave more recklessly and impulsively in prison, which can lead to rule-breaking behavior (MacKenzie, 1987). Also, younger inmates are more likely to interact with a risk group, such as prison gangs, participating in risky activities without considering potential consequences (Morris et al., 2012).

Researchers have highlighted that race/ethnicity of inmates also influence the type and rate of prison misconduct. Some researchers suggested that racial and ethnic minorities disproportionately engage in rule-breaking behavior regardless of the misconduct infraction (Berg & DeLisi, 2006; Carroll, 1974; Gaes, Wallace, Gilman, Klein-Saffran, & Suppa, 2002; Poole & Regoli, 1980; Steiner & Wooldredge, 2015; Toch et al., 1989). Specifically, the majority of researchers reported that blacks are more likely to engage in prison misconduct compared to whites (Harer & Steffensmeier, 1996; Gover et al., 2008; McCorkle, 1995; Toch et al., 1989; Poole & Regoli, 1983; Steiner &

Wooldredge, 2009b, 2014). Meanwhile, researchers acknowledged non-significant or mixed findings are present across studies (Gaes et al., 2002; Harer & Steffensmeier, 1996; Petersilia et al., 1980). The existing literature is somewhat limited in measuring race when comparing White versus Black prisoners (DeLisi, Trulson, Marquart, Drury, & Kosloski, 2011; Drury & DeLisi, 2011; Griffin & Hepburn, 2006; Steiner & Wooldredge, 2008). Researchers explained that racial minorities may have a greater risk of prison misconduct because of their imported cultural values, such as cynicism or skepticism of authority, which may lead them to encounter more challenges and engage in more conflict with correctional officers (Harer & Steffensmeier, 1996; Irwin, 1980; Mears et al., 2013).

Similar to the notion that women are largely different from men because they typically commit less serious offenses and are far less threatening to community safety (Celinska & Sung, 2014; Gover et al., 2008; Salisbury & Van Voorhis, 2009), researchers of prison misconduct literature have suggested female offenders pose lower level threats to institutional security relative to males (Wright, Salisbury, & Van Boorhis, 2007). However, the relationship between gender and misconduct has yielded mixed findings. Some researchers suggested men are more likely than women to engage in rule-breaking behavior (Sorenson & Cunningham, 2010), yet other researchers provided evidence that the likelihood of prison misconduct does not differ between men and women, depending on the specific type of misconduct (Cao et al., 1997; Camp et al., 2003; Craddock, 1996). Largely, the patterns of a women's misbehavior in prison appears to mirror the gender variation in overall offending. That is, women violate fewer rules, in general, and they

commit less violent crimes compared to men (Craddock, 1996; Farr, 2000; Harer & Langan, 2001).

Other inmate characteristics may have an impact on prison behavior. According to previous research, inmates who are more socially integrated prior to incarceration are expected to be inversely associated with prison misconduct. Having strong social ties, for example, such as having a spouse and children may promote rule-abiding behavior in an effort to sustain visitation privileges and earning the possibility of early release for good behavior (Morris & Worrall, 2014; Stacer & Solinas-Saunders, 2015; Steiner & Wooldredge, 2014; Wooldredge & Steiner, 2015). Previous research revealed that married inmates report a positive adjustment to prison (Warren, Hurt, Loper, & Chauhan, 2004; Wolfgang, 1961), engaged less often in misconduct (Jiang & Winfree, 2006; Finn, 1995), and violated relatively minor rules (Cao et al., 2003). At the same time, some studies suggested that marital status was not a significant protective factor of overall misconduct or major/violent misconduct (Cao et al., 2003; Huebner, 2003).

Prior employment (Toch & Adams, 1989) and education level (Huebner, 2003; Morris et al., 2012; Worrall & Morris, 2011) have been reported to be significant factors of prison adjustment, suggesting that inmates who were employed and attained higher levels of education prior to incarceration exhibit lower incidences of prison misconduct (Finn, 1995; Huebner, 2003; Warren et al., 2004). The aforementioned findings align with the importation theory assertion where an inmate's stable and prosocial life outside prison is carried into the institution and may promote a positive adjustment to incarceration (Toch et al., 1989).

A number of criminal history related factors, such as the type of crime, prior incarceration, sentence length, and length of incarceration, are critical in understanding inmates' misconduct (Camp et al., 2003; Craddock, 1996; Jiang & Fisher-Giorlando, 2002; Sorensen & Cunningham, 2010; Thompson & Loper, 2005). Previous research provided evidence that criminal history variables are salient predictors of criminal behavior in which individuals are involved both inside and outside of prisons (Gendreau et al., 1997; Kubrin & Stewart, 2006; Steiner et al., 2014). The type and severity of crimes for which inmates are incarcerated reflect their impulsivity, chronic psychological issues, and criminal tendencies that become apparent in the forms of rule-breaking behaviors in prison (Craddock, 1996; Harer & Langan, 2001; Reidy, Sorensen, & Cunningham, 2012; Sorensen & Cunningham, 2010). Inmates convicted of drug crimes, for example, are more likely to engage in drug-related prison misconduct because of substance addiction. Drug offenders often continue to suffer from substance abuse problems after incarceration, making their adjustment to confinement more difficult (Jiang & Fisher-Giorlando, 2002). Previous researchers indicated that violent offenders are more likely to engage in prison misconduct in comparison to non-violent offenders (Camp et al., 2003; Griffin & Hepburn, 2006; Toch & Adams, 1989).

Research assessing the relationship between prior incarceration and sentence length on misconduct provided mixed findings, while the majority of findings showed significant and predominantly positive relationships (Cunningham, Sorensen, & Reidy, 2005; Griffin & Hepburn, 2006; Jiang & Winfree, 2006; Morris et al., 2010). Prior incarceration experience can result in negative or positive effects on prison misconduct because inmates who have been previously incarcerated may have learned the ways to

negotiate or manipulate the prison setting (Adams, 1992). Just as individuals with prior

criminal history have higher risk of repeating criminal activities, inmates with prior

incarceration may be more prone to continue engaging in rule-breaking behavior (DeLisi,

2003; Steiner & Wooldredge, 2009b). Conversely, prior incarceration experiences may

facilitate an inmate's positive adjustment in prison. Experienced inmates may learn to

cope with the stressful prison environment to ensure they are less likely to engage in

misconduct, or they may manipulate the prison setting to avoid getting caught for their

misbehavior (Goodstein & Wright, 1989). Lastly, although deprivation theorists consider

length of incarceration and time as factors contributing to the levels of strain and stress of

inmates, the importation perspective views these factors as indicators of how deeply

inmates are entrenched in the criminal justice system. That is, repeat offenders, likely

serving lengthier sentences, may be more prone to hold criminal subculture behaviors,

which contribute to higher rates of rule-breaking behavior (DeLisi, 2003).

Understanding Prison Adjustment of Mentally Ill Inmates from Deprivation and

Importation Theories

In understanding risk of prison misconduct, mental health problems have been

largely considered as an importation theory correlate. Given the focus of this

dissertation, the following section is devoted to the review of previous work on the effect

of mental health problems on prison misconduct, providing a discussion of how

deprivation and importation theories can guide our understanding of misconduct behavior

by inmates with a history of mental health problems. While the majority of previous

studies considered mental health problem as a single construct and compared inmates

with and without mental health problems, a handful of studies provided important

discussions on prison misconduct of inmates with mental health problems that merit a detailed discussion.

Toch and Adams (1986) examined whether inmates with mental health problems were more disruptive than other inmates without mental health problems by using a sample of more than 1,000 inmates incarcerated in the New York State prison system. Prison misconduct was measured with the official disciplinary records to indicate an average annual rate of infractions. Relying on the official record of mental health service delivery, the authors operationalized mental health problems with mental health service needs and categorized whether inmates had received (1) no mental health service, (2) only outpatient services, or (3) periods of residence in a hospital setting. Findings indicated that inmates who had been hospitalized multiple times, and were considered as seriously disturbed had higher infraction rates compared to inmates with no mental health problems. With respect to specific types of infraction, seriously disturbed inmates who had been hospitalized were also more likely to engage in violent infractions.

Additionally, the findings underscored that seriously disturbed inmates who had violent infractions were over twice as likely to engage in nonviolent infractions. However, when looking among the inmates without violent infraction tickets, the rate of nonviolent infractions did not differ based on mental health problems. This finding suggested that inmates with mental health problems may disproportionately engage in misconduct behavior when compared to inmates without mental health problem. Among mentally ill inmates, however, there may be differential risks of prison misconduct. The authors noted that mentally disruptive inmates may be viewed as "bad" considering the fact that they are often from marginal backgrounds. Some protective factors of prison

misconduct, such as employment, education, and marriage, might not have been achievable for the inmates with mental health problems, which in turn affected their disruptive behavior. For example, findings revealed that unemployment prior to incarceration increased the rate of institutional infractions, this relationship did not hold among previously hospitalized inmates. The authors further underscored that basic demographic characteristics, such as age and race, also interact with mental health problems to affect behavior and called for a study of testing the "double stigma" effect on prison misconduct (p. 19).

Similarly, Adams (1986) relied on a sample of inmates who were referred to mental health satellite units of two maximum security level prisons and compared them with randomly drawn samples from the general prison population of both prisons. Using the most serious type of institutional infraction officially recorded, the study found that referred inmates had higher infraction rates than non-referred inmates. Further, findings suggested that the majority of rule violations committed by inmates with mental health problems is reflective of their symptoms. The referred inmates were significantly more likely cited for refusing to come out of their cell, destroying or altering property, setting fires, or enabling self-injury, compared to the non-referred inmates. Meanwhile, the author also conducted within group comparisons by differentiating disruptive tendency due to the presence of a diagnosable mental disorder at admission, such as emotional problems, reporting that referred inmates who were classified as having an active caseload had higher infraction rates compared to the referred inmates not on active caseloads. These findings raise important questions whether misconduct behavior of inmates with mental disorders are a manifestation of mental illness and maladaptive

coping as a result, and how incarceration experiences interacts with their mental health problem to affect behavior.

Drawing data from the 1986 Survey of Inmates in State Correctional Facilities, McCorkle (1995) measured mental health status with three categorical variables, focusing on inmates who were (1) never on medication or hospitalized, (2) previously medicated or hospitalized, or (3) currently receiving medication since admission to prison. Annual infraction rates of institutional infractions were used as the dependent variable with various individual-level predictors of misconduct (e.g., age, race, marriage, dependent children, education, employment, prior incarceration, drug use prior to incarceration, and type of crime). The findings suggested that inmates without a history of mental health related medication or hospitalization are substantially different from inmates with mental health problems. Inmates with mental health problems either currently or previously, were older, disproportionately white, unemployed, undereducated, have a history of prior incarceration and substance abuse, and incarcerated for violent offenses, compared to inmates without a history of medication or hospitalization.

Findings further suggested that annual disciplinary infraction rates were significantly higher for both inmates with histories of medication or hospitalizations and those currently on medication in prison compared to inmates without a medication or hospitalization history. When examining gender specific models, however, a history of mental health medication or hospitalization did not matter in predicting misconduct, but current medication use in prison increased the infraction rates only among female inmates, particularly black women. The annual infraction rates of female inmates who were currently on medication were almost two times higher than the rates of female and

male inmates without mental health problems. Though this study did not account for the types of misconduct in which inmates were engaged and the institutional environment, the author noted that higher rates of institutional infractions of female inmates observed may be indicative of gender differences in coping mechanism as related to mental health problems in responding to the pains of incarceration.

Taken together, prior research examining the effect of mental health problems and prison misconduct indicated that mental health problems may not necessarily *cause* institutional infractions. Rather, the effects of mental health problems may be further complicated by a close association with various risk factors that inmates bring into prisons. Additionally, prior studies suggest that prison experiences of those inmates with mental health problems and other associated risk factors may be different from those without. In other words, inmates may differ in behavior or misbehavior based on their impaired coping mechanisms due to their mental health histories, but also their levels of deprivation and stress in prison due to limited resources. In this regard, a combined model of deprivation and importation theories provide a meaningful framework for explaining prison misconduct of inmates with a history of mental health problems.

In fact, though both deprivation and importation theories of prison misconduct have received significant empirical support, critics have argued that each theory takes a narrow view in understanding prison adjustment of inmates (Adams, 1992; Thomas, 1973, 1977; Wellford, 1967). Jacobs (1977) argued that deprivation theory only focused on the prison environment and overlooked other key individual attributes, such as race and gender, which might differ the ways in which individuals adapted to prison subculture. Similarly, Paterline and Petersen (1999) argued that if inmate subculture and

inmates' behavior were solely based on the pains of imprisonment, all inmates would have acted out in uniform ways. Therefore, some researchers have advanced the argument that the deprivation model and importation model should not be considered as competing models (Thomas, 1977; Toch, 1992; Wellford, 1967; Wright, 1991). Rather, the components of these two models may not only directly shape, but also interactively influence inmates' prison adjustment (Gover et al., 2000; Hochstetler & DeLisi, 2005).

This combined model may be critical in understanding the prison adjustment or maladjustment of inmates with mental illnesses, in particular, considering their pre-prison characteristics and the way in which they experience the prison environment. Stressing that not all inmates engage in misconduct behaviors, Bukstel and Kilmann noted "each individual who experiences prolonged confinement reacts to this situation in an idiosyncratic manner: Some individuals show deterioration in response to confinement, and others show improved functioning, whereas others show no appreciable change" (1980, p. 19). Similarly, Adams (1992) posited that mental health problems themselves may not necessarily cause behavioral problems in prison; rather, adjustment problems in prison are independently and interactively related to both individual and prison environmental risk and protective factors.

Indeed, inmates with mental illness often have pre-prison background characteristics that may differ from the general prison population (O'Keefe & Schnell, 2007; Toch & Adams, 1986). For example, relevant criminal history factors have been found to distinguish inmates with mental health problems from the general population (Swank & Winer, 1976; Toch & Adams, 1989). Mentally ill inmates are more likely to be incarcerated for serious and violent crimes, such as rape, murder, and aggravated

assault (Torrey, 1995), to serve longer prison time (Toch & Adams, 1989), and to have extensive histories of violence and criminal justice involvement (Choe, Teplin, & Abram, 2008). Researchers also pointed out that individuals with mental health problems in prisons disproportionately come from lower socioeconomic status groups (Miech, Caspi, Moffitt, Wright, & Silva, 1999) and often have co-occurring substance abuse problems (Houser et al., 2012). As such, having various risk factors in addition to mental health problems may further challenge their coping ability with the pains of imprisonment (Carr et al., 2013; O'Keefe & Schnell, 2007; Toch & Adams, 1986). Limited scholarly efforts have been devoted to the question whether heightened levels of misconduct involvement can be explained by destructive individual characteristics of mentally ill inmates and their vulnerability to prison environments, independently or interactively.

Research Questions

Based on the existing gaps in the prison misconduct literature and the limited understanding of the effects of mental health problems, this dissertation attempts to expand our knowledge by focusing on inmates with a history of mental health problems to compare the effect of nuanced measures of mental disorder and indicators, correlated risk factors (e.g., victimization, substance abuse, and suicide attempts), and prison experiences (e.g., treatment and program participation, work assignments, and visitation) on prison misconduct. Building upon prior work as outlined in the literature review, the following research questions and hypotheses are proposed.

R0. What is the distribution of disciplinary infractions among inmates with a history of mental health problems?

R1. Is there a relationship between different types of mental disorders and other mental health indicators and disciplinary infractions?

> H_1. Mental disorders and other mental health indicators will be positively and significantly associated with inmates' disciplinary infractions, net of the demographic and crime relevant characteristics.

> H_2. More serious mental health disorders will increase the risk of institutional infractions.

R2. Is there a relationship between other individual-level risk factors (e.g., victimization, substance abuse, and suicide attempt) and disciplinary infractions among inmates with a history of mental health problems?

> H_3. Individual-level risk factors will be positively and significantly associated with inmates' disciplinary infractions, net of mental health disorder and indicators and the other relevant characteristics.

R3. Is there a relationship between prison experiences (e.g., treatment and program participation, work assignments, and visitation) and disciplinary infractions among inmates with a history of mental health problems?

> H_4. Exposure to prosocial and structured prison experiences will be negatively and significantly associated with inmates' disciplinary infractions, net of the demographic and crime relevant characteristics.

R4. Is the relationship between mental health problems as well as other risk factors and disciplinary infractions shaped by prison experiences?

> H_5. The positive and significant effects of mental health indicators and individual-level risk factors on inmates' institutional infractions will be

diminished after accounting for exposure to prosocial and structured prison experiences.

Chapter 3 presents the methodology used in this dissertation to examine the aforementioned research questions and hypotheses. In the following section, data, measures, and analytical strategies are outlined.

CHAPTER III

Methods

Data

The current research relies on data from the 2004 *Survey of Inmates in State and Federal Correctional Facilities* (SISFCF), which were collected by the United States Bureau of Census for the Bureau of Justice Statistics (BJS) and maintained and distributed through the Interuniversity Consortium for Political and Social Research (ICPSR). These data are a nationally representative sample of inmates who were confined in state prisons and federally operated prisons. A two-stage sampling procedure was used for the 2004 SISFCF where representative prisons were selected in the first stage and inmates within sampled prisons were randomly selected in the second stage.

Using the 2002 Census of State and Federal Correctional Facilities as a sampling frame, the 21 largest state prisons were first selected and the remaining state prisons were stratified by region and size of the facility population and selected based on probability proportional to size. As a result, a total of 269 state prisons were selected. In the second stage of sample selection, interviewees were randomly selected from a comprehensive list of inmates provided by the selected facilities. The number of inmates interviewed within facilities depended on the size of facilities, and sampling weights were used to adjust for sampling errors (e.g., nonresponse, non-sampling variability).

Randomly selected inmates across the facilities were interviewed using computer assisted interviewing techniques between October 2003 and May 2004. The original survey data comprised 14,499 state inmates. The dataset is particularly suited for the current research since the data provided comprehensive information with respect to

inmates' histories of mental health problems (e.g., mental disorder, use of medication, and hospitalization for mental health problems), institutional behaviors (e.g., prison misconduct) and institutional experiences (e.g., treatment program, work assignments, and visitation), pre-prison experiences (e.g., victimization, substance abuse problems, suicide attempts), background characteristics, and criminal history. Additionally, the SISFCF is ideally suited to the purpose of the current study because it provides the opportunity to examine the unique risk factors of prison misconduct among a vulnerable prison population with a history of mental health problems. It is also important to note that SISFCF sample is large enough to capture inmates with various mental health problems, also those with at least one institutional infraction, which ensure variations within the sample.

For the current study, the criteria for inclusion were inmates incarcerated in state prison facilities, who were not confined with life sentences, and those who had a history of mental health problems during their life time. First, the sample was restricted to inmates who were incarcerated in state prison facilities due to potential unmeasured variance in federal facilities. Inmates incarcerated in federal facilities differ from inmates in state prisons with respect to the type and seriousness of crime (Carson & Anderson, 2016). For example, 55% of inmates in state prison facilities were incarcerated for violent offenses, whereas only 8% of inmates in federal prison facilities were violent offenders (Carson & Anderson, 2016). Additionally, previous researchers have also noted that federal prisons generally have higher levels of security than state prisons (Raphael, 2011).

Second, inmates serving life imprisonment have been removed for the current study due to differences in the individual characteristics and prison experiences that are closely related with the risk of prison misconduct as well as mental health problems. Specifically, prior research suggested that the likelihood and seriousness of prison misconduct of long-term inmates (i.e., lifers and death row inmates) are essentially different from those inmates with shorter sentences (Cunningham & Sorensen, 2006; Cunningham, Reidy, & Sorensen, 2008; Flanagan, 1980; Marquart, Ekland-Olson, Sorensen, 1989; Sorensen & Winkle, 1996). The literature also highlighted the potential relationships between lengthy imprisonment and serious psychological distress (Murdoch, Morris, & Holmes, 2008).

Finally, the current research focused on inmates who reported a history of mental health problems during their lifetime using a series of mental health related questions. Eight survey questions were used to select the sample for the study. Inmates who had been diagnosed with a mental disorder were included using the following questions; "Have you ever been told by a mental health professional, such as a psychiatrist or psychologists, that you had (1) a depressive disorder, (2) manic-depression, bipolar disorder, or mania, (3) schizophrenia or another psychotic disorder, (4) post-traumatic stress disorder (PTSD), (5) another anxiety disorder, such as a panic disorder, or (6) a personality disorder, such as an antisocial or borderline personality disorder?" Inmates were also asked about their medication and hospitalization histories with the following questions: "because of an emotional or mental problem, have you ever taken a medication prescribed by a psychiatrists or other doctor?" and "because of an emotional or mental problem, have you ever been admitted to a mental hospital, unit or treatment program

where you stayed overnight?" Relying on these eight questions, inmates with a history of mental health problems were included in the analyses.

Overall, few missing cases were detected across the variables of interest. To assess the degree to which missing cases were problematic, missing data diagnostics were performed. Comparing the sample characteristics with and without missing cases showed that there were no significant differences, indicating the missing patterns were random. Further, most of the variables had less than 5% missing responses. After removing missing cases across 14 variables of inclusion, a total of 4,246 state inmates with a history of mental health problems were included in the study.

Measures

Four dependent variables and 14 key independent variables of interest were included in the study. All of the measures included in the analyses are presented in Table 1. The primary purpose of the current study is to identify unique risk and protective factors of prison misconduct among inmates with a history of mental health problems. Prior research typically examined prison misconduct as any misconduct or specific types of prison misconduct, comparing inmates with and without mental health problems (Berk et al., 2006; Houser et al., 2012; Houser & Welsh, 2014; Wood & Buttaro, 2013). To further assess the unique predictors of prison misconduct within a vulnerable prison population, the current study focuses on specific types of prison misconduct. Thus, the dependent variables included prevalence and incidence measures of violent misconduct and nonviolent misconduct.[1] Inmates responded to a series of questions about their

---

[1] Prior misconduct researchers often examined violent misconduct, nonviolent misconduct, and drug/alcohol misconduct. In the data, however, there were few instances of drug/alcohol misconduct among inmates with mental health problems (5.1%). Therefore, drug/alcohol misconduct was combined with the other non-violent misconduct.

prison infractions that asked, "Since your admission date, have you been written-up or found guilty of breaking any prison rules?" Then, the questionnaires included questions about specific types of prison misconduct. Answer options were "yes" or "no." If they had ever received an infraction for misconduct, they were asked how many times they had been written-up for the misconduct.

Using the various types of prison misconduct items, prison misconduct was categorized into violent and nonviolent misconduct. Following prior work, violent misconduct was measured with four items, indicating if inmates received an infraction for verbal or physical assault on staff members or other inmates. Nonviolent misconduct was measured with all nonviolent types of misconduct, including drug or alcohol violations, possession of a weapon, stolen property, or any other unauthorized item, substance, or contraband, escape or attempted to escape, being out of place, and disobeying orders. In the analysis, two measures for each misconduct were used: ever received an infraction (0 = No; 1 = Yes) and number of infractions. Approximately 21% of the state inmates with a history of mental health problems were ever written-up for or found guilty of violent misconduct, while almost half of the sample (48.9%) had at least one nonviolent infraction. With respect to the number of infractions, the distribution was skewed as expected. Additionally, extreme outlier cases were identified and top-coded at 10 because the original data contained extreme cases, as 2% of the sample had more than 10 violent misconduct tickets (i.e., range from 11 to 297) and 4% had more than 10 nonviolent misconduct tickets (i.e., range from 11 to 157).[2] The average number of violent and nonviolent infractions was 0.7 and 1.7, respectively.

---

[2] The method to replacing outliers with top coding is appropriate when less than 5% of the distribution falls into this category (Cowell & Victoria, 2007).

Existing research has demonstrated that inmates with mental health problems often have additional risk factors. Noting that these factors were found to be relevant predictors of prison misconduct among the general prison population (Houser et al., 2012; Wood, 2013), the current study captures a comprehensive set of individual-level risk factors, including various diagnosed mental disorders and relevant indicators, victimization history, substance abuse problems, and suicide attempts. Further, differential opportunities in exposure to a prosocial system within prison were captured using a series of variables, including treatment and program participation, work assignments, and visitation. In total, 14 primary independent variables were included in the study that captured individual-level risk factors as well as prison experiences of prison misconduct.

Mental health problems were operationalized with a series of variables, including specific mental disorder diagnoses (i.e., depression, psychosis, anxiety, personality disorder, and PTSD), medication, and hospitalization for mental health problems. As noted above, the participants were asked if they were ever diagnosed with mental disorders by a mental health professional, such as a psychiatrist or psychologist. Five different types of diagnosed mental disorders were captured with dichotomous measures, indicating (1) depressive disorder, manic-depression, bipolar disorder, or mania, (2) schizophrenia or another psychotic disorder, (3) post-traumatic stress disorder, (4) another anxiety disorder, such as a panic disorder, or (5) personality disorder, such as an antisocial or borderline personality disorder (0 = No; 1 = Yes). The most common type of mental disorder among the sample was depression (69%), followed by anxiety disorder (24.7%), PTSD (19.5%), personality disorder (18.1%), and psychosis (13.6%).

Considering that individuals with mental health problems often present complex issues with co-occurring multiple disorders and symptoms (Houser et al., 2012), a variable was created which identified whether inmates had more than one mental health diagnosis (0 = one disorder; 1 = multiple disorders). Less than half of inmates (39.9%) with a history of mental disorders reported that they were diagnosed with more than one mental disorder. Additionally, two dichotomous measures indicate whether inmates have ever taken a prescribed medication or been hospitalized for a mental or emotional problem. Approximately three-quarters of the sample (77.8%) reported that they had taken a medication and 38.2% had been hospitalized for their mental health problems prior to incarceration.

A set of other risk factors were included in the study. Substance abuse is measured by self-reported regular use of a wide range of drugs (e.g., cocaine or crack, heroin or other opiates, ecstasy, marijuana, or hashish) once a week or more for at least a month (0 = No; 1 = Yes). The majority of the sample (77.3%) reported that they had used drugs regularly prior to incarceration. Prior victimization is captured with a measure reflecting whether an inmate had been physically or sexually victimized prior to incarceration (0 = No; 1= Yes). Roughly half of inmates (45.4%) had experienced victimization prior to incarceration. A history of suicide attempts was also included (0 = No; 1 = Yes). Approximately 35% of the inmates with a history of mental disorders reported that they had attempted suicide.

Various prison experience related variables were included in the model. First, mental health treatment variables were included with dichotomous measures, reflecting whether inmates received mental health treatment since admission to prison. More than

half of the sample (57.5%) received mental health treatment in prison. Second, three

program participation variables were measured dichotomously to indicate whether

inmates participated in vocational, educational, or any other institutional programs, such

as religious, recreational, or parenting skill programs (0 = No; 1 = Yes). In the data, 28%

of the sample participated in vocational programs, 32% in educational programs, and

56% in other programs. Third, work assignment identifies whether inmates have had a

work assignment either inside or outside of the prison facility (0 = No; 1 = Yes). Less

than the half of the sample (58.7%) reported that they had a work assignment while

incarcerated. Lastly, a visitation measure captured whether inmates had any visits in the

past month (0 = no; 1 = yes). Less than one-third of the sample (28.1%) received a visit

in the month prior to the survey.

Consistent with prior literature, relevant demographic characteristics (e.g., age,

race/ethnicity, and gender) and criminal history (e.g., types of crime, prior incarceration)

were included in predicting the risk of prison misconduct. Age at the time of the original

study was measured as a continuous variable with a range of 17 to 84 years. The mean

age of the sample was 35 years. A set of the mutually exclusive dichotomous variables

was included for race/ethnicity, with Whites as the reference category. The majority of

the inmates with a history of mental health problems was White (50.7%), followed by

Black (29.7%), Hispanic (12.6%), and Other (7.0%). Over half of the sample was male

(66.5%), and male served as the reference category. Marital status was coded

dichotomously into married and never married. The majority of the sample was never

married, which served as the reference category, and nearly 16% of the sample were

married. Education was measured dichotomously indicating whether an inmate had at

least a high school diploma or GED (0 = no high school diploma/GED; 1 = high school diploma/GED). Around 36.1% of the sample reported that they had at least a high school diploma or GED prior to incarceration. Employment reflects whether an inmate had a job or owned a business during the month before arrest (0 = No; 1 = Yes). The majority of the inmates (66.2%) had a job or owned a business prior to incarceration.

Turning to criminal history predictors, most inmates with a history of mental health problems served time for violent crimes (43.5%), followed by property crimes (24.8%), drug crimes (20.4%), and crimes against public order (11.3%). Violent offender was included as the reference category. A dichotomous measure of prior prison term was used, reflecting whether an inmate had a history of incarceration prior to the current prison term (0 = No; 1 = Yes). Roughly half of the sample (49.3%) had previously served time in prison. Time served measure reflects the number of years an inmate served in prison by the time of the data collection. The average time served of the sample was 3.9 years.

Table 1

Sample Characteristics (n = 4,246)

Variable	%	Mean(S.D)	Min – Max
Dependent variables			
Prevalence of violent misconduct	21.2		0 – 1
Prevalence of nonviolent misconduct	48.9		0 – 1
Incidence of violent misconduct		0.7; 1.9	0 – 10
Incidence of nonviolent misconduct		1.7; 2.9	0 – 10
Key independent variables			
Mental disorder diagnoses			
Depression	69.0		0 – 1
Psychosis	13.6		0 – 1
Anxiety disorder	24.7		0 – 1
Personality disorder	18.1		0 – 1

(continued)

Variable	%	Mean(S.D)	Min – Max
PTSD	19.5		0 – 1
More than 1 mental disorder	38.9		0 – 1
Medication	77.8		0 – 1
Hospitalization	38.3		0 – 1
Substance use	77.3		0 – 1
Victimization	45.4		0 – 1
Suicide attempts	35.0		0 – 1
Institutional Treatment			
Mental health treatment	57.5		0 – 1
Institutional Program			
Vocational program	27.5		0 – 1
Educational program	31.5		0 – 1
Other social program	55.6		0 – 1
Work assignments	58.7		0 – 1
Visitation	28.1		0 – 1
Control variables			
Age		34.9; 9.7	17 – 84
Race/ethnicity			
White	50.7		0 – 1
Black	29.7		0 – 1
Latino/a	12.6		0 – 1
Others	7.0		0 – 1
Gender			
Male	66.5		0 – 1
Female	33.5		0 – 1
Married	16.1		0 – 1
Education	36.1		0 – 1
Employment	66.2		0 – 1
Type of offense			
Violent	43.5		0 – 1
Property	24.8		0 – 1
Drug	20.4		0 – 1
Public order	11.3		0 – 1
Prior prison term	49.3		0 – 1
Time served		3.9; 4.2	0 – 40

Analytical Strategy

The primary goal of the analysis is to determine whether various individual-level

risk factors and exposure to a prosocial system in prison differentiate the risk of prison

misconduct among inmates with a history of mental health problems and to explore how

the effects of individual-level risk factors are shaped by the prison experiences. Specifically, the current study seeks to answer (1) if mental disorders and other mental health indicators are positively and significantly associated with inmates' disciplinary infractions, net of the demographic and crime relevant characteristics; (2) if more serious mental health disorders increase the risk of institutional infractions; (3) if individual-level risk factors are positively and significantly associated with inmates' disciplinary infractions, net of mental health disorders and indicators and the other relevant characteristics; (4) if exposure to prosocial and structured prison experiences is negatively and significantly associated with inmates' disciplinary infractions, net of the demographic and crime relevant characteristics; and (5) if the positive and significant effects of mental health indicators and individual-level risk factors on inmates' institutional infractions are shaped by accounting for exposure to prosocial and structured prison experiences. To test the hypotheses proposed in the current work, a series of bivariate and multivariate analyses were conducted using SPSS version 22.

First, bivariate analyses were conducted to assess the relationship between prison misconduct (e.g., violent and nonviolent misconduct) and individual-level risk factors and prison experiences. For both violent and nonviolent misconduct comparisons, the bivariate analyses explore how inmates with at least one infraction for rule-breaking behavior differ from inmates without an infraction with respect to various risk and protective factors included in the analyses. Tables 2 and 3 report the findings of Pearson's Chi-Square and t-test analyses across violent and nonviolent misconduct, respectively.

Second, a series of logistic and negative binomial regression models were estimated to assess the relationship between prison misconduct and individual-level risk factors and prison experiences among inmates with a history of mental health problems. Logistic regression is appropriate with dichotomous dependent variables. Logistic regression applies maximum likelihood of estimation and estimates the odds of prison misconduct occurring after accounting for covariates. Negative binominal regression is appropriate for modeling count variables, especially when the variable of interest is over-dispersed. Negative binomial regression was chosen over the poisson model, as the variance and the mean of the two dependent variables were not equivalent (Long & Freese, 2001). Prison misconduct researchers also highlighted negative binomial regression is an ideal method to analyze the count of prison misconduct since prison misconduct data are bound by many zero values, which pose heteroskedastic error terms (DeLisi et al., 2010; Walter, 2007).

For both binary and count measures of the dependent variable, a blockwise enter method of regressions was used to identify the unique predictors of prison misconduct and determine how the predictors may be related to each other. While a simple "enter" logistic regression includes all relevant predictors simultaneously to examine the effects of the independent variables on the dependent variable with all control variables held constant, a blockwise enter method allows researchers to enter the variables in a specified order and groups based on the researcher's decision criteria, such as theory and previous research (Field, 2005; Menard, 2010). This method is often used for exploratory research (Menard, 2010), which assesses the contribution of each group of variables and evaluates

how the effects of individual variables change when other variables are introduced into the model.

Guided by prior work examining prison misconduct and mental health problems, the current study uses an enter method regression. Specifically, the regression starts with the control variables predicting the risk of prison misconduct. Then, at the second step, individual-level risk factors were introduced into the model. Lastly, prison experience relevant predictors were added to the model as the third step. In particular, a closer examination of the third step provides an explanation on whether and how the effects of individual-level risk factors are shaped by prison experiences. Further, this modeling technique is useful not only to identify significant predictors of prison misconduct, but also to assess the variance of which variables explain and provide improvement in the model fit (Menard, 2002). The findings of violent misconduct are presented in Tables 5 and 8 and of nonviolent misconduct in Tables 6 and 9. Prior to running the multivariate analyses, tests for multicollinearity were performed using all variables of interest. The diagnostics results are reported in the "Results" section, which showed that variance inflation factors (VIFs) and Tolerance levels fell within acceptable limits. VIFs above 10 and tolerance scores below .10 were considered problematic (Pallant, 2005).

CHAPTER IV

Results

Bivariate Results

Table 2 and 3 report results from bivariate analyses that examined key independent variables and inmate characteristics across violent and nonviolent misconduct. As was shown in Table 1, 21% of the 4,246 inmates with a history of mental health problems had at least one violent infraction during their incarceration and 49% had at least one nonviolent infraction. Below, statistically significant differences between inmates with and without violent and nonviolent infractions are described.

Between inmates with and without violent misconduct (see Table 2) compared to inmates who were never involved with violent misconduct, those who had been ticketed for violent misconduct were significantly more likely to be diagnosed with psychosis (12.5% versus 17.7%) and personality disorder (16.4% versus 24.2%). On the other hand, inmates with violent infractions were less likely to have a history of PTSD in comparison to inmates without violent infractions (20.2% versus 17.2%). Violent misconduct violators significantly more often reported more than 1 mental disorder diagnosis than inmates who were never ticketed for violent misconduct (38% versus 42.4%). With respect to prior hospitalization for mental health problems, inmates with violent infractions were significantly more likely to have had a history of hospitalization for mental health problems compared to inmates without violent infractions (36.7% versus 44.1%).

With respect to various risk factors, the vast majority of violent misconduct violators (81.8%) had substance use problems prior to incarceration, compared to 76% of

inmates without violent infractions. Furthermore, violent misconduct violators were more likely to have had a history of suicide attempts than inmates who never received a violent misconduct ticket (34.5% versus 38.9%). Looking at institutional experiences, the analyses revealed that inmates with violent infractions were significantly more likely to receive mental health treatment (55.5% versus 65.9%) and participate in vocational (24.8% versus 37.7%) and educational programs (28.4 versus 41.8%), compared to inmates without violent misconduct. Meanwhile, inmates with violent misconduct significantly less often received work assignments (60.1% versus 53.7%) and visits (29.0% versus 25.3%) while incarcerated.

Largely consistent with previous research relying on general prison populations, significant differences among inmates with a history of mental health problems were found between inmates with and without violent infractions across several inmate characteristics. The mean age of violent misconduct violators was significantly lower than the mean age of inmates who never had a violent infraction (35 years versus 32 years). Compared to inmates without violent misconduct, those who received at least one violent infraction ticket were more likely to be Black (27.5% versus 38.0%) or Latino/a (11.8% versus 15.3%). On the other hand, inmates with violent misconduct were significantly less likely to be White (53.3% versus 41.2%) or Others (7.4% versus 5.4%). Among inmates who were written-up for at least one violent misconduct, 75.5% were male and 24.5% were female. In contrast, among inmates without violent misconduct, 64.1% were male and 35.9% were female. With respect to the other inmate characteristics, violent misconduct violators were significantly less likely to be married

(17.4% versus 11.4%), have a high school diploma or GED (38.8% versus 26.1%), and employed prior to incarceration (67.0% versus 63.3%).

Compared to inmates who never received violent infraction tickets, inmates with violent misconduct were significantly more likely to have served time for violent offenses (39.5% versus 58.2%), and less likely to be incarcerated for property offenses (26.1% versus 19.8%), drug crimes (38.8% versus 26.1%), or crimes against public order (12.1% versus 8.5%). Violent misconduct violators significantly more often had been incarcerated previously compared to inmates without violent misconduct (47.4% versus 56.4%). Finally, the average length of time served for violent misconduct violators was significantly longer than the time served by inmates who were never written-up for violent misconduct (3.3 years versus 5.9 years).

Table 2

Bivariate results across violent misconduct (n = 4,246)

Variable	Violent Misconduct	
	No (%)	Yes (%)
Key independent variables		
Mental disorder diagnoses		
Depression	68.8	69.6
Psychosis	12.5	**17.7*****
Anxiety disorder	25.1	23.2
Personality disorder	16.4	**24.2*****
PTSD	20.2	**17.2***
More than 1 mental disorder	38.0	**42.2***
Medication	77.8	78.2
Hospitalization	36.7	**44.1*****
Substance use	76.0	**81.8*****
Victimization	45.5	44.7
Suicide attempts	34.5	**38.9***
Institutional Treatment		
Mental health treatment	55.5	**65.9*****
Institutional Program		
Vocational program	24.8	**37.7*****

(continued)

Variable	Violent Misconduct	
Educational program	28.4	**41.8***
Other program	54.9	58.1
Work assignments	60.1	**53.7***
Visitation	29.0	**25.3***
Control variables		
Age	35.4; (S.D.=10.0)	**32.4; (S.D.=8.6)***
Race/ethnicity		
White	53.3	**41.2***
Black	27.5	**38.0***
Latino/a	11.8	**15.3***
Others	7.4	**5.4***
Gender		
Male	64.1	**75.5***
Female	35.9	**24.5***
Married	17.4	**11.4***
Education	38.8	**26.1***
Employment	67.0	**63.3***
Type of offense		
Violent	39.5	**58.2***
Property	26.1	**19.8***
Drug	22.3	**13.4***
Public order	12.1	**8.5***
Prior prison term	47.4	**56.4***
Time served	3.3; (S.D.=3.7)	**5.9; (S.D.=5.1)***
N	3,344	902

Note. ***$p < .001$; **$p <.01$; *$p <.05$.

Table 3 displays the results of bivariate analyses of key independent and control

variables across inmates with and without nonviolent misconduct. As indicated above,

almost half of the inmates with mental health problems (48.9%) had received at least one

nonviolent infraction. Interestingly, only two mental health indicators were significantly

different across inmates with and without nonviolent misconduct. Compared to inmates

who had never been written-up for nonviolent misconduct, inmates with nonviolent

misconduct were significantly more likely to report a history of personality disorder

(15.9% versus 20.3%) and have been hospitalized for mental health issues (36.5% versus

40.1%). There were no statistically significant differences among all other mental health indicators between inmates with and without nonviolent misconduct.

Concerning individual-level risk factors, inmates with nonviolent infractions were significantly more likely to have substance use problems (75.1% versus 79.5%), have been physically or sexually victimized (43.1% versus 47.8%), and have attempted suicide (33.8% versus 37.3%). With the exception of visitation, significantly more nonviolent misconduct violators were exposed to structured and prosocial institutional experiences. Compared to inmates who never received nonviolent infraction tickets, nonviolent misconduct violators were more likely to receive mental health treatment (52.4% versus 63.3%), participated in vocational (18.6% versus 36.9%), educational (23.4% versus 39.5%), and other social programs (50.0% versus 61.4%), and received work assignments (56.2% versus 61.4%) while incarcerated.

Analyses further uncovered that nonviolent misconduct violators were significantly younger than their counterparts (36 years versus 34 years). In comparison to inmates without nonviolent infractions, inmates with nonviolent misconduct were significantly less likely to be White (52.4% versus 49.0%) and more likely to be Black (27.5% versus 32.1%). Among nonviolent misconduct violators, 68.8% were male and 31.2% were female. On the other hand, 64.3% were male and 35.7% were female among inmates without nonviolent misconduct violations. Further, inmates with nonviolent misconduct were significantly less likely to be married (17.4% versus 11.4%) and have a high school diploma or GED (39.4% versus 32.6%) than their counterparts.

With the exception of property crimes, the findings on all legally relevant factors between inmates with and without nonviolent misconduct were consistent with the

violent misconduct comparisons. To be specific, nonviolent misconduct violators were significantly more likely to have served time in prison for violent crimes (35.9% versus 51.4%), and less likely incarcerated for drug offenses (24.9% versus 15.7%) or crimes against public order (13.5% versus 9.1%) in comparison to inmates without nonviolent infractions. A slightly larger proportion of nonviolent misconduct violators had been previously incarcerated (47.7% versus 51.0%) and had served significantly longer time in prison (2.8 years versus 4.9 years) than their counterparts.

Overall, the bivariate findings revealed that mental disorders and relevant mental health indicators differentiated the risk of violent misconduct, whereas other individual-level risk factors were associated more with nonviolent misconduct. Somewhat unexpectedly, institutional treatment and program participation were positively associated with violent and nonviolent misconduct. Among inmates with a history of mental health problems, findings on inmate characteristics and criminal histories revealed patterns consistent with studies using general prison populations. Next, results of multivariate analyses are presented.

Table 3

Bivariate results across nonviolent misconduct (n = 4,246)

Variable	Nonviolent Misconduct	
	No (%)	Yes (%)
Key independent variables		
Mental disorder diagnoses		
Depression	69.3	68.7
Psychosis	13.6	13.6
Anxiety disorder	25.1	24.3
Personality disorder	15.9	**20.3*****
PTSD	19.7	19.3
More than 1 mental disorder	38.5	39.4
Medication	78.2	77.4

(continued)

Variable	Nonviolent Misconduct	
Hospitalization	36.5	**40.1***
Substance use	75.1	**79.5*****
Victimization	43.1	**47.8****
Suicide attempts	33.8	**37.3***
Institutional Treatment		
Mental health treatment	52.4	**63.3*****
Institutional Program		
Vocational program	18.6	**36.9*****
Educational program	23.4	**39.5*****
Other program	50.0	**61.4*****
Work assignments	56.2	**61.4*****
Visitation	27.8	28.6
Control variables		
Age	36.2; (S.D.=9.9)	**33.8; (S.D.=9.5)*****
Race/ethnicity		
White	52.4	**49.0***
Black	27.5	**32.1*****
Latino/a	13.4	11.8
Others	6.8	7.2
Gender		
Male	64.3	**68.8****
Female	35.7	**31.2****
Married	19.3	**12.8*****
Education	39.4	**32.6*****
Employment	66.4	66.0
Type of offense		
Violent	35.9	**51.4*****
Property	25.7	23.8
Drug	24.9	**15.7*****
Public order	13.5	**9.1****
Prior prison term	47.7	**51.0*****
Time served	2.8; (S.D.=3.5)	**4.9; (S.D.=4.5)*****
N	2,171	2,075

Note. ***$\rho < .001$; **$\rho < .01$; *$\rho < .05$.

Multivariate Results.

     Binary logistic regression models. To examine the proposed hypotheses, the first

set of logistic regressions were conducted to determine whether and how (1) mental

disorders and other mental health indicators, (2) serious mental disorder problems, (3)

individual-level risk factors, and (4) prison experiences differed on the probability of

being written-up or found guilty of violent and nonviolent misconduct, holding all other

relevant controls constant. Specifically, Model 1 controlled for inmate characteristics

and their criminal histories only. Model 2 included the predictors in Model 1 and mental

health indicators as well as individual-level risk factors to determine whether mental

health indicators and individual-level risk factors explain the risk of violent and

nonviolent misconduct beyond individual characteristics and criminal histories. Finally,

Model 3 was estimated with all predictors included in Model 2 and prison experience

predictors to assess how the effects of individual-level risk factors are shaped by prison

experiences. The three models are estimated for violent and nonviolent misconduct,

respectively. Prior to estimating the full models, potential multicollinearity issues were

checked. As indicated below (See Table 4), the results showed that VIFs and tolerance

levels fell within the acceptable limits.[3] The highest VIF score was 2.205 and the lowest

tolerance level was .454.

Table 4

Collinearity statistics

Variable	Tolerance	VIF
Key independent variables		
Mental disorder diagnoses		
Depression	.695	1.440
Psychosis	.761	1.313
Anxiety disorder	.723	1.383
Personality disorder	.635	1.576
PTSD	.741	1.350
More than 1 mental disorder	.301	3.318
Medication	.803	1.245
Hospitalization	.853	1.172

(continued)

[3] The VIFs and tolerance levels were tested with each dependent variable and the findings revealed similar acceptable values.

Variable	Tolerance	VIF
Substance use	.882	1.134
Victimization	.761	1.315
Suicide attempts	.794	1.259
Institutional Treatment		
Mental health treatment	.716	1.398
Institutional Program		
Vocational program	.862	1.160
Educational program	.875	1.143
Other program	.880	1.136
Work assignments	.932	1.073
Visitation	.927	1.079
Control variables		
Age	.766	1.305
Race/ethnicity		
Black	.862	1.160
Latino/a	.875	1.143
Others	.880	1.136
Gender		
Male	.700	1.429
Married	.959	1.042
Education	.871	1.148
Employment	.934	1.071
Type of offense		
Property	.742	1.348
Drug	.704	1.421
Public order	.811	1.233
Prior prison term	.896	1.116
Time served	.639	1.565

Note. The results of collinearity statistics with the prevalence of violent misconduct are reported.

The first set of logistic regression models were estimated to determine how a history of mental health problems, associated individual-level risk factors, and how institutional experiences differed on the probability of being written up for or found guilty of violent prison misconduct, controlling for other known predictors of prison misconduct (see Table 5). Comparisons between Models 1, 2, and 3 reveal a slight

increase in the variance explained across the models (Negelkerke R^2 = .196, .213,

and .227, respectively) and a small improvement in the model fit.

As a base model, Model 1 includes individual characteristics and criminal

histories related variables to isolate the effects of the key independent variables from

individual characteristics. This model was statistically significant, χ^2(13, N = 4,246) =

573.025, p = .000 and showed 80% of the model correctly classified. The Hosmer and

Lemeshow test of model fit further indicated a good model fit, χ^2(8, N = 4,246) = 9.334,

p = .315. With the exception of education, all variables entered in Model 1 remain

significant in the same direction. Thus, the results pertaining to inmate demographics

and criminal histories will be interpreted for the final model.

In Model 2, key independent variables including diagnosed mental disorder,

severity of mental health problems, and individual-level risk factors were introduced,

with all control variables held constant. This model was statistically significant, χ^2(24, N

= 4,246) = 626.216, p = .000 and indicated 81% of the model correctly classified. The

Hosmer and Lemeshow test of model fit showed a good model fit, χ^2(8, N = 4,246) =

7.153, p = .520. The results for this model show that two mental health related indicators

and one individual-level risk factor significantly predict violent prison misconduct,

holding all relevant covariates that were included in the first model constant. Relative to

inmates without a history of personality disorder diagnosis, the odds of violent

misconduct were 1.3 times greater for inmates who had been diagnosed with a

personality disorder (ρ < .05, B = 0.270, Exp(B) = 1.310). On the other hand, inmates

with a history of PTSD were 26.2% less likely to be charged with violent misconduct

compared to those without PTSD (ρ < .05, B = $-$ 0.304, Exp(B) = 0.738). All other

mental health indicators, with the exception of anxiety disorder, were positively

associated with the risk of violent prison misconduct, however, the relationships were not

statistically significant. Of the individual-level risk factors, a prior substance use

problem was significantly associated with the risk of violent prison misconduct. Relative

to inmates who did not use substances on a regular basis, the odds of being ticketed for

violent misconduct were 1.4 times greater for inmates with substance use problems ($\rho <$

.01, B = 0.339, Exp(B) = 1.404). A history of victimization and suicide attempts were

positively associated; however, the relationships were not statically significant.

Incarceration experience-relevant measures were entered in the model. The

overall model was statistically significant, χ^2(30, N = 4,246) = 670.156, p = .000. With

the inclusion of six additional variables, the Hosmer and Lemeshow test showed that the

model is correctly specified (χ^2(8, N = 4,246) = 9.692, p = .287). This final model

controlled for all of the predictors included in the prior model. The goal of this final

model was not only to examine the independent effects of incarceration experiences, but

also to assess how incarceration experiences contribute to the effects of individual risk

factors (i.e., mental disorder history, substance abuse, victimization, and suicide

attempts).

Findings revealed that inmates who received mental health treatment while

incarcerated show a 43.3% increase in the odds of being ticketed for violent misconduct

over those who did not receive institutional mental health treatment ($\rho < .001$, B = 0.360,

Exp(B) = 1.433). With respect to institutional programs, participating in vocational

programs increased the odds of violent infractions by 27.7% ($\rho < .01$, B = 0.245, Exp(B)

= 1.277), and educational program participation increased the odds of receiving violent

misconduct tickets by 33.2% ($\rho < .001$, B = 0.289, Exp(B) = 1.332). On the other hand, inmates who had an opportunity to work while incarcerated showed a 22.2% reduction in their risk of violent misconduct compared to those who never received work assignments in prison ($\rho < .01$, B = $-$ 0.251, Exp(B) = 0.778).

The predictors that influenced the odds of violent prison misconduct found in the previous model largely did not change with the inclusion of these prison experience variables. Specifically, the odds of violent prison misconduct were 1.3 times higher for inmates with a history of personality disorder ($\rho < .05$, B = 0.250, Exp(B) = 1.284), while the odds were decreased by 27.8% for those with a history of PTSD ($\rho < .01$, B = $-$ 0.325, Exp(B) = 0.722), compared to their counterparts. Substance use problems also remained significant and in the same direction ($\rho < .01$, B = 0.342, Exp(B) = 1.407) in Model 3.

Results show that the effects of individual characteristics and criminal history-relevant predictors on violent misconduct were consistent across the models, with the exception of educational attainment. As indicated in Table 5, several were significantly related to violent misconduct. Every year older, an inmate was 6.1% less likely to receive a violent infraction ($\rho < .001$, B = $-$ 0.063, Exp(B) = 0.939). Black and Latino/a inmates were significantly more likely to be ticketed for violent misconduct. Specifically, both Black and Latino/a inmates were 1.6 times more likely to be involved in violent misconduct, compared to White inmates ($\rho < .01$, B = 0.443, Exp(B) = 1.557; $\rho < .01$, B = 0.466, Exp(B) = 1.594, respectively). Inmates who have at least a high school diploma or GED were less likely to be violent misconduct violators in the first model, however, education was no longer significantly predicting the likelihood of violent misconduct after controlling for mental health and other risk factors and incarceration

experiences. Gender, marriage, and employment were not found to be statistically significant in predicting violent misconduct. Relative to violent offenders, inmates who were incarcerated for property crimes or drug crimes were significantly less likely to be charged with violent misconduct ($\rho < .001$, B $= -0.355$, Exp(B) $= 0.701$; $\rho < .001$, B $= -0.419$, Exp(B) $= 0.658$). Having been previously incarcerated increased the likelihood of violent misconduct by a factor of 1.54 ($\rho < .001$, B $= 0.431$, Exp(B) $= 1.539$) and longer periods of incarceration increased an inmate's odds of receiving a violent infraction by .6 times ($\rho < .001$, B $= 0.148$, Exp(B) $= 1.160$).

Table 5

Logistic regressions of violent prison misconduct (n = 4,246)

Variable	Model 1			Model 2			Model 3		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Key independent variables									
Mental disorder diagnoses									
Depression				.096	.106	1.101	.068	.108	1.070
Psychosis				.165	.128	1.179	.155	.129	1.167
Anxiety disorder				-.073	.118	.929	-.096	.119	.908
Personality disorder				.270*	.117	1.310	.250*	.118	1.284
PTSD				-.304*	.123	.738	-.325**	.124	.722
More than 1 mental disorder				.190	.150	1.210	.186	.151	1.205
Medication				.118	.103	1.125	-.031	.111	.969
Hospitalization				.164	.089	1.178	.131	.090	1.140
Substance use				.339**	.109	1.404	.342**	.110	1.407
Victimization				.071	.092	1.074	.046	.093	1.048
Suicide attempts				.076	.094	1.079	.045	.095	1.046
Institutional Treatment									
Mental health treatment							.360***	.100	1.433
Institutional Program									
Vocational program							.245**	.093	1.277
Educational program							.287***	.090	1.332
Other program							-.016	.089	.984
Work assignments							-.251**	.086	.778
Visitation							-.113	.096	.893
Control variables									
Age	-.064***	.005	.938	-.064***	.005	.938	-.063***	.005	.939

Variable	Model 1			Model 2			Model 3		
Race/ethnicity									
Black	.423***	.093	1.527	.482***	.096	1.620	.443***	.097	1.557
Latino/a	.421***	.123	1.523	.482***	.125	1.619	.466***	.126	1.594
Others	-.115	.177	.892	-.128	.178	.880	-.160	.180	.852
Gender									
Male	.095	.095	1.099	.163	.106	1.177	.184	.108	1.202
Married	-.211	.123	.810	-.202	.125	.817	-.189	.126	.828
Education	-.204***	.092	.815	-.154	.093	.857	-.111	.096	.895
Employment	-.135	.087	.873	-.082	.088	.921	-.059	.089	.943
Type of offense									
Property	-.371***	.107	.690	-.378***	.108	.685	-.355***	.109	.701
Drug	-.460***	.122	.632	-.473***	.124	.623	-.419***	.126	.658
Public order	-.267	.147	.766	-.258	.149	.773	-.217	.150	.805
Prior prison term	.503***	.085	1.654	.431***	.086	1.539	.431***	.087	1.539
Time served	.158***	.011	1.171	.160***	.011	1.174	.148***	.011	1.160
Constant	.038	.186	1.039	-.709**	.250	.492	-.768**	.267	.464
Model Fit Statistics									
Model fit chi-square	573.025*** (df = 13)			626.216*** (df = 24)			670.156***(df=30)		
-2 Log likelihood ratio	3818.7			3765.6			3721.6		
Negelkerke R Square	.196			.213			.227		
Hosmer & Lemeshow	9.334			7.153			9.692		

Note. ***ρ <.001; **ρ <.01; *ρ <.05.*

The next set of logistic regression models estimate the risks of nonviolent misconduct (see Table 6). Comparison across the models revealed a small increase in the variance explained (Negelkerke R^2 = .151, .170 and .201, respectively). The first and second models were statistically significant, χ^2(13, N = 4,246) = 511.385, p = .000; χ^2(24, N = 4,246) = 543.996, p = .000; however, the Hosmer and Lemeshow test of model fit showed a poor model fit, χ^2(8, N = 4,246) = 25.802, p = .002; χ^2(8, N = 4,246) = 21.023, p = .007. As outlined above, findings on the control variables will be interpreted with the final model, as the effects of the variables remained largely similar across the models.

The Model 2 predicting the likelihood of being involved with a nonviolent misconduct found that personality disorder was the only significantly associated type of mental disorder. Inmates with a history of personality disorder diagnosis were 1.2 times more likely to be ticketed for nonviolent misconduct compared to inmates without personality disorder (ρ < .05, B = 0.178, Exp(B) = 1.194). Findings further revealed that a history of substance use problems and victimization were positively associated with the likelihood of nonviolent prison misconduct. Relative to inmates without a history of substance use problems, the odds of receiving a nonviolent infraction were 1.3 times higher for inmates who had been a regular drug user prior to incarceration (ρ < .001, B = 0.295, Exp(B) = 1.343). Inmates who had been either sexually or physically victimized prior to incarceration showed an 22.4% increase in the odds of nonviolent misconduct compared to inmates without a victimization history (ρ < .01, B = 0.202, Exp(B) = 1.224). All the other mental health indicators were not found to be significantly related to the likelihood of nonviolent misconduct, nor was inmates' suicide attempt history.

The model fit statistics indicated that the final model is the best fitting model, $\chi^2(30, N = 4,246) = 692.206, p = .000$, and explained 20.1 percent of the variation in the outcome. Additionally, the Hosmer and Lemeshow's goodness of fit test indicated that the model is adequately estimated ($\chi^2(8, N = 4,246) = 3.905, p = .866$). Findings in Model 3 demonstrated that institutional mental health treatment was significantly related to the likelihood of nonviolent misconduct. Inmates who had received mental health treatment while in prison showed a 49% increase in the odds of receiving nonviolent infractions ($p < .001$, B $= 0.401$, Exp(B) $= 1.493$). Findings further revealed that various program participation was also positively associated with nonviolent misconduct. The odds of being charged with nonviolent misconduct were 1.7 times greater for inmates who participated in vocational programs ($p < .001$, B $= 0.517$, Exp(B) $= 1.678$), 1.5 times higher for educational programs ($p < .001$, B $= 0.399$, Exp(B) $= 1.490$), and 1.3 times higher for other programs ($p < .01$, B $= 0.219$, Exp(B) $= 1.245$) compared to their counterparts.

The contribution of the variables included in the prior models showed a slight change with the inclusion of these prison experience-related variables. Personality disorder, substance use problems, and victimization were positively and significantly associated with the odds of nonviolent misconduct in Model 2; however, a history of personality disorder and victimization were no longer significantly related to nonviolent misconduct after accounting for prison experiences. Even so, the results should be interpreted with caution because the relationships remained in the same direction while they lost statistical power with the inclusion of prison experience measures. This may be a statistical artifact resulting from strong effects of prison experiences in Model 3. On

the other hand, substance use problems consistently increased the odds of being charged with nonviolent misconduct by 34.4% ($\rho < .001$, B = 0.295, Exp(B) = 1.344). Although not statistically significant, a positive relationship between medication taken for mental health problems and nonviolent misconduct in Model 2 was changed to the negative association after accounting for prison experiences.

With respect to inmate characteristics and criminal histories, the findings across the models remained largely unchanged, however, fewer significant relationships were revealed in Model 3, relative to the previous two models. Age was consistently positively related to the likelihood of nonviolent misconduct, with every year older, an inmate was 3.8% more likely to be involved in nonviolent misconduct ($\rho < .001$, B = – 0.038, Exp(B) = 0.962). Race was not significantly related to nonviolent misconduct, with the exception of Model 2. In the second model, Black inmates were 1.2 times more likely to be charged with nonviolent misconduct after accounting for mental health problems and other associated risk factors, however, this relationship was no longer significant, net of all controls in Model 3 (see Table 6). While gender was not significantly predictive of nonviolent misconduct in Models 2 and 3, male inmates were significantly less likely to be engaged in nonviolent misconduct prior to accounting for the key independent variables. Meanwhile, being married was significantly and inversely related to nonviolent misconduct across the models. Inmates who were married showed a 26.3% reduction in the odds of receiving a nonviolent infraction compared to those who were not married ($\rho < .001$, B = – 0.305, Exp(B) = 0.737).

Relative to violent offenders, inmates who were incarcerated for property crimes and crimes against public order were less likely to be charged with nonviolent

Table 6

Logistic regressions of nonviolent prison misconduct (n = 4,246)

Variable	Model 1			Model 2			Model 3		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Key independent variables									
Mental disorder diagnoses									
Depression				.022	.084	1.022	-.015	.087	.985
Psychosis				-.188	.109	.829	-.148	.111	.863
Anxiety disorder				.049	.095	1.050	.006	.097	1.006
Personality disorder				.178*	.099	1.194	.171	.100	1.187
PTSD				-.024	.097	.976	-.084	.099	. .920
More than 1 mental disorder				-.010	.122	.990	-.009	.124	.991
Medication				.019	.082	1.019	-.147	.090	.864
Hospitalization				.052	.073	1.053	.004	.074	1.004
Substance use				.295***	.084	1.343	.295***	.086	1.344
Victimization				.202**	.075	1.224	.144	.077	1.155
Suicide attempts				.061	.076	1.063	.036	.078	1.037
Institutional Treatment									
Mental health treatment							.401***	.080	1.493
Institutional Program									
Vocational program							.517***	.079	1.678
Educational program							.399***	.076	1.490
Other program							.219**	.071	1.245
Work assignments							.134	.070	1.143
Visitation							.019	.077	1.019
Control variables									
Age	-.041***	.004	.959	-.039***	.004	.962	-.038***	.004	.962

Variable	Model 1			Model 2			Model 3		
Race/ethnicity									
Black	.090	.076	1.094	.165*	.079	1.179	.131	.081	1.140
Latino/a	-.141	.104	.868	-.092	.105	.912	-.096	.107	.908
Others	.097	.131	1.102	.096	.132	1.101	.036	.135	1.036
Gender									
Male	-.181*	.073	.835	-.068	.082	.934	.039	.084	1.040
Married	-.293**	.091	.746	-.292**	.092	.747	-.305***	.094	.737
Education	-.088	.071	.916	-.067	.071	.935	-.044	.074	.957
Employment	-.026	.071	.975	-.010	.071	.990	-.034	.073	.967
Type of offense									
Property	-.184*	.085	.832	-.187*	.086	.830	-.106	.088	.899
Drug	-.461***	.093	.631	-.490***	.095	.612	-.390***	.097	.677
Public order	-.336**	.113	.715	-.330**	.114	.719	-.230	.117	.794
Prior prison term	.253***	.067	1.288	.200**	.069	1.222	.226***	.070	1.253
Time served	.159***	.011	1.173	.159***	.011	1.173	.129***	.011	1.138
Constant	1.060***	.151	2.886	.481*	.199	1.618	-.013	.215	.987
Model Fit Statistics									
Model fit chi-square	511.385***(df = 13)			543.996***(df = 24)			692.206***(df=30)		
-2 Log likelihood ratio	5372.7			5340.0			5191.8		
Negelkerke R Square	.151			.170			.201		
Hosmer & Lemeshow	8.802			4.023			3.905		

*Note.* ***ρ <.001; **ρ <.01; *ρ <.05.*

misconduct in the first and second models, however, these effects were no longer

significant after accounting for prison experiences. On the other hand, being a drug

offender was consistently negatively associated with nonviolent misconduct compared to

violent offenders. That is, inmates who served time for drug crimes showed a 32.3%

reduction in the odds of being charged with nonviolent misconduct in comparison to

violet offenders ($\rho < .001$, B $= -0.390$, Exp(B) $= 0.677$). Lastly, inmates who had been

incarcerated previously and with longer periods of incarceration showed an increase in

the odds of nonviolent misconduct by 25.3% and 13.8%, respectively ($\rho < .001$, B $=$

0.226, Exp(B) $= 1.253$; $\rho < .001$, B $= 0.129$, Exp(B) $= 1.138$).

Negative binomial regression models. Turning to the next models with count

variables of violent and nonviolent misconduct, negative binomial regressions were

conducted using a blockwise enter method. A Generalized linear model (GLM) was

specified with a value of 1 for the ancillary parameter and by using a log transformation

as the link function to ensure that predicted values of the variables will be positive. As

indicated in Table 7, the mean of the dependent variables were much lower than its

variance and the distribution was highly skewed (skewness $= 3.682$; 1.929) in the positive

direction. The histogram also showed a negative binomial distribution, with the majority

of cases zero (See Figure 1). Thus, negative binomial regression was selected over the

poisson model. Additionally, a likelihood ratio test of overdispersion confirmed that a

negative binomial model was more appropriate than the poisson model.

Table 7

Descriptive statistics – violent and nonviolent misconduct count (n = 4,264)

	Violent Misconduct	Nonviolent Misconduct
Mean	0.69	1.75
Std. Error of Mean	0.03	0.04
Median	0.00	0.00
Std. Deviation	1.93	2.86
Variance	3.74	8.20
Skewness	3.68	1.93
Std. Error of Skewness	0.04	0.04
Kurtosis	13.60	2.65
Std. Error of Kurtosis	0.08	0.08
Minimum	0	0
Maximum	10	10
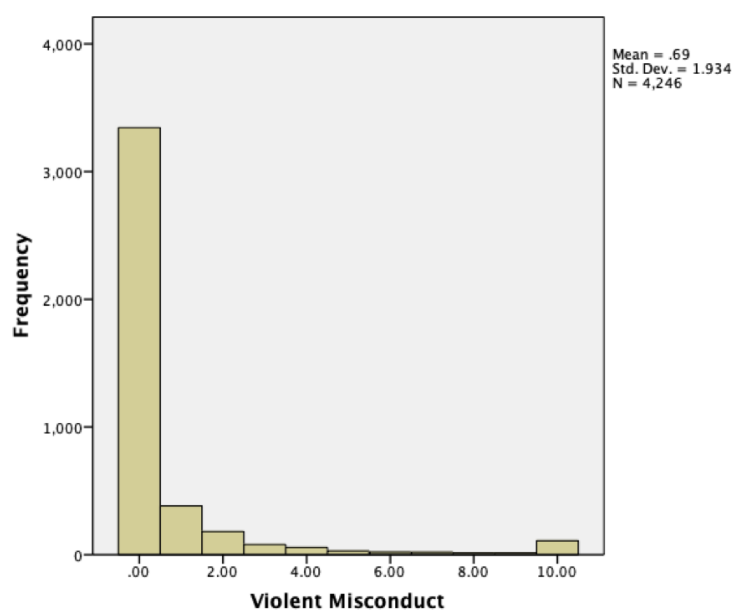
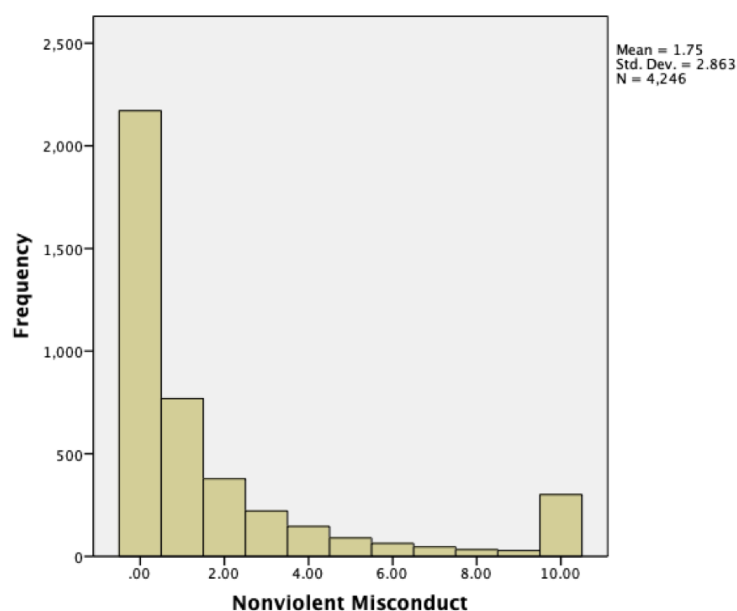*Figure 1.* Histogram for violent misconduct.

Figure 2. Histogram for nonviolent misconduct.

Table 8 presents findings of the negative binomial regression models, examining

the effects of mental health indicators and individual-level risk factors on violent

misconduct, net of controls.[4] As indicated in Table 8, the likelihood ratio chi-square

revealed that this model is statically significant, $\chi^2(24) = 1750.650, p = .000$ compared to

a null model. Moreover, the models were assessed with the likelihood ratio χ^2 of all the

parameters, showing that the models were improved with the additional measures of

mental health indicators and risk factors (in Model 2) and prison experiences (in Model

3).

The following describes statistically significant findings of Model 2. Table 8

shows that mood disorder, psychosis, personality disorder, and medication use and

hospitalization for mental health problems significantly predicted violent misconduct.

---

[4] The first model included all control variables using the same technique as the logistic regression modeling. Similar findings were found with few exceptions. Therefore, findings of the second and third models will be interpreted for the count models.

Among inmates with a history of mental health problems, those who had been diagnosed with mood disorder were expected to have a rate 1.22 times greater than those without a history of mood disorder ($e^{0.202} = 1.224$). Similarly, the violent infraction rate for inmates with psychosis was 29% higher than for those without this disorder ($e^{0.255} = 1.291$). Inmates with personality disorder had a rate of violent misconduct that was 46% higher than that the rate of inmates without personality disorder ($e^{0.380} = 1.462$). There is also evidence of relationships between medication and hospitalization for mental health problems and the number of violent infractions reported. Specifically, a history of medication use for mental health problems was associated with a 24.1% increase ($e^{0.216} = 1.241$), and hospitalization was related with a 27.4% increase in violent infractions ($e^{0.242} = 1.274$). With respect to individual risk factors, substance use problem was associated with a 26.9% increase in violent misconduct ($e^{0.238} = 1.269$). None of the other variables in the model reached significance.

The final model, with inclusion of incarceration experience-relevant predictors, is also presented in Table 8. With all other variables held constant, mental health treatment, and vocational and educational program participation were positively and significantly predictive of violent misconduct. Expected violent misconduct increased by 46.5% for inmates who had received mental health treatment in prison ($e^{0.382} = 1.465$), by 35% for those who participated in vocational programs ($e^{0.300} = 1.350$), and by 20.4% for those in educational programs ($e^{0.186} = 1.204$). On the other hand, work assignments and prison visitation were inversely related with violent misconduct rates. There was a 44.5% reduction in violent infraction rates for inmates who had received work assignments (e^{-}

$^{0.424} = 0.655$) and a 14.6% decrease in the rate for those who had received a visit during

their incarceration ($e^{-0.158} = 0.854$).

Mental health indicators and other risk factors that were significant in Model 2

largely remained the same in Model 3 with inclusion of prison experience-relevant

variables. With the exception of medication use, all the other mental health indicators

were significantly and positively associated with violent misconduct with a marginal

reduction in the estimated coefficients. With respect to different types of mental

disorders, the incident rate for inmates with mood disorder was 19% ($e^{0.180} = 1.197$), for

psychosis 26% ($e^{0.228} = 1.256$), and for personality disorder 39% ($e^{0.331} = 1.392$) higher

than the incident rate for those without the disorder, while holding the other variables

constant in the model. Findings further revealed that inmates with a history of

hospitalization had a violent misconduct infraction rate about 25% higher than those who

had never been hospitalized for their mental health problems ($e^{0.225} = 1.252$). While a

positive relationship between medication use and violent misconduct was observed in

Model 3, this relationship was no longer statistically significant after holding all relevant

controls constant. Overall findings indicated that the effects of mental health indicators

and the other risk factors did not change with the inclusion of prison experience

measures. While a minor reduction has been detected in coefficients across the models,

they may be statistical artifacts with strong effects of prison experiences. To be sure, the

directions of the relationships remained consistent, with only a marginal reduction in

coefficients.

Turning to the findings of negative binominal on incidence of nonviolent

misconduct, fewer predictors proved to be significant. None of the mental disorder

variables reached a statistically significant level, but inmates with a history of hospitalization for mental health problems had a higher rate of nonviolent misconduct ($e^{0.088} = 1.092$) compared to those who had never been hospitalized for their mental health problems. Substance use problems and victimization history was significantly and positively associated with nonviolent misconduct. Inmates with substance use received 17.8% more nonviolent infractions compared to those without substance abuse problem ($e^{0.163} = 1.178$). Similarly, a history of victimization increased the expected number of nonviolent infractions by 18.1% ($e^{0.166} = 1.181$).

Similar findings appeared in Model 3. Institutional mental health treatment and program participation were significantly and positively associated with nonviolent infractions. Mental health treatment increased nonviolent infractions by 28.5% ($e^{0.250} = 1.285$). Compared to those who did not participate in a program, vocational program participation increased the expected number of nonviolent infractions by 39.7% ($e^{0.334} = 1.397$), educational programs by 29.5% ($e^{0.259} = 1.295$), and other programs by 9.3% ($e^{0.089} = 1.093$). By adding these prison experience predictors to Model 2, a marginal change is observed as revealed in the previous models. Substance use and prior victimization consistently had a positive relationship to nonviolent misconduct and these relationships remained statistically significant. However, the relationship between a history of hospitalization and nonviolent misconduct was no longer statistically significant, while the direction of the effect remained the same.

Summary of Findings

Overall, a series of analyses provides partial support for the proposed hypotheses. The current study began with exploring the distribution of disciplinary infractions among

inmates with a history of mental health problems. Among inmates with mental health problems (n = 4,246), 21.2% were ever ticketed for violent misconduct and 48.9% received a nonviolent infraction. The bivariate findings indicated that various mental health indicators, other individual risk factors, and prison experiences were correlated with both violent and nonviolent misconduct. The risk of violent misconduct was associated more with mental health indicators. In particular, violent misconduct violators were more likely to have a history of psychosis, personality disorder, and hospitalization with their mental health problems, and they reported more than one mental disorder in their histories. Additionally, PTSD was negatively correlated with violent misconduct. On the other hand, only personality disorder and hospitalization were positively associated with nonviolent misconduct.

The first hypothesis asked if the types of mental disorder and other mental health indicators were positively and significantly associated with inmates' disciplinary infractions, net of the demographic and criminal history relevant characteristics. With respect to violent misconduct, personality disorder was positively related to the likelihood and number of violent infractions. While PTSD decreased the likelihood of violent misconduct, the number of violent infractions was not influenced by PTSD. While not significant in predicting the likelihood of violent misconduct, having a history of depression, psychosis, and hospitalization increased the number of violent infractions. Concerning nonviolent misconduct, personality disorder was positively associated with the likelihood of nonviolent misconduct, and hospitalization increased the number of nonviolent misconduct.

The findings reject the second hypothesis that proposed more serious mental health disorders would increase the risk of infractions. Having more than one mental disorder differentiated neither the likelihood nor number of infractions, regardless of types of misconduct.

The third hypothesis relating to the other individual-level risk factors is partially supported with the evidence that substance use was consistently predictive of both violent and nonviolent misconduct, while a history of victimization was positively associated only with nonviolent misconduct, net of all relevant controls.

The forth hypothesis proposed that exposure to prosocial and structured prison experiences would decrease the risk of prison misconduct. Findings reject the hypothesis, indicating that institutional mental health treatment and program participation were positively associated with both violent and nonviolent misconduct. Interestingly, however, institutional work assignment was negatively associated only with violent misconduct.

The fifth hypothesis was rejected with the findings across Models 2 and 3. The results of regressions examining both violent and nonviolent misconduct indicated only marginal changes in the effects of mental health indicators and individual-level risk factors on disciplinary infractions after the inclusion of prison experience indicators. The significant relationships that were found in Model 2 were either attenuated or lost significant power with the inclusion of prison experiences in Model 3. Findings of the current study are further discussed in the following chapter.

Table 8

Negative binomial regressions on the incidence of violent misconduct (n = 4,246)

Variable	Model 1			Model 2			Model 3		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Key independent variables									
Mental disorder diagnoses									
Depression				.202**	.0721	1.224	.180*	.0738	1.197
Psychosis				.255**	.0840	1.291	.228**	.0851	1.256
Anxiety disorder				-.058	.0786	.943	-.067	.0794	.935
Personality disorder				.380***	.0776	1.462	.331***	.0787	1.392
PTSD				-.102	.0807	.903	-.141	.0817	.868
More than 1 mental disorder				.005	.1014	1.005	.005	.1026	1.005
Medication				.216**	.0712	1.241	.044	.0779	1.045
Hospitalization				.242***	.0589	1.274	.225***	.0597	1.252
Substance use				.238***	.0723	1.269	.231**	.0729	1.260
Victimization				-.015	.0617	.986	-.032	.0626	.969
Suicide attempts				.103	.0632	1.108	.066	.0642	1.068
Institutional Treatment									
Mental health treatment							.382***	.0695	1.465
Institutional Program									
Vocational program							.300***	.0615	1.350
Educational program							.186**	.0604	1.204
Other program							-.031	.0596	.969
Work assignments							-.424***	.0573	.655
Visitation							-.158*	.0656	.854
Control variables									
Age	-.071***	.0035	.932	-.070***	.0037	.933	-.067***	.0037	.935

(continued)

Variable	Model 1			Model 2			Model 3		
Race/ethnicity									
Black	.466***	.0619	1.593	.525***	.0641	1.690	.477***	.0652	1.611
Latino/a	.446***	.0828	1.561	.551***	.0845	1.734	.522***	.0857	1.685
Others	.019	.1156	1.020	.019	.1176	1.019	-.051	.1196	.951
Gender									
Male	-.023	.0637	.977	.067	.0723	1.070	.072	.0739	1.075
Married	-.366***	.0873	.694	-.346***	.0885	.707	-.354***	.0903	.702
Education	-.146*	.0620	.864	-.076	.0634	.927	-.037	.0652	.963
Employment	-.157**	.0575	.855	-.095	.0585	.910	-.068	.0594	.934
Type of offense									
Property	-.300***	.0710	.741	-.302***	.0724	.740	-.313***	.0738	.731
Drug	-.510***	.0843	.600	-.489***	.0864	.613	-.458***	.0879	.633
Public order	-.276***	.1004	.759	-.266**	.1019	.767	-.245*	.1034	.783
Prior prison term	.430***	.0561	1.538	.383***	.0575	1.467	.364***	.0585	1.439
Time served	.175***	.0072	1.192	.174***	.0073	1.190	.161***	.0075	1.174
Constant	.947***	.1247	2.578	.035	.1768	1.035	.089	.1886	1.094
Model Fit Statistics									
Model fit chi-square	9721.526 (df =4,232)			9462.666 (df = 4,221)			8971.608 (df= 4,215)		
-2 Log likelihood ratio	-4039.242			-3956.580			-3900.410		
Omnibus Test	1605.325*** (df =13)			1750.650*** (df =24)			1882.989*** (df =30)		

*Note. ***ρ <.001; **ρ <.01; *ρ <.05.*

Table 9

Negative binomial regressions on the incidence of nonviolent misconduct (n = 4,246)

Variable	Model 1			Model 2			Model 3		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Key independent variables									
Mental disorder diagnoses									
Depression				.039	.0525	1.040	.016	.0536	1.016
Psychosis				-.030	.0670	.971	.009	.0674	1.009
Anxiety disorder				.000	.0593	1.000	-.011	.0598	.989
Personality disorder				.110	.0604	1.117	.075	.0609	1.078
PTSD				.034	.0601	1.035	-.001	.0607	.999
More than 1 mental disorder				.000	.0768	1.000	.011	.0772	1.011
Medication				.064	.0513	1.066	-.036	.0564	.964
Hospitalization				.088*	.0447	1.092	.070	.0452	1.073
Substance use				.163**	.0527	1.178	.169***	.0531	1.184
Victimization				.166***	.0458	1.181	.128**	.0463	1.136
Suicide attempts				.011	.0473	1.011	-.003	.0480	.997
Institutional Treatment									
Mental health treatment							.250***	.0506	1.285
Institutional Program									
Vocational program							.334***	.0462	1.397
Educational program							.259***	.0448	1.295
Other program							.089*	.0436	1.093
Work assignments							-.037	.0430	.964
Visitation							-.005	.0478	.995
Control variables									
Age	-.046***	.0023	.955	-.044***	.0024	.957	-.042***	.0025	.959

(continued)

Variable	Model 1			Model 2			Model 3		
Race/ethnicity									
Black	.113*	.0472	1.119	.161***	.0483	1.174	.132**	.0488	1.141
Latino/a	-.012	.0652	.988	.027	.0658	1.028	.045	.0662	1.046
Others	.095	.0817	1.100	.089	.0821	1.094	.020	.0833	1.021
Gender									
Male	-.113*	.0463	.893	-.022	.0511	.978	.028	.0521	1.028
Married	-.328***	.0604	.720	-.339***	.0607	.713	-.346***	.0617	.707
Education	-.093*	.0450	.911	-.072	.0456	.930	-.050	.0470	.951
Employment	-.075	.0440	.928	-.054	.0445	.948	-.052	.0450	.949
Type of offense									
Property	-.072	.0526	.931	-.070	.0531	.932	-.044	.0536	.957
Drug	-.412***	.0617	.662	-.416***	.0630	.660	-.369***	.0637	.692
Public order	-.087	.0720	.917	-.085	.0724	.919	-.050	.0732	.951
Prior prison term	.213***	.0421	1.237	.180***	.0428	1.197	.186***	.0434	1.204
Time served	.141***	.0060	1.152	.140***	.0061	1.150	.120***	.0062	1.128
Constant	1.567***	.0924	4.791	1.078***	.1250	2.938	.776***	.1330	2.172
Model Fit Statistics									
Model fit chi-square (df)	6063.442 (df = 4,232)			6057.363 (df = 4,221)			6123.489 (df= 4,215)		
-2 Log likelihood ratio	-7023.140			-7000.633			-6929.484		
Omnibus Test	1276.990*** (df =13)			1322.004*** (df =24)			1464.302*** (df =30)		

Note. ***ρ <.001; **ρ <.01; *ρ <.05.*

CHAPTER V

Discussion

The current research was designed to expand our understanding of institutional behavior and experiences of inmates with a history of mental health problems. Building upon prior work, which has demonstrated a positive relationship between mental health problems and prison misconduct (Martin et al., 2015; McCorkle, 1995; Steiner & Wooldredge, 2009; Walters & Crawford, 2014; Wood, 2013), this dissertation sought to find correlates of disciplinary infractions among inmates with mental health problems. In particular, the current research took a nuanced approach to investigate the heterogeneous prison population and their prison experiences to better understand embedded mechanisms of the link between mental health problems and prison misconduct. Drawing upon importation and deprivation theories, several research questions and hypotheses were proposed in the current study. This chapter discusses important findings in greater detail, limitations, and implications of the current work.

Mental health problems among the incarcerated

Numerous studies reviewed for the current study highlighted the fact that prison adjustment problems are associated with mental health of inmates (Houser et al., 2012; Martin et al., 2015; Stacer & Solinas-Saunders, 2015; Steiner & Wooldredge, 2009). Indeed, a recent systematic review of the prison misconduct literature concluded that mental health is one of the most salient predictors of prison misconduct (Steiner et al., 2014). However, no prior works have attempted to uncover the complex picture of prison maladjustment within a particularly "problematic" prison population by taking into consideration their unique problems and prison experiences. Thus, the current study

contributed to the knowledge of understanding prison adjustment by revealing several significant factors that predicts prison misconduct among inmates with a history of mental health problems.

Importantly, findings of the current study revealed meaningful variations among inmates with mental health problems. The most common type of mental health pathology was depression (69%), followed by anxiety disorder (25%), PTSD (20%), personality disorder (18%), and psychosis (14%). Mental health problems appear to be complex with a large number of the sample reporting to have multiple disorders (39%), taken medication (78%), or been hospitalized for their mental health problems (38%). Bivariate findings show that various mental health indicators differentiated between the risk of both violent and nonviolent misconduct, however, multivariate analyses revealed that not all of these mental health indicators were primary factors in predicting prison misconduct.

A first primary question asked if the types of mental disorder and other mental health indicators meaningfully differentiated between the risks of violent and nonviolent misconduct. Results partially supported the hypothesis, indicating that personality disorder was predictive of the likelihood and rate of violent misconduct. In addition, PTSD was predictive of the likelihood of violent misconduct, and depression and psychosis significantly predicted the rate of violent misconduct. However, none of the mental health indicators significantly influenced nonviolent misconduct.

Specifically, inmates with personality disorder were more likely to be charged with violent misconduct and they had the highest rate of violent misconduct (Tables 5 & 8, Model 3). This finding supports previous research that personality disorders and traits

would be associated with prison misconduct (see Toch & Adams, 1986; Warren et al., 2002; Wright, 1991). Generally, prior research has found links between personality disorder and violent behavior and criminality (Kjelsberg, 2004; Jones, Miller, & Lynam, 2011; Monahan, 1992; Warren et al., 2004). Kjelsberg (2004), for example, found that prevalence of crime was substantially higher for individuals with personality disorder than any other categories of mental disorder (e.g., disruptive behavior disorder, psychotic disorder, and mood disorder) and those with a personality disorder were more likely to commit serious crimes (i.e., violent crimes). Moreover, Jones, Miller, and Lynam (2011) showed that personality disorders were the most prominent predictors of criminal involvement, violence, and other antisocial behavior (e.g., smoking, substance abuse). Scholars have explained that individuals with personality disorders tend to hold a negative worldview and perceive others as hostile and threatening, which in turn, leads to more aggressive and violent tendencies (DeLisi, 2016; Mundia et al., 2017; Tartar et al., 2016).

Additionally, having ever suffered from depression and psychosis increased the rates of violent misconduct (Table 8, Model 3). These disorders are categorized as emotional disorders, which often are the focus of institutional mental treatment (Adams, 1992). Deprivation theory suggests that prison deviance is the outcome of the "pains" of incarceration (Sykes, 1958; Sykes & Messinger, 1960), as the lack of control and freedom causes stress, frustration, helplessness, and depression (Goodstein et al., 1984; Wright, 1991). According to this explanation, inmates with emotional disorders, such as depression and psychosis, may be more vulnerable to the pains of incarceration and have a higher risk of acting out as a result.

Results further indicated that inmates with PTSD were less likely to be involved with violent misconduct compared to those without such a disorder (Table 5, Model 3). A large body of literature on trauma suggests that individuals with PTSD tend to have an extensive history of child abuse or adult victimization, which may result in complex interpersonal relationships and emotional problems (Cook et al., 2005; Pearlman & Curtois, 2005). While a positive relationship between violence and PTSD has been suggested (Crisford, Dare, & Evangeli, 2008; Gray et al., 2003; Pollock, 1999), prior research underscored the victimization vulnerability of inmates with PTSD in prisons (Blitz et al., 2008; Toch, 1977; Wolff, Blitz, & Shi, 2007). Further, the negative association of PTSD on violent misconduct may be explained by the notion that the common symptoms of PTSD include high levels of stress and avoidance of a situation that is unsafe or threatening (Overstreet & Braun, 2000).

Results from the current work further indicated that none of the mental health problems were statistically associated with nonviolent misconduct (Tables 6 & 9). These findings suggest that violent rule-breaking behaviors of inmates may be more reflective of the symptoms and condition of mental health problems, whereas nonviolent rule-breaking behaviors are not meaningfully indicative of mental health problems. The current findings extend previous work by suggesting that overrepresentation of mentally ill inmates in prison misconduct should be carefully understood that not all of the problematic behaviors may be symptomatically reflective of their disorders. Findings of the current work further highlighted mental health indicators were stronger predictors of the frequency of violent misconduct, regardless of prison experiences, whereas the effect of personality disorder on nonviolent misconduct was attenuated with the inclusion of

prison experience relevant predictors. One avenue of investigation to understand further these effects of mental health problems on prison misconduct would be to carefully capture the specific types of prison misconduct and/or assess the seriousness of adjustment problems by comparing inmates with violent misconduct only, nonviolent misconduct only, and both violent and nonviolent misconduct, to those who are never involved in any misconduct.

Moreover, it is also important to note that a few types of mental disorder differentiated the risk of violent misconduct, but the seriousness of mental health problems did not. Specifically, the second hypothesis asked if inmates with more serious and complex mental health problems, having been diagnosed with multiple disorders, are more likely to engage in prison misconduct. Results rejected the second hypothesis that disruptive behavior in prison stem from the seriousness of mental health problems, rather certain types of mental disorder shape inmates' violent behaviors in institutions.

Disrupted lives of inmates with a history of mental health problems

In addition to various mental health problems, the study population appeared to be substantially different from the general prison population. Among the inmates with a history of mental health problems, the vast majority had a history of substance abuse problems (77%), almost half had been either physically or sexually victimized (45%), and over one-third of the sample had attempted suicide (35%). The third hypothesis proposed that such individual-level risk factors, in addition to mental health problems, increase the risk of prison misconduct. Findings from this work provide partial support that inmates with a history of substance abuse are more likely to engage in both violent and nonviolent

misconduct, however, pre-incarceration victimization history was predictive of nonviolent misconduct only (Tables 5 – 9).

While studies using the general prison population provided mixed findings regarding the effect of substance abuse (see Celinska & Sung, 2014; Jiang, 2005; Plourde et al., 2012; Worrall, 2014), findings from the current work are consistent with the notion that inmates with mental health problems often suffer from substance abuse problems, which may pose a uniquely complex challenge in adjusting to prison. For example, Houser and her colleagues (2012) emphasized a potential adjustment problem associated with co-occurrence of substance abuse and mental health problems, finding that inmates with both mental health problems and substance abuse disorder were more likely to be charged with disciplinary infractions compared to inmates with mental health problems only, while inmates with only substance abuse problems did not differ from the inmates without mental health or substance abuse problems (Houser et al., 2012). The current study further suggested that inmates with a history of mental health as well as substance abuse problems are more likely to engage not only in violent misconduct, but also in nonviolent misconduct.

Inmates with a history of victimization prior to incarceration were also more likely to engage in nonviolent misconduct. Prior studies consistently suggested that individuals with mental health problems are at a high risk of victimization in the community and prison (Teplin et al., 2005; Fazel et al., 2016; Wolff et al., 2007). It is also suggested that victimization experiences can lead to serious mental health problems (e.g., PTSD) and substance dependence (Bloom et al., 2003; Kessler et al., 1995; Skopp et al., 2007). The findings of the current study imply that inmates with a history of

victimization as well as mental health problems may not exhibit violence or aggression towards others, but may have more complex symptoms that may cause additional difficulties in communicating and navigating the prison environment and adhering to prison rules. Future research is needed to further our understanding of the overlap of mental health and victimization for prison populations considering that these inmates may also be at a higher risk of victimization in prison.

Prison experiences of inmates with mental health problems

There has been a long-standing criticism that the quantity and quality of institutional treatment and programs are limited, particularly for inmates with mental health problems (Covington & Bloom, 2003; Lord, 2008). Among the inmates with a history of mental health problems, more than half (58%) had access to mental health treatment, worked in prison (59%), and participated in various social programs (56%). Approximately one-third of the sample also participated in vocational (28%) and educational programs (32%), and received at least one visit (28%) while incarcerated. The current study proposed a hypothesis that inmates' exposure to prosocial and structured activities during their incarceration would decrease the risk of prison misconduct. Results of the current research rejected the hypothesis that treatment and program participation decreased the risk of both violent and nonviolent misconduct (Tables 5 – 9). Meanwhile, work assignment in prison and prison visitation reduced the risk of violent misconduct (Tables 5 & 8, Model 3).

One potential explanation for this increased risk of misconduct may be that mental health treatment may not properly address the needs of the inmates with a history of mental health problems. Despite the fact that some research provided evidence that

treatment exposure helps inmates' adjustment in prison resulting in reduced risk of prison misconduct (Celinska & Sung, 2014; Houser & Welsh, 2014), the effectiveness of existing treatment and services are often criticized (Mears & Cochran, 2012). A growing body of work on evidence-based practices, in particular, highlighted that program and treatment effectiveness can vary depending on target population, across facilities, and communities (Mears, 2010). Considering the complexity of problems that inmates with mental health issues may have, the development of effective and comprehensive service and treatment for this population can be especially challenging (Bloom et al., 2003). Meanwhile, the positive association between mental health treatment and misconduct may imply that inmates were more likely to receive such mental health treatment due to their disruptive behaviors.

With respect to program participation, the increased risk of both violent and nonviolent misconduct may be explained by the opportunity argument (Jiang & Fisher-Giorlando, 2002; Steinke, 1991). That is, inmates in programs may have a higher opportunity to commit misconduct as they have more interactions with other inmates. However, previous research demonstrates that inmates with more program participation opportunities are expected to have lower risks of prison misconduct because inmates are more prone to comply with institutional rules to maintain program participation privileges (Huebner, 2003). On the other hand, it may be that the inmates with program participation opportunities may have been exposed to higher degrees of supervision by correctional officers, which result in a higher risk of receiving disciplinary infractions. Indeed, correctional officers have considerable discretion when enforcing institutional rules (Cochran & Mears, 2013; Poole & Regoli, 1980). Noting that privileges of inmates

are filtered through correctional officers (Belenko & Peugh, 2005; Rhodes, 2005),

behavioral problems of inmates with mental health issues may be more likely handled

officially with disciplinary infractions because the primary concerns of correctional

officers are maintaining security and safety of the overall prison population (Camp et al.,

2003; Walters, 1998).

Limitation and Future Research

Despite the strengths and importance of the findings of this research, there are

several limitations in the study that should be noted. Largely, the limitations of the

current study stem from the use of secondary data. To be sure, the SISCF data were ideal

for the current study as the original data were collected to provide comprehensive

information with respect to inmates' mental health problems and their disciplinary

infractions (James & Glaze, 2006), and a nationally representative large dataset ensures

variations for the current study. However, the dataset entails several limitations that are

related to cross-sectional data, the operationalization of variables, and validity concerns.

First, this was a cross-sectional sample of inmates incarcerated in state prisons.

Therefore, causal relationships between the variables in the study cannot be established,

and the results of the current study should be interpreted with caution. In particular, the

date that the inmate was told they had a mental disorder is unknown. As noted, various

mental disorders were captured with the questionnaires: "Have you ever been told by a

mental professional, such as a psychiatrist or psychologist that you have…?" It is

possible that inmates who reported a mental disorder may not necessarily have severe

symptoms associated with the reported disorder that have influenced their problematic

behavior while in prison. Indeed, a reported mental disorder may not reflect present

symptomatology that inmates experience while incarcerated. At the same time, prior

research has underscored that inmates with a history of mental health problems are more

likely to experience high levels of psychological distress and impairment in functioning

in prison compared to inmates without such history (Houck & Loper, 2002; Black et al.,

2007). In this regard, it is critical that time ordering should be taken into account in

future research to investigate the relationship between a history of mental disorders,

psychological distress during confinement, and disciplinary infraction.

Similarly, mental health treatment measures, which showed a positive relationship

with disciplinary infractions does not inform about whether inmates received mental

health treatment prior to or after a disciplinary infraction was issued. Due to this

limitation, the effects of prison experiences (i.e., mental health treatment, program

participation, work assignment, and visits) should be understood with caution. It is

possible that inmates, who were in need of positive reinforcement due to their

problematic behavior in prison, will actually enjoy structured and prosocial programs and

treatments. It is also possible that participation in various programs and treatments may

have created additional opportunities for disciplinary infractions as inmates in programs

and treatments had more interactions with other inmates or they were under close

monitoring. In responding to a growing body of empirical knowledge concerning

evidence-based practice, future research should consider misconduct as an outcome of

prison experiences so that the function and effectiveness of the prison experiences can be

examined carefully.

Second, the constructs of the current study were operationalized using variables

available in the original dataset. Due to the nature of secondary data analysis, not all

available variables were most optimal. Institutional mental treatment and program participation, for example, were measured with a dichotomous variable, indicating whether an inmate had ever participated in any treatment or program. While the types of programs were distinguished in the study, dosage and completion of the program and treatment participation were not determined. According to prior research, mere participation, and dosage, duration, and completion of institutional programs or treatment are related to the risk of disciplinary infractions (Celinska & Sung, 2014; Steiner & Wooldredge, 2008; Wooldredge, 1994). In particular, it is critical to examine the effects of program completion rates or hours of program participation among inmates with mental health problems as prior studies indicated not only that inmates with mental health problems are less likely given the opportunity to be involved in institutional programs, but also that they are more likely to have difficulties in remaining in the programs due to their behavioral problems (Warren et al., 2002).

With respect to operationalization-related concerns, the majority of the variables included in the study were captured dichotomously. For example, the prison visit measure included in the study cannot speak to the frequency or type of visitation. While previous studies indicated receiving prison visits is critical in maintaining social bonds and support and reducing psychological distress, scholars have also underscored that visitation can be a stressor, depending on the frequency and type of visit, as well as the visitor (Houck & Loper, 2002; Jiang & Winfree, 2006; Siennick et al., 2013). Similarly, substance abuse was operationalized as regular use of a wide range of drugs (e.g., cocaine, crack, heroin, or other opiates, ecstasy, marijuana or hashish). It is reasonable to believe that these type of drugs also play important roles in understanding inmate

adjustment, particularly in co-occurrence with mental health problems. Findings of the current study and previous research suggest that there might be potential exacerbating effects of co-occurring mental health and substance abuse problems on prison misconduct (Houser et al., 2012; Houser & Welsh, 2014; Wood, 2013). Future research should examine nteractive associations between the types of substance, mental health problems, and prison misconduct. Additionally, the reported victimization prior to incarceration did not differentiate whether a victimization occurred in adulthood or childhood and if inmates experienced repeated victimization.

Third, there are validity issues related to the research design that need to be discussed for future research. One of major concerns is that the study did not account for potential variations such as differences in the structures and security levels of prisons, and institutional level of the prison environment (e.g., crowding, racial and ethnic composition of inmate population), or any other institutional level variation that may influence the management style of each prison. Prior research demonstrated that environmental characteristics are important in understanding inmates' behaviors (Huebner, 2003; Jiang & Fisher-Giorlando, 2001; Steiner & Wooldredge, 2008, 2014). Evidence indicates prison misconduct is more prevalent in maximum security facilities (Jiang & Winfree, 2006), where a higher proportion of racial minorities are incarcerated (Harer & Steffensmeier, 1996) and prisons with overcrowding problems (Wooldredge et al., 2001).

Understanding the effects of institutional-level prison environment on prison misconduct of inmates with mental health problems is critical because environmental characteristics may have associations not only with prison misconduct, but also with

mental health problems and associated prison experiences. Mental health problems of inmates, for example, may be overlooked or unnoticed in crowded prisons due to limited resources available (O'Keefe et al., 2010; Shalev, 2009). In particular, evidence suggest that disruptive behavior of inmates with mental health problems are more likely to be placed in disciplinary segregation or in higher security settings (Lurigio & Snowden, 2008; O'Keefe et al., 2010; Shalev, 2009; Stewart & Wilton, 2014; Wexler, 2003), which further limit their access to programs, work assignments, and other privileges. O'Keefe and Schnell's study (2007) highlights, however, infractions that inmates with mental health problems engaged in are not more serious or violent than the infractions that other inmates committed. Rather, inmates with mental health problems have higher accumulation of disciplinary infractions that lead to higher custody placements (O'Keefe & Schnell, 2007). Future research should account for variations in institutional-level variables of prison environment (e.g., security level and overcrowding) to assess the ways in which prison environment influence the risk of prison misconduct among inmates with mental health problems.

Another limitation is that the study did not account for potential gender differences in examining the relationships between mental health and prison misconduct. Noting that previous studies consistently found gender is strongly associated with both mental health problems and disciplinary infractions, it is critical to investigate how male and female inmates with mental health problems differ in terms of their adjustment to the prison environment. With few exceptions, the majority of studies show male inmates are more likely to commit prison misconduct than female inmates (Casey-Acevedo & Bakken, 2001; Celinska & Sung, 2014; Craddock, 1996; Gover et al., 2008; Kruttschnitt

& Krmpotich, 1990). Meanwhile, some research indicates that women may have a higher risk of prison misconduct due to impaired coping mechanisms (Kruttschnitt & Gartner, 2006) and scarce resources available in women's prisons to meet their unique needs (Bloom et al., 2003). Further, mental health problems are more prevalent among female inmates (Drapalski et al., 2009; Light, Grant, & Hopkins, 2013). Despite the fact that research on female inmates, in general, has been limited, especially female inmates with mental health problems (Casey-Acevedo & Bakken, 2001; Warren et al., 2004), previous research demonstrated that negative stereotypes of female inmates are pervasive among correctional officers (Bloom et al., Pollock, 1986), which may lead to gender disparities in prison misconduct. In this regard, prison experiences of female inmates with mental health problems need further investigation.

Other limitations might have resulted from the use of the survey and the instrument. Despite the original data collection efforts were made to obtain a nationally representative sample of state and federal inmates across various security levels, the selected sample of the current study from the original data may not necessarily be representative of the inmates with mental health problems. It is possible that inmates with serious mental health problems may have been excluded from an original sample selection due to safety and security concerns. Another problem is associated with the accuracy of a retrospective survey data due to memory bias or simple recall error (Bachman, Schutt, & Plass, 2017). In particular, the survey instruments attempted to capture lifetime experiences of mental health problems, victimization, and suicide attempts. Lastly, prison misconduct involvement of inmates was captured with a series of questionnaires to indicate rule-breaking behavior that resulted in a disciplinary

infraction. There have been concerns that official misconduct data do not adequately

describe the quantity of prison misconduct that occur in prison because of officer

discretion (Light, 1999; Hewitt et al., 1984) and prison environment, such as

overcrowding and security levels shaping the management styles and techniques (Daggett

& Camp, 2009; Steiner & Wooldredge, 2014). Previous research demonstrates that both

self-reported and official measures of prison misconduct are valid (Steiner &

Wooldredge, 2013; Van Voorhis, 1994), however, the dependent variables included in

the study captured self-reported ticketed behaviors that have not received empirical

attention.

Policy Implications

Several policy implications can be derived from the current study. The findings

indicate that personality disorder, depression, and psychosis play an important role in

inmates' violent behavior in prison. Results also showed that many inmates with mental

health problems suffer from a complex myriad of issues, such as substance abuse and

victimization, in addition to their mental health histories, which also have important

implications for their nonviolent disruptive behavior. Further, the current study

highlighted the importance of understanding complex mental health problems and

associated risk factors as being related to problems of living in a stress-inducing

environment. Broadly, institutional policies should be created to balance treatment and

control in addressing and managing the needs of inmates with specific disorders and

other relevant problems. Further, mental illnesses and associated problems should be

considered beyond being a predictor of rule-breaking behavior. In pursuit of the new

penology, efficient systematic control and management goals can be achieved when these

risk factors are carefully regarded as mechanisms for better identifying, classifying, and managing a high-risk group of inmates (Freely & Simon, 1992).

Problems in dealing with inmates with mental health problems, however, have been recognized in practice and research (Adams & Ferrandino, 2008; Byrne & Roberts, 2007; Fellner, 2006). Adams and Ferrandino (2008) noted that there is a tension in balancing treatment and control. Undoubtedly, the priority of prison administrators is given to safety, security, and custody. Fellner (2006) argued that "the formal and informal rules and codes of conduct in prison reflect staff concerns about security, safety, power, and control. Coordinating the needs of the mentally ill with those rules and goals is nearly impossible" (p. 391). Given this disconnect, it is not surprising that disciplinary behavior of mentally ill inmates is more likely to be handled punitively (O'Keefe et al., 2010; Shalev, 2009; Toch & Kupers, 2007). However, the goals of treatment and control may not necessarily be mutually exclusive. Professional judgement and use of evidence-based practices associated with prison misconduct of mentally ill inmates can narrow gaps between the two goals.

More practical suggestions to fill the gaps between treatment and control models can include offering training for frontline correctional officers and regulating their discretion, implementing effective programs, and use of a multidimensional classification instrument. Specifically, training for staff members is critical to help determine the effective intervention strategies dealing with inmates with specific mental disorders and identify a high-risk group for appropriate program and treatment referral, which can result in improvement of surveillance and custody. Noting that negative attitudes toward disruptive behavior of mentally ill inmates prevail among correctional officers (Edwards,

2000; Houser & Belenko, 2015), it is important to better inform frontline correctional

officers regarding mental health problems of inmates and associated behavioral problems.

Some researchers stressed that perceptions and responses of correctional officers may

lead to differential reactions of inmates with mental health problems because mentally ill

inmates often suffer from stigma of their disorders, which greatly influence their

behaviors (Adams, 1983; Toch, 1977). Moreover, negative attitudes toward mentally ill

inmates can result in disparities in disciplinary outcomes with discretion available to

correctional officers and limited resources available to manage the inmates with mental

health problems (Callahan, 2004; Rhodes, 2004). Therefore, in-depth training on various

diagnoses and associated symptoms as well as relevant risk factors should help to

improve the interactions between correctional officers and inmates with mental health

problems. When correctional officers are trained adequately, they are able to make better

judgments about whether an inmate's disruptive behavior is due to mental health

problems and/or any other associated risk factors and helps identify the needs for

appropriate treatment.

Additionally, development of multidimensional classification instruments that

address unique risks and needs of specific segments of the prison population are needed.

Byrne and Roberts (2007) stressed that it is critical to develop an instrument that can

identify both the treatment needs and protocols, the risks, and the control levels of

inmates with special needs, such as the mentally ill. The use of classification instruments

with high predictive validity and reliability is critical to improve selection of target

populations for adequate institutional programs and treatment implementation. Better

prediction of inmates with institutional program and treatment needs would enhance

managerial effectiveness of this population. In doing so, the probability of successful

reintegration of inmates into the community can also increase considering that inmates

with mental health problems are more likely to recidivate than are other inmates (Ditton,

1999; Heikes, 2000; Fields, 2006).

REFERENCES

Acevedo, K. C., & Bakken, T. (2003). Women adjusting to prison: Disciplinary behavior and the characteristics of adjustment. *Journal of Health & Social Policy*, *17*(4), 37-60.

Adams, K. (1983). Former mental patients in a prison and parole system: A study of socially disruptive behavior. *Criminal Justice and Behavior*, *10*(3), 358-384.

Adams, K. (1992). Adjusting to prison life. In M. Tonry (Ed.) *Crime and Justice: A Review of Research*, *16* (pp.275-359). Chicago: University of Chicago Press.

Adams, K., & Ferrandino, J. (2008). Managing mentally ill inmates in prisons. *Criminal Justice and Behavior*, *35*(8), 913-927.

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology, 30*(1), 47-87.

Agnew, R. (2009). General strain theory: Current status and directions for further research. In F.T. Cullen, J. P. Wright, & K. R. Blevins (Eds.), *Taking Stock: the Status of Criminological Theory* (pp. 101-123). New Brunswick, NJ: Transaction.

Agnew, R., & White, H. R. (1992). An empirical test of general strain theory. *Criminology*, *30*(4), 475-500.

Agnew, R., Brezina, T., Wright, J. P., & Cullen, F. T. (2002). Strain, personality traits, and delinquency: Extending general strain theory. *Criminology*, *40*(1), 43-72.

Akins, S., Burkhardt, B. C., & Lanfear, C. (2015). Law enforcement response to "frequent fliers": An examination of high-frequency contacts between police and justice-involved persons with mental illness. *Criminal Justice Policy Review*, *27*(1), 97-114.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th edition). (Text Revision). Washington, DC: American Psychiatric Association.

Andrews, D. A., & Bonta, J. (2003). *The psychology of criminal conduct*. Cincinnati, Ohio: Anderson Publishing Company.

Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P., & Cullen, F. T. (1990). Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. *Criminology*, *28*(3), 369-404.

Baillargeon, J., Binswanger, I. A., Penn, J. V., Williams, B. A., & Murray, O. J. (2009). Psychiatric disorders and repeat incarcerations: The revolving prison door. *American Journal of Psychiatry, 166*, 103-109.

Bales, W. D., & Miller, C. H. (2012). The impact of determinate sentencing on prisoner misconduct. *Journal of Criminal Justice*, *40*(5), 394-403.

Baron, S. W. (2004). General strain, street youth, and crime: A test of Agnew's revised theory. *Criminology, 42*(2), 457-483.

Baskin, D., Sommers, I., & Steadman, H. (1991). Assessing the impact of psychiatric impairment on prison violence. *Journal of Criminal Justice, 19*(3), 271-280.

Belenko, S., & Peugh, J. (2005). Estimating drug treatment needs among state prison inmates. *Drug and Alcohol Dependence*, *77*(3), 269-281.

Berg, M., & DeLisi, M. (2006). The correctional melting pot: Race, ethnicity, citizenship, and prison violence. *Journal of Criminal Justice*, *34*(6), 631-642.

Berk, R., Kriegler, B., & Back, J.-H. (2006). Forecasting dangerous inmate misconduct: An application of ensemble statistical procedures. *Journal of Quantitative Criminology*, *22*(2), 131-145.

Bersot, H. Y., & Arrigo, B. A. (2010). Inmate mental health, solitary confinement, and cruel and unusual punishment: An ethical and justice policy inquiry. *Journal of Theoretical & Philosophical Criminology*, *2*(3), 1-82.

Bierie, D. M. (2012). Is tougher better? The impact of physical prison conditions on inmate violence. *International Journal of Offender Therapy and Comparative Criminology*, *56*, 338-355.

Blevins, K. R., Listwan, S. J., Cullen, F. T., & Jonson, C. L. (2010). A general strain theory of prison violence and misconduct: An integrated model of inmate behavior. *Journal of Contemporary Criminal Justice*, *26*(2), 148-166.

Bloom, B., Owen, B., & Covington. S. (2003). *Gender-responsive strategies: Research, practice, and guiding principles for women offenders*. Washington, DC: National Institute of Corrections.

Bonta, J., Blais, J., & Wilson, H. A. (2014). A theoretically informed meta-analysis of the risk for general and violent recidivism for mentally disordered offenders. *Aggression and Violent Behavior*, *19*(3), 278-287.

Bonta, J., Law, M., & Hanson, K. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: A meta-analysis. *Psychological Bulletin, 123*(2), 123-142.

Bowker, L. (1980). *Prison Victimization*. New York, NY: Elsevier North Holland.

Bronson, J., & Berzofsky, M. (2017). *Indicators of mental health problems reported by prisoners and jail inmates, 2011–12* (Report No. NCJ 250612). Washington, DC: Bureau of Justice Statistics.

Bukstel, L. H., & Kilmann, P. R. (1980). Psychological effects of imprisonment on confined individuals. *Psychological Bulletin*, *88*(2), 469-493.

Bushway, S. D., & Apel, R. (2012). A signaling perspective on employment-based reentry programming: Training completion as a desistance signal. *Criminology & Public Policy*, *11*(1), 21-50.

Cain, C. M., Steiner, B., Wright, E. M., & Meade, B. (2016). Nonstranger victimization and inmate maladjustment: Is the relationship gendered? *Criminal Justice and Behavior, 43*(8), 992-1017.

Camp, S., Gaes, G., Langan, N., & Saylor. W. (2003). The influence of prisons on inmate misconduct: A multilevel investigation. *Justice Quarterly, 20*(3), 502-533.

Camp, S., & Gaes, G. G. (2005). Criminogenic effects of the prison environment on inmate behavior: Some experimental evidence. *Crime & Delinquency, 51*(3), 425-442.

Cao, L., Zhao, J., &Van Dine, S. (1997). Prison disciplinary tickets: A test of the deprivation and importation models. *Journal of Criminal Justice, 25*(2), 103-113.

Carr, W. A., Eggenberger, M., Crawford, L., & Rotter, M. (2012). Prediction of institutional misconduct among civil psychiatric patients: Evaluating the role of correctional adaptations. *Criminal Justice and Behavior, 40*(5), 541-550.

Carroll, L. (1974). *Hacks, blacks, and cons: Race relations in a maximum security prison*. Lexington, MA: Lexington Books.

Carson, E. A., & Anderson, E. (2016). *Prisoners in 2015* (Report No. NCJ250229). Washington, DC: Bureau of Justice Statistics.

Celinska, K., & Sung, H. E. (2014). Gender differences in the determinants of prison rule violations. *The Prison Journal, 94*(2), 220-241.

Chamberlain, A. W. (2012). Offender rehabilitation: Examining changes in inmate treatment characteristics, program participation, and institutional behavior. *Justice Quarterly, 29*(2), 183-228.

Chen, Y., Lai, Y, & Lin, C. (2014). The impact of prison adjustment among women offenders: A Taiwanese perspective. *The Prison Journal*, *94*(1), 7-29.

Choe, J. Y., Teplin, L. A., & Abram, K. M. (2008). Perpetration of violence, violent victimization, and severe mental illness: Balancing public health concerns. *Psychiatric Services, 59(*2), 153-164.

Clemmer, D. (1940). *The prison community*. New York, NY: Rinehart & Company.

Cloyes, K. G., Wong, B., Latimer, S., & Abarca, J. (2010). Time to prison return for offenders with serious mental illness released from prison: A survival analysis. *Criminal Justice and Behavior*, *37*(2), 175-187.

Cochran, J. C., & Mears, D. P. (2013). Social isolation and inmate behavior: A conceptual framework for theorizing prison visitation and guiding and assessing research. *Journal of Criminal Justice*, *41*(4), 252-261.

Cochran, J. C., Mears, D. P., Bales, W. D., & Stewart, E. A. (2014). Does inmate behavior affect post-release offending? Investigating the misconduct-recidivism relationship among youth and adults. *Justice Quarterly*, *31*(6), 1044-1073.

Coe, R. M. (1961). Characteristics of well adjusted and poorly adjusted inmates. *Journal of Criminal Law, Criminology, and Police Science*, *52*(2), 178-184.

Colvin, M. (1992). *The penitentiary in crisis: From accommodation to riot in New Mexico*. Albany, NY: SUNY Press.

Cowell, F. A., & Victoria-Feser, M. P. (2007). Robust stochastic dominance: A semi-parametric approach. *The Journal of Economic Inequality, 5*(1), 21-37.

Craddock, A. (1996). A comparative study of male and female prison misconduct careers. *The Prison Journal, 76*(1), 60-80.

Cunningham, M. D., Sorensen, J. R., & Reidy, T. J. (2005). An actuarial model for assessment of prison violence risk among maximum security inmates. *Assessment, 12*(1), 40-49.

Cunningham, M. D., Reidy, T. J., & Sorensen, J. R. (2008). Assertions of "future dangerousness" at federal capital sentencing: Rates and correlates of subsequent prison misconduct and violence. *Law and Human Behavior*, *32*(1), 46-63.

Cunningham, M. D., Sorensen, J. R., Vigen, M. P., & Woods, S. O. (2011). Correlates and actuarial models of assaultive prison misconduct among violence-predicted capital offenders. *Criminal Justice and Behavior*, *38*(1), 5-25.

Cunningham, M., & Sorensen, J. (2006). Nothing to lose? A comparative examination of prison misconduct rates among life-without-parole and other long-term high-security inmates. *Criminal Justice and Behavior*, *33*(6), 683-705.

Day, J. C., Brauer, J. R., & Butler, H. D. (2015). Testing an integrated theory of misconduct and resistance in U.S. prisons. *Criminal Justice and Behavior*, *42*(2), 133-155.

DeLisi, M. (2003). Criminal careers behind bars. *Behavioral Sciences and the Law, 21*(5), 653-669.

DeLisi, M., Trulson, C. R., Marquart, J. W., Drury, A. J., & Kosloski, A. E. (2011). Inside the prison black box: Toward a life course importation model of inmate behavior. *International Journal of Offender Therapy and Comparative Criminology*, *55*(8), 1186-1207.

DeRosia, V. R. (1998). *Living inside prison walls: Adjustment behavior*. Westport, CT: Praeger.

Diamond, P. M., Wang, E. W., Holzer, C. E., & Thomas, C. (2001). The prevalence of mental illness in prison. *Administration and Policy in Mental Health and Mental Health Services Research*, *29*(1), 21-40.

Drury, A. J., & DeLisi, M. (2010). The past is prologue: Prior adjustment to prison and institutional misconduct. *The Prison Journal*, *90*(3), 331-352.

Drury, A. J., & DeLisi, M. (2011). Gangkill: An exploratory empirical assessment of gang membership, homicide offending, and prison misconduct. *Crime and Delinquency*, *57*(1), 130-146.

Earley, P. (2007). *Crazy: A father's search through America's mental health madness* New York, NY: Penguin.

Edwards, K. A. (2000). Stigmatizing the stigmatized: A note on the mentally ill prison inmate. *International Journal of Offender Therapy and Comparative Criminology*, *44*(4), 480-489.

Farr, K. A. (2000). Classification for female inmates: Moving forward. *Crime & Delinquency*, *46*(1), 3-17.

Fazel, S., & Seewald, K. (2012). Severe mental illness in 33,588 prisoners worldwide: Systematic review and meta-regression analysis. *The British Journal of Psychiatry*, *200*(5), 364-373.

Fellner, J. (2006). A corrections quandary: Mental illness and prison rules. *Harvard Civil Rights-Civil Liberties Law Review, 41*(2), 391-412.

Felson, R. B., Silver, E., & Remster, B. (2012). Mental disorder and offending in prison. *Criminal Justice and Behavior*, *39*(2), 125-143.

Fernandez, K., & Neiman, M. (1998). California's inmate classification system: Predicting inmate misconduct. *The Prison Journal*, *78*(4), 406-422.

Finn, M. A. (1995). Disciplinary incidents in prison: Effects of race, economic status, urban residence, prior imprisonment. *Journal of Offender Rehabilitation*, *22*(1-2), 143-156.

Fisher, W. H., Silver, E., & Wolff, N. (2006). Beyond criminalization: Toward a criminologically informed framework for mental health policy and services research. *Administration and Policy in Mental Health and Mental Health Services Research*, *33*(5), 544-557.

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*(6), 357-367.

Flanagan, T. J. (1981). Dealing with long-term confinement: Adaptive strategies and perspectives among long-term prisoners. *Criminal Justice and Behavior*, *8*(2), 201-222.

Flanagan, T. J. (1983). Correlates of institutional misconduct among state prisoners. *Criminology*, *21*(1), 29-39.

Flynn, S., Rodway, C., Appleby, L., & Shaw, J. (2014). Serious violence by people with mental illness: National clinical survey. *Journal of Interpersonal Violence*, *29*(8), 1438-1458.

French, S. A., & Gendreau, P. (2006). Reducing prison misconducts: What works!. *Criminal Justice and Behavior*, *33*(2), 185-218.

Gaes, G. G. (1994). Prison crowding research reexamined. *The Prison Journal*, *74*(3), 329-363.

Gaes, G. G., & McGuire, W. (1985). Prison violence: The contribution of crowding versus other determinants in prison assault rates. *Journal of Research in Crime and Delinquency*, *22*(1), 41-65.

Gaes, G. G., Wallace, S., Gilman, E., Klein-Saffran, J., & Suppa, S. (2002). The influence of prison gang affiliation on violence and other prison misconduct. *The Prison Journal*, *82*(3), 359-385.

Gendreau, P., Goggin, C. E., & Law, M. A. (1997). Predicting prison misconducts. *Criminal Justice and Behavior*, *24*(4), 414-431.

Glancy, G. D., & Murray, E. L. (2006). The psychiatric aspects of solitary confinement. *Victims and Offenders*, *1*(4), 361-368.

Goetting, A., & Hoswen, R. (1986). Correlates of prisoner misconduct. *Journal of Quantitative Criminology*, *2*, 49-67.

Goffman, I. 1961. *Asylums: Essays on the social situation of mental patients and other inmates*. Chicago, IL: Aldine Publishing Company.

Goodstein, L., & Wright, K. N. (1989). Inmate adjustment to prison. In L. Goodstein & D. L. MacKenzie (Eds.), *The American prison: Issues in research and policy* (pp. 229-251). New York, NY: Plenum.

Goodstein, L., MacKenzie, D. L., & Shotland, R. L. (1984). Personal control and inmate adjustment to prison. *Criminology*, *22*(3), 343-369.

Gover, A. R., Mackenzie, D. L., & Armstrong, G. S. (2000). Importation and deprivation explanations of juveniles' adjustment to correctional facilities. *International Journal of Offender Therapy and Comparative Criminology*, *44*(4), 450-467.

Gover, A. R., Pérez, D. M., & Jennings, W. G. (2008). Gender differences in factors contributing to institutional misconduct. *The Prison Journal*, *88*(3), 378-403.

Grace, M., Batterham, D., & Cornell, C. (2008). Multiple disruptions: Circumstances and experiences of young people living with homelessness and unemployment. *Just Policy: Journal of Australian Social Policy, 48*, 23-41.

Griffin, M. L., & Hepburn, J. R. (2006). The effect of gang affiliation on violent misconduct among inmates during the early years of confinement. *Criminal Justice and Behavior*, *33*(4), 419-448.

Griffin, M. L., & Hepburn, J. R. (2013). Inmate misconduct and the institutional capacity for control. *Criminal Justice and Behavior*, *40*(3), 270-288.

Harcourt, B. E. (2011). Reducing mass incarceration: Lessons from the deinstitutionalization of mental hospitals in the 1960s. *Ohio State Journal of Criminal Law*, *9*(1), 53-88.

Harer, M., & Steffensmeier, D. (1996). Race and prison violence. *Criminology*, *34*(3), 323-355.

Harer, M., & Langan, N. (2001). Gender differences in predictors of prison violence: Assessing the predictive validity of a risk classification system. *Crime and Delinquency*, *47*(4), 513-536.

Hartwell, S. (2004). Triple stigma: Persons with mental illness and substance abuse problems in the criminal justice system. *Criminal Justice Policy Review*, *15*(1), 84-99.

Hildebrand, M., DeRutter, C., & Nijman, H. (2004). PCL-R psychopathy predicts disruptive behavior among male offenders in a Dutch forensic psychiatric hospital. *Journal of Interpersonal Violence, 19*(1), 13-29.

Hiller, M. L., Knight, K., Broome, K. M., & Simpson, D. D. (1996). Compulsory community-based substance abuse treatment and the mentally ill criminal offender. *The Prison Journal*, *76*(2), 180-191.

Hochstetler, A., & DeLisi, M. (2005). Importation, deprivation, and varieties of serving time: An integrated-lifestyle exposure model of prison offending. *Journal of Criminal Justice*, *33*(3), 257-266.

Hoffmann, J. P., & Cerbone, F. G. (1999). Stressful life events and delinquency escalation in early adolescence. *Criminology*, *37*(2), 343-374.

Houser, K. A., & Welsh, W. (2014). Examining the association between co-occurring disorders and seriousness of misconduct by female prison inmates. *Criminal Justice and Behavior*, *41*(5), 650-666.

Houser, K. A., Belenko, S., & Brennan, P. K. (2012). The effects of mental health and substance abuse disorders on institutional misconduct among female inmates *Justice Quarterly*, *29*(6), 799-828.

Houser, K., & Belenko, S. (2015). Disciplinary responses to misconduct among female prison inmates with mental illness, substance use disorders, and co-occurring disorders. *Psychiatric Rehabilitation Journal, 38*(1), 24-34.

Huebner, B. (2003). Administrative determinants of inmate violence: A multilevel analysis. *Journal of Criminal Justice*, *31*(2), 107-117.

Human Rights Watch. (2003). *Keep mentally ill out of solitary confinement*. Retrieved from https://www.hrw.org/news/2007/07/19/keep-mentally-ill-out-solitary-confinement

Innes, C. A. (1997). Patterns of misconduct in the federal prison system. *Criminal Justice Review, 22*(2),157-174.

Irwin, J. & Cressey, D. R. (1962). Thieves, convicts, and the inmate culture. *Social Problems*, *10*(2), 142-155.

Irwin, J. (1980). *Prisons in turmoil*. Boston, MA: Little, Brown, & Company.

Jacobs, J. B., (1977). *Stateville: The penitentiary in mass society*. Chicago, IL: University of Chicago Press.

James, D.J., & Glaze, L.E. (2006). *Mental health problems of prison and jail inmates*. Washington, DC: U.S Department of Justice, Bureau of Justice Statistics.

Jensen, G.F. (1977). Age and rule breaking in prison. *Criminology, 14*(4), 555-567.

Jiang, S., & Fisher-Giorlando, M. (2002). Inmate misconduct: A test of the deprivation, importation, and situational models. *The Prison Journal, 82*(3), 335-358.

Jiang, S., & Winfree, Jr., L.T. (2006). Social support, gender, and inmate adjustment to prison life. *The Prison Journal, 86*(1), 32-55.

Jiang, S. (2005). Impact of drug use on inmate misconduct: A multilevel analysis. *Journal of Criminal Justice, 33*(2), 153-163.

Johnson, R., & Toch, H. (Eds.). (1982). *The pains of imprisonment*. Beverly Hills, CA: Sage.

Jones, S. E., Miller, J. D., & Lynam, D. R. (2011). Personality, antisocial behavior, and aggression: A meta-analytic review. *Journal of Criminal Justice*, *39*(4), 329-337.

Jordan, B.K., Schlenger, W.E., Fairbank, J.A., & Caddell, J.M. (1996). Prevalence of psychiatric disorders among incarcerated women: II. Convicted felons entering prison. *Archives of General Psychiatry, 53*(6), 513-519.

Kerley, K. R., Copes, H., Tewksbury, R., & Dabney, D. A. (2010). Examining the relationship between religiosity and self-control as predictors of prison deviance. *International Journal of Offender Therapy and Comparative Criminology*, *55*(8), 1251-1271.

Kuanliang, A., Sorensen, J. R., & Cunningham, M. D. (2008). Juvenile offenders in an adult prison system: A comparative examination of rates and correlates of misconduct. *Criminal Justice and Behavior*, *35*(9), 1186-1201.

Kubrin, C. E., & Stewart, E. A. (2006). Predicting who reoffends: The neglected role of neighborhood context in recidivism studies. *Criminology*, *44*(1), 165-197.

Lahm, K. (2008). Inmate-on-inmate assault: A multilevel examination of prison violence. *Criminal Justice and Behavior*, *35*(1), 120-137.

Lahm, K. (2009). Educational participation and inmate misconduct. *Journal of Offender Rehabilitation*, *48*(1), 37-52.

Lamb, H. R., & Weinberger, L. E. (1998). Persons with severe mental illness in jails and

prisons: A review. *Psychiatric Services*, *49*(4), 483-492.

Langan, N. P., & Pelissier, B. M. (2001). The effect of drug treatment on inmate

misconduct in federal prisons. *Journal of Offender Rehabilitation*, *34*(2), 21-30.

Lawson, D. P., Segrin, C., & Ward, T. D. (1996). The relationship between prisonization

and social skills among prison inmates. *The Prison Journal*, *76*(3), 293-309.

Light, S. C. (1991). Assault on prison officers: Interactional themes. *Justice Quarterly,

8*(2), 243-262.

Lindquist, C. A. (1980). Prison discipline and the female offender. *Journal of Offender

Counseling Services Rehabilitation*, *4*(4), 305-318.

Lindquist, C.H., & Lindquist, C.A. (1997). Gender differences in distress: Mental health

consequences of environmental stress among jail inmates. *Behavioral Science and

the Law, 15*(4), 503-523.

Listwan, S. J., Sperber, K. G., Spruance, L. M., & Van Voorhis, P. (2004). High anxiety

offenders in correctional settings: It's time for another look. *Federal

Probation*, *68*(1), 43-50.

Listwan, S. J., Sullivan, C. J., Agnew, R., Cullen, F. T., & Colvin, M. (2013). The pains

of imprisonment revisited: The impact of strain on inmate recidivism. *Justice

Quarterly*, *30*(1), 144-168.

Long, J. S., & Freese, J. (2001). Predicted probabilities for count models. *The Stata

Journal*, *1*(1), 51-57.

Lord, E. A. (2008). The challenges of mentally ill female offenders in prison. *Criminal

Justice and Behavior*, *35*(8), 928-942.

Lovell, D., & Jemelka, R. (1996). When inmates misbehave: The costs of discipline. *The Prison Journal*, *76*(2), 165-179.

Lovell, D., Allen, D., Johnson, C., & Jemelka, R. (2001). Evaluating the effectiveness of residential treatment for prisoners with mental illness. *Criminal Justice and Behavior*, *28*(1), 83-104.

Lovell, D., Cloyes, K., Allen, D., & Rhodes, L. (2000). Who lives in super-maximum custody-a Washington state study. *Federal Probation*, *64*(2), 33-38.

Lowenkamp, C. T., Latessa, E. J., & Holsinger, A. M. (2006). The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? *Crime & Delinquency*, *52*(1), 77-93.

Lurigio, A. J., & Snowden, J. (2008). The impact of prison culture on the treatment and control of mentally ill offenders. In J. Byrne, D. Hummer, & F. S. Taxman (Eds.), *Prison violence, prison culture, and offender change* (pp. 164–179). Upper Saddle River, NJ: Allyn and Bacon.

Lurigio, A. J., & Swartz, J. A. (2000). Changing the contours of the criminal justice system to meet the needs of persons with serious mental illness. *Criminal Justice*, *3*, 45-108.

MacKenzie, D. L. (1987). Age and adjustment to prison: Interactions with attitudes and anxiety. *Criminal Justice and Behavior*, *14*(4), 427-447.

MacKenzie, D. L. (2006). *What works in corrections: Reducing the criminal activities of offenders and delinquents*. Cambridge, UK: Cambridge University Press.

Makarios, M., Steiner, B., & Travis III, L. F. (2010). Examining the predictors of recidivism among men and women released from prison in Ohio. *Criminal Justice and Behavior*, *37*(12), 1377-1391.

Mallik-Kane, K., & Visher, C. A. (2008). *Health and prisoner reentry: How physical, mental, and substance abuse conditions shape the process of reintegration*. Washington, DC: Urban Institute Justice Policy Center.

Marquart, J. W. (1986). Prison guards and the use of physical coercion as a mechanism of prisoner control. *Criminology*, *24*(2), 347-366.

Marquart, J. W., Ekland-Olson, S., & Sorensen, J. R. (1989). Gazing into the crystal ball: Can jurors accurately predict dangerousness in capital cases. *Law & Society Review*, *23*(3), 449-468.

Matejkowski, J. (2017). The moderating effects of antisocial personality disorder on the relationship between serious mental illness and types of prison infractions. *The Prison Journal*, *97*(2), 202-223.

McCorkle, R. (1995). Gender, psychopathology, and institutional behavior: A comparison of male and female mentally ill prison inmates. *Journal of Criminal Justice*, *23*(1), 53-61.

McCorkle, R. C., Miethe, T. D., & Drass, K. A. (1995). The roots of prison violence: A test of the deprivation, management, and "not-so-total" institution models. *Crime & Delinquency*, *41*(3), 317-331.

McEwen, C. A. (1980). Continuities in the study of total and nontotal institutions. *Annual Review of Sociology*, *6*(1), 143-185.

Mears, D. (2004). Mental health needs and services in the criminal justice system. *Houston Journal of Health, Law and Policy, 4*(2), 255-284.

Mears, D. P. (2012). Prison experience. *Journal of Criminal Justice*, *40*(5), 345-347.

Mears, D. P., Stewart, E. A., Siennick, S. E., & Simons, R. L. (2013). The code of the street and inmate violence: Investigating the salience of imported belief systems. *Criminology*, *51*(3), 695-728.

Mears, D. P., Wang, X., Hay, C., & Bales, W. D. (2008). Social ecology and recidivism: Implications for prisoner reentry. *Criminology*, *46*(2), 301-340.

Menard, S. (2002). *Applied logistic regression analysis*. Thousand Oaks, CA: Sage.

Merton, R. K. (1938). Social structure and anomie. *American Sociological Review*, *3*(5), 672-682.

Messina, N., Burdon, W., Hagopian, G., & Prendergast, M. (2006). Predictors of prison-based treatment outcomes: A comparison of men and women participants. *The American Journal of Drug and Alcohol Abuse*, *32*(1), 7-28.

Metraux, S., & Culhane, D. P. (2004). Homeless shelter use and reincarceration following prison release. *Criminology & Public Policy*, *3*(2), 139-160.

Miech, R. A., Caspi, A., Moffitt, T. E., Wright, B. R. E., & Silva, P. A. (1999). Low socioeconomic status and mental disorders: A longitudinal study of selection and causation during young adulthood. *American Journal of Sociology*, *104*(4), 1096-1131.

Monahan, J. (1992). Mental disorder and violent behavior: Perceptions and evidence. *American Psychologist*, *47*(4), 511-521.

Monahan, J., & Steadman, H. J. (1983). Crime and mental disorder: An epidemiological

approach. *Crime and Justice*, *4*, 145-189.

Morash, M., Jeong, S. J., & Zang, N. L. (2010). An exploratory study of the

characteristics of men known to commit prisoner-on-prisoner sexual assault. *The*

Prison Journal, *90*(2), 161-178.

Morgan, R. D., Fisher, W. H., Duan, N., Mandracchia, J. T., & Murray, D. (2010).

Prevalence of criminal thinking among state prison inmates with serious mental

illness. *Law and Human Behavior*, *34*(4), 324-336.

Morgan, R. D., Flora, D. B., Kroner, D. G., Mills, J. F., Varghese, F., & Steffan, J. S.

(2012). Treating offenders with mental illness: A research synthesis. *Law and*

Human Behavior, *36*(1), 37-50.

Morris, R. G., & Worrall, J. L. (2014). Prison architecture and inmate misconduct: A

multilevel assessment. *Crime and Delinquency*, *60*(7), 1083-1109.

Morris, R. G., Carriaga, M., Diamond, B., Piquero, N. L., & Piquero, A. R. (2012). Does

prison strain lead to prison misbehavior? An application of general strain theory

to inmate misconduct. *Journal of Criminal Justice*, *40*(3), 194-201.

Murdoch, N., Morris, P., & Holmes, C. (2008). Depression in elderly life sentence

prisoners. *International Journal of Geriatric Psychiatry: A Journal of the*

Psychiatry of Late Life and Allied Sciences, *23*(9), 957-962.

Myers, L. B., & Levy, G. W. (1978). Description and prediction of the intractable

inmate. *Journal of Research in Crime and Delinquency*, *15*(2), 214-228.

Nacci, P. L., Teitelbaum, H. E., & Prather, J. (1977). Population density and inmate

misconduct rates in the federal prison system. *Federal Probation*, *41*(2), 26-31.

O'Keefe, M. L., & Schnell, M. J. (2007). Offenders with mental illness in the correctional system. *Journal of Offender Rehabilitation*, *45*(1-2), 81-104.

O'Keefe, M. L., Klebe, K. J., Stucker, A., Sturm, K., & Leggett, W. (2010). *One year longitudinal study of the psychological effects of administrative segregation*. Colorado Springs: Colorado Department of Corrections, Office of Planning and Analysis.

Paterline, B. A., & Petersen, D. M. (1999). Structural and social psychological determinants of prisonization. *Journal of Criminal Justice*, *27*(5), 427-441.

Patrick, S. (1998). Differences in inmate-inmate and inmate-staff altercations: Examples from a medium security prison. *The Social Science Journal*, *35*(2), 253-263.

Perez, A., Leifman, S., & Estrada, A. (2003). Reversing the criminalization of mental illness. *Crime & Delinquency*, *49*(1), 62-78.

Peterka-Benton, D., & Masciadrelli, B. P. (2013). Legitimacy of corrections as a mental health care provider: Perspectives from U.S. and European Systems. *Journal of the Institute of Justice and International Studies*, *13*, 171-184.

Petersilia, J. (2003). *When prisoners come home: Parole and prisoner reentry*. New York, NY: Oxford University Press.

Petersilia, J., Honig, P., & Hubay, C. (1980). *Prison experiences of career criminals*. Santa Monica, CA: Rand.

Poole, E., & Regoli, R. (1980). Race, institutional rule breaking, and disciplinary response: A study of discretionary decision making in prison. *Law and Society Review*, *14*(4), 931-946.

Poole, E., & Regoli, R. (1983). Violence in juvenile institutions. *Criminology*, *21*(2), 213-232.

Porporino, F. J., & Zamble, E. (1984). Coping with imprisonment. *Canadian Journal of Criminology*, *26*(4), 403-422.

Pratt, T. C. (2018). *Addicted to incarceration: Corrections policy and the politics of misinformation in the United States*. Thousand Oaks, CA: Sage.

Prins, S. J. (2014). Prevalence of mental illnesses in U.S. state prisons: A systematic review. *Psychiatric Services*, *65*(7), 862-872.

Proctor, J. L. (1994). Evaluating a modified version of the federal prison system's inmate classification model: An assessment of objectivity and predictive validity. *Criminal Justice and Behavior*, *21*(2), 256-272.

Radatz, D. L., & Wright, E. M. (2016). Integrating the principles of effective intervention into batterer intervention programming: The case for moving toward more evidence-based programming. *Trauma, Violence, & Abuse*, *17*(1), 72-87.

Raphael, S. (2011). Incarceration and prisoner reentry in the United States. *The ANNALS of the American Academy of Political and Social Science*, *635*(1), 192-215.

Raphael, S., & Stoll, M. A. (2013). Assessing the contribution of the deinstitutionalization of the mentally ill to growth in the US incarceration rate. *The Journal of Legal Studies*, *42*(1), 187-222.

Reidy, T. J., Sorensen, J. R., & Cunningham, M. D. (2012). Community violence to prison assault: A test of the behavioral continuity hypothesis. *Law and Human Behavior*, *36*(4), 356.

Reisig, M. (1998). Rates of disorder in higher custody state prisons: A comparative analysis of managerial practices. *Crime & Delinquency 44*, 229-244.

Reiter, K., & Koenig, A. (Eds.). (2015). *Extreme punishment: Comparative studies in detention, incarceration and solitary confinement*. New York, NY: Palgrave MacMillan.

Rhodes, L. A. (2005). Pathological effects of the super maximum prison. *American Journal of Public Health*, *95*(10), 1692-1695.

Rhodes, L. A. (2004). *Total confinement: Madness and reason in the maximum security prison* (Vol. 7). Berkeley, CA: University of California Press.

Ruback, R. B., & Carr, T. (1993). Prison crowding over time: The relationship of density and changes in density to infraction rates. *Criminal Justice and Behavior*, *20*(2), 130-148.

Rueve, M. E., & Welton, R. S. (2008). Violence and mental illness. *Psychiatry*, *5*(5), 34-48.

Salisbury, E. J., Van Voorhis, P., & Spiropoulos, G. V. (2009). The predictive validity of a gender-responsive needs assessment: An exploratory study. *Crime & Delinquency*, *55*(4), 550-585.

Shalev, S. (2013). *Supermax: Controlling risk through solitary confinement*. London, U.K.: Willan.

Siennick, S. E., Mears, D. P., & Bales, W. D. (2013). Here and gone: Anticipation and separation effects of prison visits on inmate infractions. *Journal of Research in Crime and Delinquency*, *50*(3), 417-444.

Silver, E. (2006). Understanding the relationship between mental disorder and violence: The need for a criminological perspective. *Law and Human Behavior*, *30*(6), 685-706.

Silver, E., Felson, R. B., & Vaneseltine, M. (2008). The relationship between mental health problems and violence among criminal offenders. *Criminal Justice and Behavior*, *35*(4), 405-426.

Simon, L. (1993). Prison behavior and the victim offender relationship among violent offenders. *Justice Quarterly*, *10*(3), 489-506.

Slate, R. N., Buffington-Vollum, J. K., & Johnson, W. W. (2013). *The criminalization of mental illness: Crisis and opportunity for the justice system*. Durham, NC: Carolina Academic Press.

Sorensen, J., & Cunningham, M. D. (2010). Conviction offense and prison violence: A comparative study of murderers and other offenders. *Crime and Delinquency*, *56*(1), 103-125.

Sorensen, J., & Wrinkle, R. D. (1996). No hope for parole: Disciplinary-infractions among death-sentenced and life-without-parole inmates. *Criminal Justice and Behavior*, *23*(4), 542-552

Stacer, M. J., & Solinas-Saunders, M. (2015). Physical and verbal assaults behind bars: Does military experience matter? *The Prison Journal*, *95*(2), 199-222.

Steadman, H. J., & Veysey, B. M. (1997). *Providing services for jail inmates with mental disorders*. Washington, DC: US Department of Justice, Office of Justice Programs, National Institute of Justice.

Steiner, B., & Wooldredge, J. (2008). Inmate versus environmental effects on prison rule violations. *Criminal Justice and Behavior*, *35*(4), 438-456.

Steiner, B. (2009). Assessing static and dynamic influences on inmate violence levels. *Crime & Delinquency*, *55*(1), 134-161.

Steiner, B., & Meade, B. (2016). Assessing the link between exposure to a violent prison context and inmate maladjustment. *Journal of Contemporary Criminal Justice*, *32*(4), 328-356.

Steiner, B., & Wooldredge, J. (2009a). Rethinking the link between institutional crowding and inmate misconduct. *The Prison Journal*, *89*(2), 205-233.

Steiner, B., & Wooldredge, J. (2009b). The relevance of inmate race/ethnicity versus population composition for understanding prison rule violations. *Punishment and Society, 11*(4), 459-489.

Steiner, B., & Wooldredge, J. (2014). Comparing self-report to official measures of inmate misconduct. *Justice Quarterly*, *31*(6), 1074-1101.

Steiner, B., & Wooldredge, J. (2015). Racial (in)variance in prison rule breaking. *Journal of Criminal Justice*, *43*(3), 175-185.

Steiner, B., Butler, H. D., & Ellison, J. M. (2014). Causes and correlates of prison inmate misconduct: A systematic review of the evidence. *Journal of Criminal Justice*, *42*(6), 462-470.

Steinke, P. (1991). Using situational factors to predict types of prison violence. *Journal of Offender Rehabilitation*, *17*(1), 119-132.

Stewart, L. A., & Wilton, G. (2014). Correctional outcomes of offenders with mental disorders. *Criminal Justice Studies*, *27*(1), 63-81.

Swank, G. E., & Winer, D. (1976). Occurrence of psychiatric disorder in a county jail population. *The American Journal of Psychiatry, 133*(11), 1331-1333.

Sykes, G. (1958). *The society of captives*. Princeton, NJ: Princeton University Press.

Sykes, G. M., & Messinger, S. L. (1960). The inmate social systems. In R. Cloward (Ed.), *Theoretical studies in social organization of the prison* (pp. 5-19). New York, NY: Social Science Research Council.

Thomas, C. W. (1973). Prisonization or resocialization? A study of external factors associated with the impact of imprisonment. *Journal of Research in Crime and Delinquency*, *10*(1), 13-21.

Thomas, C. W. (1977). Theoretical perspectives on prisonization: A comparison of the importation and deprivation models. *Journal of Criminal Law & Criminology, 68*(1), 135-145.

Thomas, C. W., Petersen, D. M., & Zingraff, R. M. (1978). Structural and social psychological correlates of prisonization. *Criminology*, *16*(3), 383-394.

Thompson, C., & Loper, A. (2005). Adjustment patterns in incarcerated women: An analysis of differences based on sentence length. *Criminal Justice and Behavior*, *32*(6), 714-732.

Toch, H. (1977). *Living in prison*. New York, NY: The Free Press.

Toch, H., & Adams, K. (1986). Pathology and disruptiveness among prison inmates. *Journal of Research in Crime and Delinquency*, *23*(1), 7-21.

Toch, H., & Adams, K. (1989). *The disturbed violent offender*. New Haven, CT: Yale University Press.

Toch, H., & Adams, K. (2002). *Acting out: Maladaptive behavior in confinement*. Washington, DC: American Psychological Association.

Toch, H., Adams, K., & Grant, J. D. (1989). *Coping: Maladaptation in prisons.* New Brunswick, NJ: Transaction Publishers

Toman, E. L., Cochran, J. C., Cochran, J. K., Bales, W. D. (2015). The implications of sentence length for inmate adjustment to prison life. *Journal of Criminal Justice*, *43*(6), 510-521.

Torrey, E. F. (1995). Jails and prisons—America's new mental hospitals. *American Journal of Public Health, 85*(12), 1611-1613.

Torrey, E. F., Kennard, A. D., Eslinger, D., Lamb, R., & Pavle, J. (2010). *More mentally ill persons are in jails and prisons than hospitals: A survey of the states*. Arlington, VA: Treatment Advocacy Center.

Torrey, E. F., Zdanowicz, M. T., Kennard, A. D., Lamb, H. R., Eslinger, D. F., Biasotti, M. C., & Fuller, D. A. (2014). *The treatment of persons with mental illness in prisons and jails: A state survey*. Arlington, VA: Treatment Advocacy Center.

Travis, J., & Visher, C. (2005). *Prisoner reentry and crime in America*. New York, NY: Cambridge University Press.

Valentine, C. L., Mears, D. P., & Bales, W. D. (2015). Unpacking the relationship between age and prison misconduct. *Journal of Criminal Justice*, *43*(5), 418-427.

Veysey, B. M., & Bichler-Robertson, G. (2002). Prevalence estimates of psychiatric disorders in correctional settings. In *The health status of soon-to-be-released inmates: A report to congress, Vol. 2*. (pp. 57–80). Chicago, IL: National Commission on Correctional Health Care.

Vitiello, M. (2010). Addressing the special problems of mentally ill prisoners: A small piece of the solution to our nation's prison crisis. *Denver University Law Review*, *88*(1), 57-72.

Visher, C. A., & Travis, J. (2003). Transitions from prison to community: Understanding individual pathways. *Annual Review of Sociology*, *29*(1), 89-113.

Walters, G. D., & Crawford, G. (2014). Major mental illness and violence history as predictors of institutional misconduct and recidivism: Main and interaction effects. *Law and Human Behavior*, *38*(3), 238-247.

Warren, J. I., & South, S. C. (2009). A symptom level examination of the relationship between Cluster B personality disorders and patterns of criminality and violence in women. *International Journal of Law and Psychiatry*, *32*(1), 10-17.

Warren, J. I., Burnette, M., South, S. C., Chauhan, P., Bale, R., & Friend, R. (2002). Personality disorders and violence among female prison inmates. *Journal of the American Academy of Psychiatry and the Law Online*, *30*(4), 502-509.

Warren, J. I., Hurt, S., Loper, A. B., & Chauhan, P. (2004). Exploring prison adjustment among female inmates: Issues of measurement and prediction. *Criminal Justice and Behavior*, *31*(5), 624-645.

Wellford, C. (1967). Factors associated with adoption of the inmate code: A study of normative socialization. *Journal of Criminal Law, Criminology, & Police Science*, *58*(2), 197-203.

Welsh, W. N., McGrain, P., Salamatin, N., & Zajac, G. (2007). Effects of prison drug treatment on inmate misconduct: A repeated measures analysis. *Criminal Justice and Behavior*, *34*(5), 600-615.

Western, B. (2006). *Punishment and inequality in America*. New York, NY: Russell Sage Foundation.

Wexler, H. K. (2003). The promise of prison-based treatment for dually diagnosed inmates. *Journal of Substance Abuse Treatment*, *25*(3), 223-231.

White, M. C., Chafetz, L., Collins-Bride, G., & Nickens, J. (2006). History of arrest, incarceration and victimization in community-based severely mentally ill. *Journal of Community Health*, *31*(2), 123-135.

Wilson, A. B., Draine, J., Hadley, T., Metraux, S., & Evans, A. (2011). Examining the impact of mental illness and substance use on recidivism in a county jail. *International Journal of Law and Psychiatry*, *34*(4), 264-268.

Winfree Jr, L. T., Mays, G. L., Crowley, J. E., & Peat, B. J. (1994). Drug history and prisonization: Toward understanding variations in inmate institutional adaptations. *International Journal of Offender Therapy and Comparative Criminology*, *38*(4), 281-296.

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.

Wood, S. R. (2013). Dual severe mental and substance use disorders as predictors of federal inmate assaults. *The Prison Journal*, *93*(1), 34-56.

Wood, S. R., & Buttaro Jr, A. (2013). Co-occurring severe mental illnesses and substance abuse disorders as predictors of state prison inmate assaults. *Crime & Delinquency*, *59*(4), 510-535.

Wood, S. R., & Buttaro, A. (2013). Co-occurring severe mental illnesses and substance abuse disorders as predictors of state prison inmate assaults. *Crime and Delinquency*, *59*(4), 510-535.

Wooldredge, J. (1991). Correlates of deviant behavior among inmates of U.S. correctional facilities. *Journal of Crime & Justice*, *14*(1), 1-25.

Wooldredge, J. (1999). Inmate experiences and psychological well-being. *Criminal Justice and Behavior*, *26*(2), 235-250.

Wooldredge, J., & Steiner, B. (2015). A macro-level perspective on prison inmate deviance. *Punishment & Society*, *17*(2), 230-257.

Worrall, J. L., & Morris, R. G. (2011). Inmate custody levels and prison rule violations. *The Prison Journal*, *91*(2), 131-157.

Wright, E. M., Salisbury, E. J., & Van Voorhis, P. (2007). Predicting the prison misconducts of women offenders: The importance of gender-responsive needs. *Journal of Contemporary Criminal Justice*, *23*(4), 310-340.

Wright, K. N. (1991). A study of individual, environmental, and interactive, effects in explaining adjustment to prison. *Justice Quarterly*, *8*(2), 217-242.

VITA

AHRAM CHO

EDUCATION

2014 – 2019	Ph.D., *Criminal Justice,* Sam Houston State University <u>Dissertation</u>: *Exploring the Relationship between Prison Experience and Prison Misconduct among Inmates with Mental Health Problems: Are They Bad, Mad, or Unfortunate?* Chair: Dr. Jurg Gerber.
2012 – 2014	M.A., *Criminal Justice and Criminology*, Sam Houston State University <u>Thesis Title</u>: *The Relationship between Exposure to Video Games and Bullying Behaviors*. Chair: Dr. Jurg Gerber.
2006 – 2010	LL.B. in Law, Department of Law, Dankook University, Republic of Korea.

ACADEMIC POSITIONS

2016 – 2019	Doctoral Teaching Fellow Department of Criminal Justice and Criminology, Sam Houston State University
2012 – 2019	Research and Teaching Assistant Department of Criminal Justice and Criminology, Sam Houston State University
2012 – Summer	Research Assistant Korean Institute of Criminology, Republic of Korea

AREAS OF SPECIALIZATION

- Quantitative methods.
- Correctional experiences and outcomes.
- Crime and Justice as it relates to gender.

PUBLICATIONS

Refereed Articles

Tasca, M., **Cho, A.**, Spohn, C., & Rodriguez, N. (2018). The role of parental status and involvement in sentence length decisions among men and women sentenced to prison. *Crime & Delinquency,* doi: 10.1177/0011128718811929.

Cho, A., & Tasca, M. (2018). Disparities in women's prison sentences: Exploring the nexus between motherhood, drug offense, and sentence length. *Feminist Criminology,* doi: 10.1177/1557085118773434.

Other Publications

Gerber, J. & **Cho, A.** (Forthcoming). Mental health issues experienced by jail inmates in Texas: An overview of diagnostic problems. In Piotr Stepniak (Ed.), *Proceedings of Diagnosis in the Justice System*. Poznan, Poland: Adam Michiewicz University.

Wright, K.A., Turanovic, J.J., Tasca, M., & **Cho, A.** (2017). *Understanding gender, racial, and ethnic differences in the relationship between prison visitation and recidivism.* Report submitted to the National Science Foundation.

Tasca, M., & **Cho, A**. (2016). *Racial and ethnic disparities in solitary confinement placement decisions*. Report submitted to Sam Houston State University Office of Research and Sponsored Programs.

Tasca, M., **Cho, A**., & Wright, K.A. (2016). *Assessing the role of prison visitation on inmate misconduct, recidivism, and self-harm*. Report submitted to the Arizona Department of Corrections.

MANUSCRIPTS IN PROGRESS

Cho, A. *Exploring the relationships between mental health problem, institutional misconduct, and in-prison experiences.*

Tasca, M., Orrick, E., Butler, D., & **Cho, A**. *The defiant ones: Assessing the gendered context of prison misconduct*.

FELLOWSHIPS AND AWARDS

2012 - 2019	Graduate Assistantship, College of Criminal Justice, Sam Houston State University.
2016	Doctoral Student Summit Scholarship, Academy of Criminal Justice Sciences.
2016	Doctoral Summer Fellowship, College of Criminal Justice, Sam Houston State University.

| 2015 | Doctoral Summer Fellowship, College of Criminal Justice, Sam Houston State University. |

RESEARCH EXPERIENCE

Research Positions

| 2017 | **Project Manager (Texas Site)** |
| | *Measuring the effects of correctional officer stress on the well-being of the officer and the prison workplace and developing a practical index of officer stress for use by correctional agencies.* PI: John Hepburn; Co-PI/Texas Site Coordinator: Melinda Tasca; Co-PI/Texas Site Co-Coordinator: H. Daniel Butler. Funded by the National Institute of Justice (Award No. 2014-IJ-CX-0026). |

| 2016 – 2017 | **Research Assistant** |
| | *Examining race and gender disparities in restricted housing placements*. PI: Melinda Tasca; Co-PI: Jillian Turanovic. Funded by the National Institute of Justice W.E.B. Du Bois Program of Research on Race and Crime (Award No. 2016-R2-CX-0043). |

| 2015 – 2017 | **Research Assistant** |
| | *Understanding gender, racial, and ethnic differences in the relationship between prison visitation and recidivism*. PI: Kevin Wright; Co-PI: Melinda Tasca; Co-PI: Jillian Turanovic. Funded by the National Science Foundation (Award No. 153531). . |

| 2015 | **Research Assistant** |
| | *Racial and ethnic disparities in solitary confinement placements*. PI: Melinda Tasca. Funded by Sam Houston State University, Enhancement Research Grant Program (Award No. 29009). |

Statistical Program Proficiencies
- SPSS
- STATA
- AMOS
- CMA
- ArcGIS

TEACHING EXPERIENCE

Courses Taught
CRIJ 3378   Introduction to Methods of Research (Online & Lecture; Writing Enhanced)
CRIJ 3340   Gender and Crime (Online & Lecture)
Teaching Assistant

CRIJ 2361 Intro to the Criminal Justice System
CRIJ 3396 Juvenile Delinquency and Juvenile Justice
CRIJ 4436 Understanding Human Behavior
CRIJ 4385 Criminal Justice and Social Diversity
CRIJ 4430 Law and Society
CRIJ 6394 CJ Organization of the Future

PROFESSIONAL CONFERENCE PARTICIPATION

Paper Presentations

2018 **Cho, A.**, Tasca, M., & Orrick, E. Advancing research on the linkage between prison misconduct trajectories and recidivism. Forthcoming presentation at the *Annual Meeting of the American Society of Criminology*, Atlanta, GA.

2016 **Cho, A**., & Tasca, M. Exploring gender and racial/ethnic patterns of minor institutional infractions. Presented at the *Annual Meeting of the American Society of Criminology*, New Orleans, LA.

2016 **Cho, A**., & Tasca, M. The influences of romantic relationship quality, stability, and partner characteristics on criminal desistance. Presented at the *Annual Meeting of the Academy of Criminal Justice Sciences*, Denver, CO.

2016 Tasca, M., & **Cho, A**. A preliminary analysis of administrative segregation placements. Presented at the *Annual Meeting of the Academy of Criminal Justice Sciences*, Denver, CO.

2015 **Cho, A.,** & Tasca, M. Sentencing disparities among prison-bound female offenders: Examining interactions between parenthood and type of offense on sentence length. Presented at the *Annual Meeting of the American Society of Criminology*, Washington, DC.

2014 **Cho, A**., & Gerber, J. Bully, victim, or bully/victim: Risk predictors for adolescents. Presented at the *Annual Meeting of the American Society of Criminology*, San Francisco, CA.

2013 **Cho, A.,** & Gerber, J. Examining the relationship between exposures to violent video games and school bullying behaviors. Poster presented at the *Annual Meeting of the American Society of Criminology*, Atlanta, GA.

PROFESSIONAL DEVELOPMENT

2017 *Annual Teaching Conference*. Sam Houston State University.
2016 *Teaching Assistant Certification Series*. Sam Houston State University.
2016 *Doctoral Student Summit*, Academy of Criminal Justice Sciences. Annual Conference, Denver, CO.
2016 *IDEA Workshop.* Sam Houston State University.

2016	*DELTA Blackboard Training Certificate Series.* Sam Houston State University.
2015	*SHSU Statistic Workshop.* Sam Houston State University.
2015	*The Smart Decarceration Initiative's Inaugural Conference.* Washington University, St. Louis, MO.

SERVICE

2018	Manuscript Reviewer, *Feminist Criminology*.
2017	Manuscript Reviewer, *Feminist Criminology*.
2016	Speaker, "How to Conduct a Meta-Analysis," Sam Houston State University brown bag event.

PROFESSIONAL AFFILIATIONS

American Society of Criminology (ASC).
Academy of Criminal Justice Sciences (ACJS).
Korean Society of Criminology in America (KOSCA).

REFERENCES

Jurg Gerber, Ph.D.
Professor
Department of Criminal Justice & Criminology
Sam Houston State University
816 17th St. P.O. Box 2296
Huntsville, TX 77341-2296
Phone: 936-294-3172
Email: gerber@shsu.edu

Danielle Boisvert, Ph.D.
Associate Professor and Assistant Department Chair
Department of Criminal Justice & Criminology
Sam Houston State University
816 17th St. P.O. Box 2296
Huntsville, TX 77341-2296
Phone: 936-294-1644
Email: d.boisvert@shsu.edu

Michael S. Vaughn, Ph.D.
Professor
Department of Criminal Justice and Criminology
Sam Houston State University
816 17th St. P.O. Box 2296
Huntsville, TX 77341
Phone: 936-294-1349
Email: mvaughn@shsu.edu