

An Examination of Misconduct in Canadian Prisons

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Ahmad Saleem Alhijili

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**UNIVERSITY OF REGINA**  
**FACULTY OF GRADUATE STUDIES AND RESEARCH**  
**SUPERVISORY AND EXAMINING COMMITTEE**

Mr. Ahmad Saleem Alhijili, candidate for the degree of Master of Arts in Police Studies, has presented a thesis titled, ***An Examination of Misconduct in Canadian Prisons***, in an oral examination held on December 4, 2013. The following committee members have found the thesis acceptable in form and content, and that the candidate demonstrated satisfactory knowledge of the subject material.

External Examiner:           \*Mr. William Sturgeon,  
  Institute for Adult Education & Training Inc.

Supervisor:                     Dr. Richard Ruddell, Department of Justice Studies

Committee Member:         Dr. Nicholas Jones, Department of Justice Studies

Committee Member:         Prof. Bonny Gerger, Committee Member

  

Chair of Defense:             Dr. Laurie Clune, Faculty of Nursing

\*via Tele-conference

## Abstract

This thesis examines the relationships between inmate characteristics and prison misconduct in Canadian penitentiaries using prison data collected from 18,075 inmates admitted to the Correctional Service of Canada (CSC) between January 1, 2006 and August 31, 2009. In a test of importation theory, this research examines the relationships between minor and major prison misconduct and the following individual-level characteristics: gender, age, race, conviction for a violent offence and gang membership, controlling for prior incarceration, need, risk and prison placement (level of security). In order to carry out this research, a series of logistic regression analyses were estimated. Consistent with prior misconduct research all of the variables of interest were statistically significant predictors of prison rule violation with the exception of the ethno-cultural status of the inmates. The findings from this study support the importation proposition, suggesting that an offender's characteristics are significantly associated with rule-breaking behaviour in Canadian federal prisons.

Keywords: prison misconduct, prison adjustment, violent offenders, gang membership, institutional misconduct.

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## **DEDICATION**

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## **CHAPTER ONE PRISON MISCONDUCT**

### 1.1 Introduction

Prisons are an expensive method of holding offenders accountable for their crimes and the costs to society increase when offenders are returned to the community more physically and psychologically damaged than when they were first admitted (Clear, 2007). This study examines factors associated with prison misconduct in facilities operated by the Correctional Service of Canada (CSC), an issue that has received comparatively little empirical attention. Given that American penologists have been extensively studying this issue for several decades, the lack of prior research about prison misconduct in the Canadian context is surprising (See: Blackburn & Trulson, 2010; Cunningham, & Sorensen, 2006; Drury & DeLisi, 2010; Gover, Pérez & Jennings, 2008). Understanding correctional misconduct, including the factors associated with prison violence, is important given the relatively high rates of violence in Canadian prisons (Correctional Investigator of Canada, 2012). Moreover, there is an increasing acknowledgment that misconduct and violence are related. That is, institutions with high rates of misconduct are likely to be violent as well (Drury & DeLisi, 2010; Kuanliang, Sorensen & Cunningham, 2008).

One important question is whether factors that influence misconduct in Canadian prisons are similar to those in U.S. prisons. In order to better understand prison misconduct, this study examines the conduct of 18,075 federal prisoners admitted to the CSC between January 1, 2006 and August 31, 2009. Data already collected by the CSC

for another research project on the demographic changes in the prison population were used to answer six research questions.

This introductory chapter provides an overview of Canadian corrections, the characteristics of offender populations in federal prisons, as well as brief descriptions of provincial and territorial corrections, as both systems are somewhat related: offenders admitted to provincial corrections are generally held on remand awaiting their trials and sentencing. Once convicted and if sentenced to a term of incarceration longer than two years, they are placed in facilities operated by CSC. In order to better understand the context of imprisonment, the literature pertaining to misconduct is briefly described, and the causes, consequences and policy implications of those factors are also discussed. The data used in this research is briefly described, along with an overview of the research questions addressed in the study and the analytical methods that are used.

## 1.2 Canadian Federal Imprisonment: An Overview

To be admitted to a federal prison in Canada, a person must first have been convicted of a criminal act as defined by the *Criminal Code of Canada* and sentenced to a term of imprisonment of two years plus a day. Persons serving terms of incarceration of less than two years are held by provincial and territorial authorities in correctional centres. The CSC supervised 23,165 offenders on April 10, 2012 (Public Safety Canada, 2012a). Of these offenders, 14,419 were incarcerated and the remainder supervised in the community (Public Safety Canada, 2012a, p. 34).

The CSC operates 57 institutions including four Aboriginal healing centers. Eleven of these institutions are classified as minimum security, 21 as medium security, 10

as maximum security and there are 13 multi-level facilities (multi-level institutions are generally treatment facilities, such as the Regional Psychiatric Centre in Saskatoon, Saskatchewan) (CSC, 2012a). Inmates are placed in these different facilities in accordance with their security classification as well as the assessments that indicate the inmates' risk and need (Bonta & Motiuk, 1992). Upon their admission to a federal prison, an offender's risks and needs are assessed during the Offender Intake Assessment (OIA) which is a series of assessments first implemented in 1994 (Motiuk, 1997). The staff members conducting the OIA compile information about an inmate's criminal and mental health history, education, social status and other relevant material, including gang membership. The Institutional Parole Officer (IPO) then uses that information to assess the offender's security classification and develops a correctional plan for every offender's treatment while in prison (Motiuk, 1997). For example, a gang member imprisoned for a violent offence and who has a history of prior incarceration and escapes requires a different level of security and has different treatment needs than a first time offender charged with driving under the influence of drugs or alcohol.

The majority of Canadian prisoners serve short sentences and relatively few offences result in sentences to federal prisons. While there were 2.4 million crimes reported to police in 2011 only 5,115 offenders were sentenced to federal penitentiaries in 2011/12 (Public Safety Canada, 2012, p.13). Since 2002, there had been an increase in the number of offenders admitted to federal institutions from less than 7,750 in 2002/03 reaching a peak of 8,608 in 2006/07 followed by a period of some fluctuation, and ending in the lowest rate of admission in 2011/12 with 7,919 offenders (including both warrants of committal for new admissions and parole revocations, see Public Safety Canada, 2012,

p. 37). Another significant change in the federal prison population is that the number of female offenders has increased during the past two decades. Although women make up only 6.1% of the federal prisoner population there was an increase of about 70% in the size of that population between 2002 and 2012 (Public Safety Canada, 2012b, p. 39).

Unlike what occurs in other nations, most prisoners in Canadian federal institutions are sentenced for serious and violent offences with about two-thirds (67%) of federal prisoners serving time for committing violent crimes (Public Safety Canada, 2012a, p. 61). Certain ethno-cultural groups have higher rates of conviction for violent crimes, and more than 78% of Aboriginal offenders were imprisoned for violent offences verses 64% of non-Aboriginals (Public Safety Canada, 2012a, p. 59). However, the large proportion of violent offenders, regardless of their ethno-cultural status, is posited to increase the risk of violence in correctional facilities (Vanyur, Nink, Upchurch, Bodman, & Greenwald, 2009).

There are several prison-related conditions that might lead to misconduct and violence. Given that federal institutions are becoming more crowded, the concern is that these prisons may become more chaotic and dangerous. The CBC (2012a) reported that 13% of federal male inmates in Canada are already double-bunked (which means that two inmates share a cell designed for one prisoner) and it is expected that the use of double bunking will increase to 30% of the population due to anticipated increases in the size of the prison population.

Despite the increases of offender populations in Canadian institutions in recent years, the incarceration rate in Canada (117 per 100,000 residents) is lower than the average world prison population rate (145 per 100,000 residents) (Public Safety Canada,

2012; Stern, 2006). Yet, this incarceration rate is considered high when compared to the average imprisonment rate in most European countries (Public Safety Canada, 2012a). Nevertheless, Canada still has the lowest rate of incarceration compared to other English speaking Common Law nations (e.g., the United States, England, New Zealand, England and Wales, Scotland and Australia). To put the figures in a global scale, Canada had 0.5% of the world's population and held 0.4% of the world's prisoners (Stern, 2006).

### 1.3 Legislative Changes and Prison Populations

A number of changes recently took place in the Canadian justice system after the introduction of "tough on crime" legislation enacted by the federal government. Bill C-10, titled *The Safe Street and Communities Act*, introduced several amendments to the *Criminal Code of Canada* and increased the number of offences that had mandatory minimum sentences, enabling courts to impose harsher sanctions for violent offenders, placing restrictions on the use of conditional sentences and other changes compatible with the "zero tolerance policies" used in many American jurisdictions (Canadian Civil Liberties Association, 2012).

Critics of the new measures argue that the implementation of Bill C-10 will burden correctional systems as this legislation will lead to higher incarceration rates and costs. This is especially true for provincial corrections because most minimum sentences will be served in these institutions. In addition, a larger number of offenders will be held on remand awaiting trials as it is hypothesized that mandatory minimum sentences will reduce plea bargaining (Bernas, Fernandez, Hutton & MacKinnon, 2012). The Ontario Ministry of Community Safety and Correctional Services anticipated that the legislation will result in the imprisonment of an additional 1,500 inmates and that province will

require an additional 1,000 correctional beds (Cohen, 2012). The Quebec government, which did not support the legislation, has claimed that the new measures will cost the province an additional \$600 million each year (Cohen, 2012). Moreover, opponents of the legislation have suggested that Bill C-10 will not make Canada safer, and “It could eventually create the very problem it’s supposed to solve” (Ernst, 2011). In fact, one of the primary concerns as expressed by a United Nations committee is that Crime Bill C-10 will further punish Canada’s most vulnerable people such as young Aboriginal and African Canadian adults, who are already overrepresented in Canadian prisons (Scofield, 2012).

Imprisoning offenders is a costly proposition, and the costs have grown over the last two decades. For example, the increase of expenditures on federal corrections from 2006/07 to 2010/11 was \$2.4 billion representing a growth of 29.9% in five years. Provincial expenditures also grew by 25% between 2005/06 and 2008/09 with an additional \$1.93 billion spent on corrections since 2006/07 (Public Safety Canada, 2012a, p. 21). One factor that may have contributed to these increased expenditures is that the daily cost to house a prisoner has grown substantially. While the annual average cost of keeping a federal offender incarcerated in 2005/06 was \$88,067 in 2010/11 that cost had increased to \$114,364. Incarcerating women offenders is even more expensive and the annual average cost of keeping a woman incarcerated was \$214,614 in 2010/11 (Public Safety Canada, 2012a, p. 25). Another distinctive factor about the federal offender population is that many offenders are serving life or indeterminate sentences (the latter

are for prisoners who have been designated as dangerous offenders by the courts<sup>1</sup>) and that adds additional costs, as these persons will remain under correctional supervision for the rest of their lives. Of the total federal population approximately 23% were serving life/indeterminate sentences in 2012 (Public Safety Canada, 2012a, p. 57) which is higher than any of the 27 nations reported by Griffin and O'Donnell (2012) in their cross-national study of life imprisonment sentencing.

#### 1.4 Provincial and Territorial Corrections

In the Canadian justice system, offenders serving a sentence of two years or less, or accused persons awaiting for a trial are the responsibility of provincial governments (Reed & Morrison, 1996). In the fiscal year 2008/09, a total of 371,800 adult offenders were admitted to provincial/terrestrial correctional facilities across the country (Calverley, 2010). These inmates were housed in 234 correctional facilities, of which 177 were operated by provincial or territorial authorities. While about 70% of federal inmates are imprisoned for committing violent offences, only 32% of provincial offenders were admitted for violent crimes (e.g., attempted murders, aggravated assaults, assault with a weapon or causing bodily harm, kidnappings/forcible confinement and robberies). In 2008/09 approximately 25% of provincial offenders were admitted for offences against

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<sup>1</sup> To designate an offender as dangerous, an application must first be provided to the court by the Crown Prosecutor at the time of sentencing. If that designation is imposed, that offender will be imprisoned for an indeterminate period.

the administration of justice such as breach of conditions of probation, bail violation or failure to attend court, and 22% were held on property offences (Calverley, 2010).

One of the characteristics of the provincial correctional systems is the use of the conditional sentence which allows offenders to complete their sentence in the community (Mackay, 2005). From 2008 to 2010 there was a 3.5% increase in size of the provincial community corrections population, a growth that has been steady since the conditional sentence was introduced in 1996. A conditional sentence, which only can be applied to offenders serving less than two years, is an alternative option to jail that judges could use if they are convinced that the offender does not pose a danger to the society and they do not have a history of failing to abide by court orders. In 2008/09 an average of 13,500 persons were serving a conditional sentence in the community (Calverley, 2010). It is worth mentioning that the maximum length of a probation sentence in Canada is three years (Evans, 2006).

Despite the fact that the majority of offenders under the responsibility of provincial and territorial correctional services serve their sentence in the community, on any given day in 2008/09 there were more than 13,500 inmates held on remand and about 10,000 offenders were serving custodial sentences (Dauvergne, 2012). Correctional costs have been increasing: Reed and Morrison (1996) reported that the total expenditure on adult correctional services in 1995/96 was \$1.9 billion while in 2008/09 spending on correctional services in Canada had increased to almost \$3.9 billion (Calverley, 2010). It is likely that these costs will continue to increase. Opponents of Bill C-10 have expressed the concern that many offenders will be sentenced to prison who otherwise might have

received a community sentence, which in turn will increase correctional costs (CBC, 2012b).

### 1.5 Correctional Misconduct

One of the most important goals of correctional systems is reducing misconduct and violence as such activities pose a threat to the safety and order in any correctional facility. Successfully reducing the level of misconduct in a correctional institution will preserve correctional resources and lead to a more humane and safe environment (French & Gendreau, 2006). In addition, higher levels of misconduct may contribute to an increased likelihood of violence. Incidents of misconduct can be destructive not only because they interrupt correctional operations but also because witnessing or being victims of these acts can have serious psychological and physical effects on inmates and staff (Wolff, Shi & Bachman, 2008).

There are a number of factors that may contribute to higher levels of prison misconduct in federal institutions. First, a high proportion of inmates are imprisoned for violent offences and this reflects their high needs and risks. In 2012, violent offenders constituted 67% of the federal offender population (i.e., violent offences includes assault, sexual assault, robbery, attempted homicide and murder) (Public Safety Canada, 2012a). This population represents a challenge for correctional officials as many of these offenders are at high risk to exhibit aggressive behaviour while in prison. In the United States, by contrast, about 53% of the state prison population have been convicted of a violent offence (Carson & Sabol, 2012). Second, many Canadian prisoners have histories of mental illness or have a high need for treatment and may suffer from the effects of

long-term drug or alcohol abuse (Bonta, Blais & Wilson, 2013). Thus, their decision making skills can be poor and escalating conflicts with other prisoners and staff. Third, prior to their incarceration, many prisoners were unemployed, poorly educated and came from marginalized populations and these traits may be related to a less successful adjustment to prison with the rigid rules and expectations (Huang, Laing & Wang, 2004). According to the importation theoretical model, inmates are expected to continue their criminal path where they are imprisoned instead (Tasca, Griffin & Rodriguez, 2010). Fourth, prison conditions such as crowding (Ruback, & Carr, 1993; Wooldredge, Griffin, & Pratt, 2001) abusive treatment by some correctional officers (Jacobs, 2004; Parker, 2002) and poor conditions of confinement (Ross, 2012) are factors that frustrate prisoners and may contribute to misconduct. Fifth, the percentage of gang members in prisons has increased in recent years (Harris, 2012) and members of those security threat groups (STG, another term for prison gangs) pose a significant threat to order and safe operations of prisons (Gaes, Wallace, Gilman, Klein-Saffran, & Suppa, 2002; Griffin & Hepburn 2006; Winterdyk & Ruddell 2010).

Altogether, the five factors reported above can collectively contribute to increased levels of misconduct and violence in correctional settings. Wolfe, Blitz, Shi, Siegel and Bachman (2007) noted that:

It is not surprising that violence is the leading by-product of prison because hundreds or thousands of people with antisocial tendencies or behaviour are aggregated and are confined in a close and frequently overcrowded quarters characterized by material and social deprivation. (p. 588)

Correctional officials use different strategies to reduce prison misconduct and one of the most important is classification. Upon their admission to the federal system a prisoner's risk and needs are formally assessed and they are classified into different levels of custody (minimum, medium, and maximum security) (Motiuk, 1997). The process of classification often lasts several months and is led by an institutional parole officer (IPO). The major priorities in the assessment that takes place in the beginning of a prison sentence (at a CSC reception centre) are assessing the offender's suicide potential, security risk, needs and their health prior to their transfer to the institution where they will serve their sentence.

Recently, the media has brought to the public's attention that violent activities occur in Canadian federal prisons at a high rate and the number of aggressive incidents is increasing (Harris, 2012). These incidents include inmate-on-inmate violence and inmates assaulting staff. Consequently, correctional officers are increasingly using force in order to maintain control. MacCharles (2012) reported that the use of force by prison officers has gone up by 37% over the last five years. It is plausible therefore that the increasing use of force by correctional officers occurs simultaneously with the growing number of incidents of violence committed by prison inmates (Correctional Investigator for Canada, 2012, p. 25).

A number of changes might have contributed to increased levels of violent incidents in federal prisons. First, the offender population has grown by more than 1,200 inmates between 2008/09 and 2010/2011 (Public Safety Canada, 2012a). This increase has led prison administrators to double bunk as a way of dealing with the challenge of institutional crowding. The Correctional Investigator of Canada (2012) observed that

double bunking has not been implemented in all federal institutions. Some institutions do not double bunk, whilst prisons in the Ontario and Prairie regions have a higher percentage of double bunked prisoners due to a lack of capacity (Correctional Investigator of Canada, 2012, p. 24). Another challenge workers in federal institutions must confront is the increasing number of persons with mental health problems. The Correctional Investigator of Canada (2012, p. 6) reported that inmates identified as having mental health needs at their admission doubled through the last decade and in 2009 13% of male and 30% of female inmates needed mental health assistance. This gender-based variation suggests that adjustment to the prison environment by female offenders might be more problematic than for their male counterparts. Previous research has reported a strong association between mental illness and prison misconduct (see Houser, Belenko & Brennan, 2012; Wooldredge, & Steiner, 2009; Wright, Salisbury & Van Voorhis, 2007).

Although Canada has a much lower rate of incarceration than the United States, when compared to some state correctional systems, Canadian prisons have higher levels of violence. Ruddell (2013) found that the rate of homicide in Canadian federal prisons is much higher than that of prisons in California, which is generally representative of the entire U.S. prison population. While the rate of murder in California prisons between 1999 and 2010 was 6.96 per 100,000 inmates, it was 22.4 per 100,000 prisoners in Canadian penitentiaries during the same time period. This suggests that Canadian prisoners and staff are exposed to violence at a high rate. The Correctional Investigator of Canada (2011, p. 28) reported five cases of murder in 2010/11 which represents the highest number of homicides in almost one decade. High levels of violence in prisons

raise concerns that correctional officers are compelled to use force in order to maintain institutional security and safety. For example, the Correctional Investigator of Canada (2011, p. 28) reported that an inmate was killed by correctional staff in 2010, which was the first time lethal force was used by correctional staff since 1984.

As homicide is the most extreme form of violence and this offence has occurred at a high rate in Canadian prisons, it is likely that numerous serious and minor assaults are also occurring. However, unlike homicide, not all assaults are reported. The unknown number of these unreported acts of violence and sexual assaults limits one's understanding of the exact levels of violence in Canadian correctional settings.

#### 1. 6 Factors Influencing Prison Misconduct

Managing institutions that confine some of the most dangerous members of a society is a challenging task. Most federal prisoners are incarcerated for committing violent crimes and that might shape their behaviours while in custody. Given that prisons impose restrictive rules upon inmates, their level of anger and frustration of some prisoners may be intense. Correctional staff, on the other hand, must confront a number of challenges, especially in higher security facilities. For example, officers supervise the prisoners and ensure that they obey the institutional rules and routines: meals must be served on time, programs attended by the inmates and the housekeeping and chores completed. It is not usual that some offenders resist the rules imposed on them and the level of resistance can be dramatic in some cases.

The problem of prison misconduct has been viewed according to two different schools of thought. On the one hand, supporters of the deprivation theory proposed that

confinement removes items and experiences that are enjoyed outside of the prison environment, such as freedom of movement and access to goods and services (Innes, 1997; Sykes, 1958). Sykes (1958) speculated that conditions within prisons affect the inmate's behaviour such as the loss of liberty and desirable goods which results in increased pain, frustration, and attempts to undermine the legitimacy of the prison staff and structure. According to this view, any negative factor related to the prison environment, such as noise, poor food or crowded conditions would lead to more prison misconduct. An example of such stressors in Canadian prisons is crowding including the use of double bunking (Correctional Investigator of Canada, 2011).

On the other hand, proponents of the importation theory attribute the number of violent and non-violent incidents in correctional settings to characteristics that the offenders bring into prison (Cao, Zhao & Van Dine, 1997; Irwin & Cressey, 1962). To test that proposition scholars have examined the relationships between factors such as age, criminal history, prior incarceration, gang membership or mental illness and misconduct. Those investigators have typically found strong empirical support for the importation proposition (Flanagan, 1983; Gover, Perez & Jennings, 2008; Toch, Adam & Grant, 1989). Yet, recent research suggests that these two theoretical perspectives may also complement each other (Tasca, Griffin, & Rodriguez, 2010).

### 1.7 Impacts of Correctional Misconduct

Prison misconduct has several negative effects on the institutional environment that affects the inmates' experiences. While prisons often receive the most dangerous individuals in the community, at the same time some of the most vulnerable people also

reside within their walls. One challenge for these vulnerable populations is the fact that Canadian prisons house a growing number of STGs who pose threats to the safe operations of correctional facilities. Griffin (2009) indicates that violence is central to the establishment of prison gangs and is used by members to increase their status and maximize their participation in an underground economy, which also is in violation of institutional rules. The spread of these groups in the prison environment threatens vulnerable inmates who are already at risk of victimization. Therefore, these prisoners often feel that they are in need of protection, and may join a gang because they believe that will increase their safety (Winterdyk & Ruddell, 2010). Victimization in prison may also be more stressful compared to being harmed in the community because in prison the victim is more likely to see his or her abuser on a regular basis (Ruddell, 2009).

One of the issues that have received little scholarly attention in Canada is the harms resulting from sexual assaults. Ruddell (2009) observed that sexual victimization is well documented and that “new inmates are particularly vulnerable to these attacks, especially in high security facilities” (p. 4). Unlike in the United States, where studies of sexual assaults in confinement are funded by the federal government, there is no similar research in Canadian prisons, which represents a significant gap in our understanding. It should be noted that the fears of sexual victimization experienced by inmates are combined with other stressors and conditions of deprivation in the prison environment. Altogether these factors reduce feelings of safety, which is essential to the effective operations of correctional facilities to maximize the benefits of the rehabilitative programs.

McGuire (2009) noted that parolees who had been physically or sexually abused by other prisoners may be more likely to commit offences after their release, and consequently the entire community will be at higher risk. Predicting the risks of recidivism has received considerable attention because of the large numbers of ex-prisoners who engage in criminal behaviour. For example, Langan and Levin (2002) found that two thirds of inmates will be rearrested within three years after their release. Newer research by the Pew Centre for the States (2011) shows that the three-year recidivism rate for U.S. prisoners released in 2004 was approximately 43%. Releases from prison in Canada are somewhat more successful than what occurs in the United States. Cortoni and Hanson (2005) reported that the CSC recidivism rate during the 1990s was 32% although it is difficult to make meaningful cross-national comparisons because of the different definitions used in these recidivism studies.

Cochran, Mears, Bales and Stewart (2012) found that adult inmates who engage in prison misconduct and violence had a higher risk of recidivism. This finding shows the importance of an inmate's institutional behaviour as it may shape his or her future after their release. Thus, reducing prison misconduct by developing intervention programs addressing institutional violence may ultimately reduce recidivism. French and Gendreau (2006) conducted a meta-analysis that examined the effectiveness of correctional programs at reducing prison misconduct, and they found that correctional interventions that reduced prison misconduct also reduced recidivism.

Prisons are closed communities where inmates have limited access to services, amenities or communication with the outside world. The poor quality of services provided to prisoners may also contribute to misconduct as a reaction to those conditions.

Therefore, there is a need to understand how such conditions affect inmate behaviour. One potentially fruitful source of information about prison life and the relationships between deprivation and misconduct is provided by ex-prisoners. Ross and Richards (2002) argued that the academic contributions of convict-authors should be acknowledged because “much of their research and writing while critically informed, is based on their experiences inside prisons, and may only be partially grounded in the academic literature” (p. 349). One of the strengths of the accounts of prison life by convict criminologists is that this work improves our understanding of the challenges and difficulties as experienced by prisoners which may be associated with prison misconduct. For instance, Victor Hassine (2002) described his daily fears serving a life sentence:

As a convict, I eat prison violence for breakfast, lunch and dinner. It is with me when I wake in the morning and when I go to sleep at night. It stalks me during the day, and steel-eyed, it glares at me throughout the night. It is the lead actor in my dreams and the villain during my conscious hours. I have learned the markings, scents, footprints, and the ways of violence and like a tracker, I hunt it down before it has an opportunity to do the same to me. (pp. 38-39)

Hassine, who had survived over thirty years in prison, killed himself after being denied parole in 2008.

Prison violence is one form of institutional misconduct which poses a significant challenge for correctional administrators to confront as creating a safe environment

contributes to successful rehabilitation and less recidivism. Acts of violence behind bars have long term psychological consequences for inmates that can affect them during their imprisonment and after they are released. A large number of prisoners are returned to their communities every year after serving their sentences, and those who have been harmed by their incarceration experiences may pose a greater threat to society (Maguire, 2009). Some vulnerable and marginalized inmates, who have suffered in silence and may have severe emotional and physical conditions, such as post-traumatic stress disorder (PTSD), may also have a more difficult reintegration into the community.

### 1.8 Studying Causes of Correctional Misconduct

American scholars have devoted a great deal of research to identify the predictors of institutional misconduct. This research is important because what happens in prison has an effect on the inmates, correctional staff and the community. A primary goal of Canadian federal corrections is to rehabilitate offenders and when the energies of a correctional system are devoted to managing misconduct, offender rehabilitation can be neglected (Craig, 2004; Sykes, 1958). Another challenge for correctional administrators is to maintain the safety of both the prisoners and the correctional officials and misconduct can play a destructive role in the prison environment.

Despite the importance of the topic, little has been written about prison misconduct in Canada. Therefore there is a need to examine this issue in Canadian prisons, especially as these institutions are expected to receive more inmates after the implementation of new “tough on crime policies.” This study responds to this gap in

literature by examining the relationships between inmate characteristics and prison misconduct.

### 1.9 Hypotheses

The following six hypotheses were developed after a review of the prison misconduct literature. Five of them are associated with the importation theory and one is an indicator of the deprivation proposition:

1. Younger inmates will engage in higher levels of major and minor prison misconduct than older inmates.
2. Male inmates will engage in higher levels of major and minor prison misconduct than female inmates.
3. Aboriginal and African Canadian offenders will engage in higher levels of major and minor prison misconduct than Whites and other racial groups.
4. Violent offenders will engage in higher levels of major and minor prison misconduct than non-violent offenders.
5. Gang members will engage in higher levels of major and minor prison misconduct than non-gang members.
6. Inmates incarcerated in high custody units will engage in higher levels of major and minor prison misconduct than inmates placed in low custody units.

Two indicators of prison misconduct are used in this study, minor and major offences.

Minor offences include acts such as disobeying prison rules, refusing to work, and possessing unauthorized items. Involvement in these acts is relatively common and approximately one-half of the CSC inmates in the population admitted between 2006 and 2009 engaged in these infractions. In contrast, major misconduct includes assaulting other

inmates or staff, committing property crimes, engaging in riots and using illegal drugs, and about one-fifth of the prisoners admitted between 2006 and 2009 committed these acts. A more comprehensive list of major and minor misconduct offenses is presented in Table 3.1.

### 1.10 Summary

This study examines factors thought to influence prison misconduct in federal institutions. The inmate characteristics examined in the study include demographic factors (race, gender, and age), conviction for a violent offence and gang membership. The study also controls for inmate risk, needs, security level and prior incarceration. The data used in this study is a collection of information about a cohort of all 18,075 offenders who were admitted between January 1, 2006 and August 30, 2009 to CSC institutions. The data was originally collected as part of a study on demographic changes in the Canadian prison population (Grant, 2011) and has previously been used to examine misconduct committed by STGs (Ruddell & Gottschall, 2011).

This research evaluates whether race, gender, age, conviction of violent crimes and gang memberships predict prison misconduct. Having a better understanding of inmate characteristics and how they impact prison operations can enable correctional authorities to respond more effectively to the prisoner's unmet needs and the risks that they pose. Such information might also be used in the development of newer generations of risk assessment tools (e.g., whether gang membership should be included in developing security ratings of prisoners). Little is known about how these characteristics

are associated with misconduct in Canadian prisons. Logistic regression will be used to determine the variables that are predictive of misconduct.

Two theories are used to explain prison misconduct: the deprivation and the importation approaches. The deprivation theory emphasizes the impact of the prisonization process which derives from the pains associated with incarceration and will be indicated by prison placement (Sykes, 1958). The importation model, on the other hand, emphasizes how the offender's characteristics affect the prison environment (Drury & DeLisi, 2011). Both theories are presented in greater detail in the chapter that follows.

#### 1.11 Structure of the Thesis

This thesis is structured in the following manner. The introductory chapter is followed by a review of the literature on correctional misconduct. As mentioned above, most of this literature is from the United States and there is comparatively less information from Canada. The third chapter describes the data used in the study, which is secondary data originally collected by the CSC for a study of demographic changes in the prison population (Grant, 2011). This chapter also describes the methodological techniques used in the study and provides a rationale for using logistic regression. The fourth chapter reports the results of the analyses. The fifth chapter concludes the thesis, and includes a review of the findings and the policy implications for correctional services, as well as how this research informs theories of correctional misconduct.

## **CHAPTER TWO LITERATURE REVIEW**

Inmate adjustment to the prison environment has been an important topic for researchers concerned with understanding correctional operations. While some scholars have examined the psychological outcomes of exposure to the prison environment, others have developed measures to determine how inmates affect prison conditions including identifying the predictors of prison misconduct. The two competing theoretical models that have guided correctional researchers over the past few decades to examine the adjustment to the correctional environment are known as the deprivation and importation theories (Gover, MacKenzie, & Armstrong, 2000).

In this chapter, these two theoretical perspectives are described. After describing these two theories, the literature pertaining to each of the importation indicators that are examined in this study are reviewed and the custody level variable (an indicator of the deprivation model) are discussed, along with the other control variables, in Chapter Four.

### 2.1 Theoretical Perspectives

#### 2.1.1 Deprivation Theory

The primary assumption of the deprivation theory is that prison characteristics have powerful influences on prisoners. According to Sykes (1958) when an individual is incarcerated he or she will experience five pains of imprisonment: (a) loss of liberty, (b) loss of goods and services, (c) deprivation of heterosexual contact, (d) lack of autonomy and (e) experiencing continual surveillance. These conditions collectively shape the inmate's behaviour while they are incarcerated. Sykes (1958) based some of his

theoretical approach on Clemmer's (1940) earlier work that highlighted how inmates developed social values that are in opposition to prison authority. These informal values encourage inmates to resist prison rules and routines including participating in work programs, obeying orders, and they sometimes contribute to prisoners acting violently toward other inmates, staff or damaging prison property.

Sykes (1958) hypothesized that experiencing each of these five pains of imprisonment leads to changes in the inmate's behaviour. For example, loss of liberty would affect the inmate in a way that diminishes his or her concern for others. Similarly, limited access to desirable goods and services may generate misconduct or violent behaviour as inmates attempt to obtain these goods (e.g., through the underground prison economy, such as the trafficking in contraband items). In this case, Sykes suggested that a lack of goods exerts pressure on inmates to obtain scarce items. As a result, some individuals adopt disruptive behaviours in order to receive these desirable goods or services (Tasca, Griffin & Rodriguez, 2010). Similarly, the loss of autonomy, heterosexual contact and the surveillance and procedures associated with correctional security may lead to frustration that worsens an inmate's adjustment to prison and motivates them to resist prison rules.

All of these pains, Sykes (1958) argued, are embodied within prison life and are potentially harmful to the prisoner's self-esteem and self-worth. Accordingly, the oppositional subculture in prison becomes a means for some inmates to feel positive about themselves by exercising power over others. Thus, the deprivation perspective posits that the prison environment can be criminogenic, or contributes to criminal behaviour and recidivism (Innes, 1997). Huebner (2003) reported that the following

factors were associated with misconduct: (a) higher levels of security, (b) low quality of services, (c) more hours spent in cells and (d) the size of the prison. MacDonald (1999) noted that the prison environment had negative influences upon inmates' attitudes, social interactions and feelings of self-worth, which in turn influences their prison adjustment. In addition to the deprivation of the prison environment, an inmate's criminal values may also boost the oppositional subculture that may result in higher levels of antisocial behaviour among inmates (Innes, 1997). Altogether, these scholars suggest that the early period of a prisoner's incarceration is critical for inmates in setting the stage for future misconduct.

The frustration and stress felt by prisoners are also caused by other factors that can vary between and within institutions and these conditions may also change over time. A key example of these conditions is overcrowding and several scholars found this to be a significant predictor of violence between inmates as well as acts of prison misconduct (Gaes & McGuire, 1985; Ruback & Carr, 1993; Wooldredge, Griffin & Pratt, 2001). After controlling for age, race, and staff experience, Walters (1998) found prison crowding to be one of the strongest predictors of inmate assault. However, Franklin, Franklin and Pratt (2006) indicated that the research examining the relationships between prison crowding and misconduct produced mixed findings. For example, Tartaro (2002) found a negative association between prison crowding and inmate-on-inmate assault. Franklin et al. (2006) pointed out that the methodological approach through which prison density is measured may influence the results (e.g., considering the density in the entire correctional system rather than each prison within the system). Franklin and colleagues

(2006) conducted a meta-analysis that examined the effects of overcrowding on misconduct and they found a weak relationship between these variables.

In sum, deprivation theory suggests that the characteristics of the prison environment and the rules imposed on the prisoners contribute to inmate misconduct although Huebner (2003) noted that, “the direct relationship between absolute deprivation and misconduct is not clear” (p. 108). It should be acknowledged that inmates experience deprivation in various ways and in response to prison conditions that are often difficult to measure. Sykes (1958) argued that some inmates may deal with frustration by developing destructive behaviours such as using drugs or engaging in acts of self-harm (e.g., ‘slashing oneself’ see Doty, Smith & Rojek 2012 ). Feld (1981) found that higher levels of violence, sexual assault, and other types of misconduct occurred in facilities that placed a greater emphasis on custody rather than treatment and rehabilitation. Therefore, effective correctional management may play a critical role in decreasing levels of deprivation.

While many of these scholars have found a relationship between indicators of deprivation and misconduct, the theory has been challenged for neglecting the inmate’s characteristics, needs and risks. In response to these shortcomings, a number of investigators have examined the relationships between prisoner characteristics and their adjustment to the prison environment.

### 2.1.2 Importation Theory

The importation model proposes that the prison environment is not solely responsible for prison misconduct. Rather, the main focus of this approach is that the

prison environment is impacted by the inmate's characteristics. Irwin and Cressey (1962) contended that scholars such as Clemmer and Sykes overemphasized the effects of the prison environment on misconduct and suggested that many inmates come to prison with values and beliefs that support a criminal subculture and that these traits shapes their behaviour once incarcerated. For instance, STG members can influence the prison environment by importing their criminogenic values and oppositional culture. These gang-involved inmates may compete for power in the prison and this can lead to increased racial tension, violence and misconduct.

Researchers have identified a number of significant positive relationships between a prisoner's characteristics (e.g., age, gang membership, and race) and misconduct (Cunningham & Sorensen, 2007; Drury & DeLisi, 2011; Kuanliang, Sorensen & Cunnengham, 2008; Ruddell & Gottschall, 2011). Cao, Zhao and Van Dine (1997) found that the importation perspective was better able to explain prison adjustment compared to the deprivation model.

The prison environment can also be influenced by the ethno-cultural backgrounds of the inmates and correctional officers. Racially-based conflict can result in violent activities both at individual and collective levels (e.g., a greater number of fights and assaults or riots). In U.S. prison systems, for example, there is a long history of conflict between African American and White inmates, as well as African American and Latino groups. The destructiveness of these conflicts can be intensified when the proportion of gang membership within facilities is higher as gangs tend to form along racial and ethnic lines.

A number of scholars have also reported that racial tension might also exist between correctional officers and inmates. Marquart (1989) found that the race of the correctional officers as well as the inmates was an important predictor of violence and prison misconduct; suggesting that biased or racist treatment by correctional officers can trigger aggressive feelings, especially among African American inmates. Consistent with that finding, other researchers found that race was associated with misconduct, especially in facilities that emphasized the role of custody more than treatment and rehabilitation (Harer & Steffensmeier, 1996; Poole & Regoli, 1983; Winfree, Mays, Crowley & Peat, 1994). Winfree and colleagues suggested that the negative perceptions developed by minority inmates toward correctional officers may prevent them from forming positive relationships with them. On the other hand, officers might also import characteristics and values that shape their work experiences (Van Voorhis, Cullen, Link, & Wolfe, 1991). The race of correctional officers was seen by some earlier scholars to play an important role in influencing the correctional environment, particularly with respect to their correctional goals, such as being punitive or having a more rehabilitative philosophy (Crouch & Alpert, 1982; Jacobs & Kraft, 1978).

Central to the importation theory is the proposition that the characteristics and prior experiences that inmates bring with them to prison will predict their behaviour while incarcerated. That is, inmate behaviours are shaped by their characteristics, attitudes and experiences which may have contributed to their involvement in crime in the first place. For example, membership in a street gang was found to be associated with prison misconduct (Cunningham & Sorensen, 2007; Gaes, et al., 2002; Ruddell &

Gottschall, 2011). Likewise, offenders with a history of violence in the community may be at a high risk to behave aggressively while in prison.

Supporters of the importation proposition are critical of the deprivation theory as it excludes factors such as criminal history, gender, ethno-cultural background and age. For example, Flanagan (1983) found that younger inmates are more likely to resist prison officials and engage in violent acts within the institution. MacDonald (1999) proposed that the high levels of rule violations among younger prisoners can be explained because they are likely to act aggressively in response to prison conditions, whereas older inmates have adapted to such conditions. In addition, adjustment to the prison environment was sometimes linked to the offender's involvement with the criminal justice system including their histories of prior incarceration. For instance, Craddock (1996) found that offenders admitted to prison for the first time were more likely to break the rules and their infractions were often discovered, suggesting that inmates who had previously been incarcerated may be more skilled in hiding their misconduct compared with newcomers.

In sum, the importation theory proposes that an inmate's characteristics and prior experiences in the community and correctional facilities shape their prison adjustment. These prior experiences might also include incarceration in youth custody facilities or provincial correctional centers. Therefore, a better understanding of the characteristics of these inmates, as well as their needs and risks is a prerequisite to developing strategies to address the problem of inmate misconduct.

## 2.2 Correlates of Prison Misconduct

A number of U.S scholars have examined the factors associated with institutional misconduct. Their research has identified that several variables are consistently associated with misconduct and the results of these studies can help prison staff to develop more valid institutional classification / security rating schemes, more effective programming and to better manage institutional resources. Predicting which groups of inmates will exhibit different forms of misconduct is a complex undertaking. In their review of the literature, Cooper and Werner (1990) summarized the research findings and pointed out that, “practical and methodological complexities make it difficult to fairly assess the accuracy of predictions of violence in an absolute sense” (p. 432).

Cunningham and Sorensen (2007) noted that while some of the factors associated with prison misconduct are expected, others are counterintuitive. Among the characteristics that are often studied are: age, gang affiliation, type of offence, race, gender, length of sentence, and mental illnesses. Similar to prior U.S. research, this study examines five importation-related factors: age, gender, race (ethno-cultural status), type of offence and gang membership as predictive of misconduct. In the following sections, a review of extant research is presented for each of these factors.

### 2.2.1 Age

Both crimes in the community and prison have are negatively associated with age. A greater proportion of young people tend to violate the law prior to their admission to prison and to violate the rules throughout their incarceration. As inmates get older this

tendency seems to be reduced. Berk, Kriegler, and Baek (2006) observed that using age as a predictor variable in misconduct studies is consistent with the extant work of criminology. Hirschi and Gottfredson (1983), for example, stressed the importance of age as related to crime: “age is everywhere correlated to crime. Its effects on crime do not depend on other demographic correlates of crime. Therefore, it cannot be explained by these correlates and can be explained without reference to them. Indeed, it must be explained without reference to them” (p. 581). Gottfredson and Hirschi (1987) also observed that involvement in crime declines with age; what some scholars have called an “aging out” of crime. The highest involvement in crime occurs in adolescence and Sampson and Laub (1990) observed that “criminal behavior peaks in the teenage years” (p. 609).

Prior research has shown that inmate age is one of the strongest and consistent predictive factors of prison misconduct as older inmates tend to be involved in fewer institutional infractions (Cunningham & Sorensen, 2007; Flanagan, 1983; Goetting & Howsen, 1986). Age was also reported to be negatively associated with institutional violence and Cooper and Werner (1990) found that younger inmates were more likely to assault others. A negative relationship between age and prison violence was also found in Cunningham and Sorensen’s (2006) study of misconduct in the Florida Department of Corrections. These researchers found that younger inmates were more likely to commit violent misconduct than their older counterparts.

Consistent with those findings, inmate age has been reported to be associated with assaultive misconduct. Lahm (2008) examined inmate-on-inmate non-lethal assaults and found that age and aggression were the strongest predictors of violence. Lahm’s (2008)

findings suggest that highly aggressive inmates tend to exhibit more violence and inmates younger than 25 years old pose the highest risks. Moreover, other research has shown that age was strongly and negatively associated with a broad array of violent rule infractions (see Cunningham, Sorensen, Vigen & Woods, 2011). In research that was aimed to predict involvement in serious misconduct (e.g., that would be a felony committed outside prison) Berk and colleagues (2006) examined data from 10,000 California prisoners and found that high risk inmates tended to be young, had lengthy criminal records and a street and / or prison gang affiliation. Interestingly, age was also found to be a significant predictor of different types of institutional misconduct in a female juvenile population (Blackburn & Trulson, 2010).

Altogether, one consistent finding from prior correctional research indicates that there is a strong negative relationship between age and institutional misconduct both in juvenile and adult settings (Blackburn & Trulson, 2010). In fact, the research findings of an inverse relationship between inmate age and prison misconduct have led some scholars to criticize laws enacted in the United States during the 1990s that lowered the age at which juvenile offenders could be admitted to adult correctional facilities. Kuanliang, Sorensen and Cunningham (2008) argued that such practices may increase the likelihood for creating career criminals among these youthful offenders.

A number of studies suggested that the commission of crime at an early age is the best predictor of future offending (Katsiyannis, Zhang, Barrett, & Flaska, 2004; Schwalbe, Fraser, Day, & Arnold, 2005). Several scholars attempted to determine whether the same pattern exists for prison misconduct. For example, McShane and Williams (1989) examined the prison adjustment of 55 offenders who committed their

offences when they were under 17 years of age, but were older than 18 upon their admission to Texas prisons between 1984 and 1987. They were compared to a group of young inmates who committed their offences between the ages of 17 and 21 years and were incarcerated during the same period. These investigators found that the younger group of offenders committed a significantly higher number of major and minor misconduct offences than their older counterparts (McShane & Williams, 1989). Commenting on McShane and Williams' (1989) research, Kuanliang and colleagues (2008) observed that the relationship between criminal acts at earlier ages and future offending "hold true for prison misconduct as well" (p. 1189).

In their own study, Kuanliang and his colleagues (2008) examined the effect of age on disciplinary misconduct and violence in Florida prisons by making a comparison between inmates who were younger than 18 years of age when admitted to the adult prison system and prisoners admitted as adults (over 18 years). They reported that prisoners admitted as juveniles were involved in higher rates of misconduct than adult inmates. These investigators also found that the level of education, gang affiliation, type of offence and sentence length were associated with misconduct although "age was the most consistent and strongest determinant of prison violence" (p. 1186). Furthermore, their research revealed that the group least likely to engage in misconduct were those inmates aged 41-years of age or older. This study provided additional empirical evidence to demonstrate the significant negative association between age and prison misconduct.

Altogether, the results of prior research show that younger prison inmates have a higher involvement in misconduct and violence than their older counterparts. All of these

studies were based on research conducted in U.S. prison systems, but similar pattern is expected to exist in Canadian federal prisons.

### 2.2.2 Gang Membership

A growing body of correctional research has examined the extent to which gangs influence the correctional environment. Knox (2005) provides a definition for gang-affiliated inmates as, “any group of three or more persons recurring threatening or disruptive behavior ...including but not limited to gang crime or gang violence” (p. 3). Griffin (2009) reports that prison gangs are primarily formed within the male population and are typically organized along racial and ethnic lines. Recent evidence suggests that in American prisons there are a growing number of gang-affiliated inmates. A report by the National Gang Crime Center (NGCC) indicated that nearly 25% of state prisoners were gang members (Knox, 2005: see also Hall, 2009). Winterdyk and Ruddell (2010) also found that the prevalence of U.S. prison gang members was increasing. There has also been an expansion of gang members in Canadian prisons over the last few years. Harris (2012) indicated a 44% increase of gang members in five years, growing from 1,420 in 2007 to 2,020 inmates in 2012.

A number of studies have found a strong relationship between gang membership and prison misconduct (Cunningham & Sorensen, 2007; Gaes et al., 2002; Ruddell & Gottschall, 2011). In addition, prison gangs have consistently been found to pose a threat to the safety and security of correctional facilities through their involvement in institutional violence (Drury & DeLisi, 2011). Cunningham and Sorensen (2007) also

found that gang affiliation was associated with assaultive misconduct in their study of Texas prisoners.

One of the most cited studies on prison gangs is the research conducted by Gaes and colleagues (2002) who examined misconduct in U.S. federal prisons. The authors indicated that there had been a lack of empirical research about the influence of gang membership on prison violence and misconduct prior to their study. The lack of such research may be a result of the complexities of investigating gang activities in correctional facilities. Winterdyk and Ruddell (2010) observed that conducting research on prison gangs is challenging since determining whether acts of misconduct were caused by gangs requires victims and witnesses to report incidents and prisoners are often reluctant to cooperate with authorities for fear of retaliation by other STG members.

Gaes et al. (2002) found that 7,445 of 82,504 male inmates (from 27 different STG) were classified as gang members in the U.S. Bureau of Prisons. The importance of this study comes from the large number of inmates identified as STG members. These investigators found that gang membership is associated with increases in violence and all types of prison misconduct. Gaes and colleagues (2002) also made distinctions for gang affiliation based on the level of attachment to a gang, such as members, suspected members (e.g., prisoners not validated as members) and associated members. While core members were more likely to commit violent misconduct than their suspected or associated counterparts, the suspected and associated members were more likely to be involved in violent misconduct than non-gang affiliated prisoners. Time spent in prison by these gang members was negatively related to prison misconduct. One of the possible explanations these investigators provided for this finding is that long-term gang members

might occupy higher positions in the organization where they order lower status members to commit misconduct instead of becoming directly involved. Another possible explanation is that as inmates age their criminality may be reduced, as research on age and crime suggests (Berk et al., 2006).

The correctional literature also revealed that being a gang member with a violent history increases the likelihood of engaging in major and minor prison misconduct. Drury and DeLisi (2011) examined a sample of 1,005 prison inmates from a Southwestern state. They analyzed the relationship between prisoners with a street gang history who were convicted of homicide offences and their subsequent involvement in prison misconduct. Their findings suggest that gang members convicted of homicide have an increased likelihood of prison misconduct than non-homicide offenders or gang members who had not been convicted of murder. Moreover, these researchers noted that violent gang-involved inmates threatened the safety and security of institutional facilities and were significantly involved in all types of prison misconduct, “such as damage to property, possession of dangerous weapons, possession of contraband, as well as more discretionary violation, such as disobeying an officer” (Drury & DeLisi, 2011, p. 141). This finding is in contrast with prior research that examined the involvement of homicide offenders in prison misconduct (Marquart, Ekland-Olson & Sorensen, 1989; Sorensen & Cunningham, 2010). Drury and DeLisi (2011) speculated that gang members constantly have to prove their loyalty to the group which results in higher levels of misconduct.

Another threat to correctional facilities that gangs pose is their willingness to import illegal drugs and contraband such as cellular phones into prison as well as participating in the underground prison economy (Winterdyk & Ruddell, 2010). The

distribution of contraband in correctional facilities and trafficking by STG may lead to violence as these groups try to protect their interests or compete for a greater portion of the prison economy. Winterdyk and Ruddell (2010) observed that, “one of the challenges that correctional systems have to confront is that illicit drugs and the underground economy contribute to violence” (p. 731). Such activities raise concerns in regard to the safety and rehabilitation in Canadian prisons as the number of STG involved prisoners is increasing (Harris, 2012).

As the current study is concerned with Canadian federal prisons, it is relevant to report a study that examined variation between gang members in these institutions. Using the same data that is used for this thesis, Ruddell and Gottschall (2011) found that gang members in general were more likely to be involved in minor and major misconduct than non-affiliated prisoners. Not all gang members were found to pose the same level of threat to the safety in these institutions. Ruddell and Gottschall found that Aboriginal, Asian and Street gang members were most likely to engage in serious misconduct. In contrast, Traditional Organized Crime (TOC) prisoners (e.g., such as members of the mafia) were less likely to be involved in major incidents. Although it is possible that the older and more established organized crime members hire other prisoners to engage in misconduct (e.g., to commit an assault on another prisoner).

Altogether, this review of the prior literature indicates a strong correlation between STG membership and prison misconduct. Further, these security threat groups represent a challenge for the rehabilitative programs in correctional facilities (Winterdyk & Ruddell, 2010). Gang activities represent challenges not only to correctional facilities

but also to public safety (Knox, 2005) as gang membership is associated with recidivism (Huebner, Varano, & Bynum, 2007).

### 2.2.3 Conviction on a Violent Offence

A number of scholars have found that a conviction for a violent offence is a predictor of rule violations in correctional institutions (e.g. Cunningham, Sorensen & Reidy, 2005; Cunningham & Sorensen, 2006; Davis, 1996; Harer & Langan, 2001; Porporino, 1986; Sorensen & Cunningham, 2010). Violent offenders are defined as those who have been sentenced for a criminal act of violence such as “homicide, assault, robbery, rape and other sexual assault” (Blackburn, 1997, p. 210).

Public Safety Canada (2012) reported that 67% of the federal prison population in 2012 was serving a sentence for committing violent crimes. Although one may hypothesize that a higher percentage of violent offenders is likely to be involved in prison misconduct, some studies of misconduct and violence have produced mixed findings in this regard. While some researchers found that conviction for a violent offence can predict future prison misconduct, others found that inmates imprisoned for violent offence had lower rates of misconduct, particularly for non-gang involved inmates convicted of homicide offences (Drury & DeLisi, 2011; Sorensen & Cunningham, 2010). Ralph and Laura (2009) noted that as crime is not normally distributed in the community, a small number of inmates are often responsible for a disproportionate number of rule violations.

Officials in correctional systems often use conviction for violent crimes to determine the level of security and classification when inmates are admitted to prison.

Harer and Langan (2001) noted that the U.S. Bureau of Prisons based their classification on the severity of violence displayed by the offender against his or her victim. As a result, offenders with a history of violent crimes are likely to be placed, at least initially, in an institution with a higher security level. This practice also occurs in Canada and prisoners convicted of first-degree murder are automatically placed in a maximum security facility for the first two years of their sentence, regardless of the circumstances of the homicide (CSC, 2012c).

Many security classification schemes assume that offence severity predicts future prison misconduct although some studies failed to provide evidence supporting this proposition. Porporino's (1986) study of Canadian prisons revealed that inmates convicted of a violent offence had rates of violent misconduct similar to or less than those imprisoned for property crimes. Furthermore, an analysis conducted on inmate data from three U.S. state prison systems in the 1980s found that the offence for which an inmate was imprisoned was not significantly related to prison misconduct (Wooldredge, Griffin, & Pratt, 2001). Sorensen and Cunningham (2010) also criticized the practice of considering conviction for a violent offence as a predictive factor for institutional conduct.

Sorensen and Cunningham (2006) examined data from the Florida Department of Corrections and found that inmates who had been convicted of first-degree murder (n= 5,010) did not have significantly higher rates of institutional assault compared to inmates charged with property offences (n= 11,017) or all inmates charged with public order or drug offences (n= 51,512). Sorensen and Cunningham (2010) also examined whether murderers are more prone to prison misconduct than inmates convicted of other offences

but placed in the same level of confinement. Their study revealed that offenders convicted of second-degree murder had higher levels of serious misconduct than prisoners convicted of first-degree murder. These investigators also found that inmates convicted of murder offences were significantly less likely to be involved in four measures of prison misconduct than non-homicide offenders (Sorensen & Cunningham, 2010).

In another study that examined the correlates of prison violence, Cunningham and Sorensen (2007) found that persons convicted of a violent offence, older inmates and those with longer sentences had significantly lower rates of violent misconduct. Less involvement in violent misconduct among inmates imprisoned for a violent offence may be explained by the fact that many of these inmates had been confined in high security units which may limit their opportunities to engage in violence (Cunningham & Sorensen, 2007). Consistent with the findings reported above, Drury and DeLisi (2011) also found a similar pattern of misconduct in a large Southwestern correctional system. In that study, the severity of offence was negatively associated with having three or more minor violations and that inmates who had been convicted of homicide were significantly less likely to commit any type of institutional misconduct (Drury & DeLisi, 2011).

Contrary to the findings reported above researchers examining the effect of a conviction for a violent crime found a strong relationship with aggressive prison misconduct (Davis, 1996). An analysis of inmate assaults on correctional staff in 53 correctional systems collected from surveys of 21 states and the U.S. Bureau of Prisons revealed that offenders incarcerated for a violent offence were responsible for 70% of assaults on staff (Davis, 1996). Similarly, Griffin and Hepburn (2006) examined the

involvement of 2,158 male inmates in the Arizona Department of Corrections in four types of violent misconduct: assault, fighting, threatening others and possession of weapons. After accounting for age and gang affiliation, conviction for a violent offence was significantly associated with involvement in assaults, fighting and weapons violations. Similar findings were reported by Cunningham and Sorensen (2007) in their study of Texas prisons.

As mentioned above, inmates convicted of homicide offences were reported to have lower rates of prison misconduct compared to non-homicide offenders (Drury & DeLisi, 2011; Sorensen & Cunningham, 2006, 2010) and one possible explanation is that murder is sometimes a product of passion carried out by persons without criminal histories (Drury & DeLisi, 2011). As a result, a homicide offender who has no prior criminal convictions may pose a different risk than someone convicted of murder and who has an extensive criminal record.

The misconduct literature reported above has revealed mixed findings in respect to the relationship between an offender's conviction for violence and prison misconduct. Most of the studies that found support for the relationship between conviction for a violent offence and prison adjustment were related to violent misconduct. Violent offenders are not only assessed as being at high risk to engage in misconduct while incarcerated but also for greater risk of violent recidivism once returned to the community (Howells & Day, 2002).

Over two thirds of the inmates incarcerated in federal prisons have been convicted of committing a violent offence in the community and this may increase the potential risk of misconduct compared to nonviolent offenders. Howells and Day (2002) noted that

some correctional services devoted much of their resources to develop rehabilitative and treatment programs based on cognitive behavioural approaches to reduce anger, aggression and the potential risk of violence. Such procedures taken by the correctional authorities (including placing inmates admitted with violent offence in high security units) reflect the difficulty of managing violent offenders who may also have psychological and emotional problems, prior histories of victimization, cognitive disabilities and a history of criminal behavior in the community.

#### 2.2.4. Race and Prison Misconduct

Criminologists have examined the link between race and crime, as members of minority groups are often convicted of involvement in criminal activities at higher levels than the dominant racial groups (Blau & Blau 1982; Sampson & Wilson, 1995; Shaw & Mckay, 1942). This disproportionate involvement in crime has also been reported at the national and international levels (Rushton, 1995). For example, Rushton (1995) noted that while in the U.S. African Americans have been overrepresented in crime statistics for much of the last century, Asians are underrepresented. While the over-representation of ethnic groups has long been described, there is less agreement on the reasons for this over-representation, and its ultimate impact on correctional populations and what actually occurs in prison in terms of misconduct.

A number of researchers have examined the relationships between race or ethnicity and institutional misconduct in American prisons. Griffin and Hepburn (2006) noted that many researchers who have investigated correctional misconduct in the past have focused upon the prison adjustment of African American inmates. Studies that have

included race as a predictor of prison misconduct have revealed mixed findings. Finn (1995) examined the relationship between race and misconduct controlling for economic deprivation, urban background and criminal history. She found that race was not a significant factor in predicting misconduct. In contrast, Harer and Steffensmeier (1996) found that African American inmates were significantly more likely to become involved in violent incidents but had lower rates of alcohol and/or drug misconduct than White inmates. Similar to those findings, Innes (1997) examined the misconduct of newly admitted inmates to the U.S. Bureau of Prisons (BOP) and found that ethnicity was significantly associated with less serious incidents of misconduct. That finding was especially relevant given the increased population of African American non-Hispanic inmates in the BOP. Last, Sorensen, Wrinkle and Gutierrez (1998) examined misconduct among long-term Missouri inmates between 1978 and 1987 and they found that African American and younger prisoners were strong predictors for rule violations.

Gendreau, Goggin and Law (1997) conducted a meta-analysis of 39 studies that examined predictors of prison misconduct and they found that inmates who were members of minority groups were more likely to be involved in institutional misconduct. Consistent with this finding, Fernandez and Neiman (1998) reported that African American inmates were more likely than any other racial group to be involved in prison assaults. Huebner (2003) found a similar relationship between inmate race and assault; African American inmates had a higher involvement in both inmate-on-inmate and staff assaults. Griffin and Hepburn (2006) found that ethnicity was not a statistically significant predictor of fighting or possessing weapons although their examination revealed that Native American prisoners were more likely than their non-Native

counterparts to be involved in assaultive misconduct. Griffin and Hepburn also reported that Mexican Nationals were more likely than other ethno-cultural groups to threaten others. Altogether, these studies suggest that there is a relationship between race and different forms of misconduct in U.S. prisons.

Aboriginal and African Canadian inmates are overrepresented in Canadian federal prisons relative to their representation in the general population (Public Safety Canada, 2012a). However, there has been a lack of research that has investigated the relationships between ethnicity and misconduct in Canadian prisons. A recent study concerned with the impact of gang membership on institutional misconduct in Canadian federal institutions by Ruddell and Gottschall (2011) revealed that Aboriginal gang members had higher levels of risk and needs, and also had high rates of involvement in major and minor incidents. Moreover, a high proportion of these inmates were victims in major and minor incidents. Yet that research did not examine whether Aboriginal offenders who were not gang-involved had higher involvement in misconduct than non-Aboriginal offenders.

It is possible that race, by itself, is not a causal factor in prison misconduct and a number of studies have explored whether inmates are treated differently by correctional authorities based on their race or ethnicity. Poole and Regoli (1980) as well as Flanagan (1983) found that African American inmates were more likely to be convicted of misconduct than were White inmates. As a result, it is plausible that discrimination may account for some of those differences. Knowing whether the race of an officer or an inmate contributes to the prison operation may be important for better understanding the problem of prison misconduct. Van Voorhis, Cullen, Link and Wolfe (1991) found that,

“African American officers were more likely to be oriented to the notion of rehabilitation” (p. 487). The perceptions toward rehabilitation of correctional officers may affect the extent to which they report disciplinary incidents and officers who have a more rehabilitative perspective might issue fewer disciplinary violations. Scrutinizing this relationship, Fisher-Giorlando and Jaing (2000) found no significant effect of race between African American and White officers in their reporting of disciplinary incidents committed either by African American or White inmates.

Several explanations have been offered to account for the involvement in misconduct for different racial groups. In regard to the relationship between crime and race in the general population, Like (2011) noted that African Americans have had higher crime and victimization rates compared to Whites. This might lead to perceptions that the justice system is not legitimate. It is possible that those feelings of illegitimacy might lead to less law-abiding behaviour, both in the community and within prisons (see Tyler, 2006). A similar process might be occurring with Aboriginal offenders in Canadian prisons.

The link between criminal behavior in the community and disruptive activities in prison can also be explained as some populations may disproportionately come from criminogenic environments. Like’s (2011) review of the literature on crime and race suggests that crime and victimization rates among minorities in society may be produced by social and economic inequalities and the historical marginalization of African Americans might also contribute to misconduct. This view suggests that factors that affect crime in the community would continue to have a role on prison misconduct (Wacquant, 2001). Other scholars have attributed the high rates of prison misconduct

among African Americans as a result of living in disadvantaged areas prior to their incarceration (Rose & Clear, 1998; Wooldredge & Steiner, 2012). This experience, in turn, might facilitate an emergence of a subculture that is resistant and hostile to the legal authorities (Sampson & Bartusch, 1998; Wooldredge & Steiner, 2009).

While the recent evidence suggests that ethno-cultural status plays a role in prison misconduct in U.S. facilities, there has been comparatively little attention placed on this issue in Canadian prisons. Therefore, examining the relationship between ethno-cultural status and institutional misconduct in Canadian penitentiaries will help us understand whether this is a predictor of misconduct.

#### 2.2.4.1 Aboriginal Peoples in Justice Systems

A key theme in commentary about the Canadian criminal justice system is the overrepresentation of Aboriginal people both in crime statistics (as victims and offenders) and in correctional settings. The Supreme Court of Canada has called this overrepresentation “a crisis in the Canadian justice system” (Rudin, 2005). Public Safety Canada (2012a, p. 47) reported that Aboriginal people represent 19.3% of the prison population yet they only constituted 4% of the general population. A higher proportion of Aboriginal offenders are convicted of serious and violent offences than their non-Aboriginal counterparts (Public Safety Canada, 2012). Ruddell and Gottschall (under review) also found that Aboriginal prisoners may have a more difficult adjustment to prison than their non-Aboriginal counterparts due to their histories of violence and victimization, as well as discrimination and marginalization.

Despite the recognition in the 1970s of the high rates of incarceration among First Nations peoples the problem persists. The *Corrections and Conditional Release Act* (CCRA) was enacted in 1992 and one priority of the *Act* was to facilitate the reform of Aboriginal offenders (Correctional Investigator of Canada, 2012). However, a lack of resources and administrative obstacles has prevented the CSC from achieving this goal (CSC, 2013). These concerns were addressed in a comprehensive report issued by the Correctional Investigator of Canada (2012) that was critical of the treatment of Aboriginal offenders.

Addressing Aboriginal involvement in crime in isolation from other social forces does not provide a complete explanation for the high proportion of First Nation peoples in Canadian prisons. There is a long history of marginalization that Aboriginal youth experience, placing them at a greater risk to be attracted into criminal pathways. Bracken, Deane and Morrissette (2009) claimed that discrimination against Canadian Aboriginal peoples exists in education, employment and the criminal justice system. This discrimination contributes to higher rates of poverty and poor community health (Bracken et al., 2009). Therefore it is possible that the community experiences of Aboriginal offenders would also influence their behaviour when incarcerated.

#### 2.2.5. Gender and Prison Misconduct

One of the most consistent findings in criminological research is that males commit crime at higher rates than females (Cernkovich & Giordano, 2008; Steffensmeier & Allan, 1996). Despite those differences, there is still concern over the involvement of women in justice systems and more specifically in corrections. As a result, a number of feminist theoretical perspectives emerged in the 1960s and in 1970s to explain female

involvement in crime. In recent years, there is a growing awareness that women have different pathways to crime and corrections (Salisbury, Van Voorhis & Spiropoulos, 2009) and as a result, require a different approach in corrections than those developed for their male counterparts.

Males constitute the majority of prison populations and women inmates constituted only 6.8% of the federal offender population in 2011/12 (603 offenders), although this population increased by 69.6% since 2002/03 (Public Safety Canada, 2012a, p. 39). This trend is compatible with findings from research in recent decades suggesting a decrease in the gender gap in crime and delinquency (Heimer, 2000; Pelissier, Camp, Gaes, Saylor & Rhodes, 2003). A number of explanations for the narrowing of this gap have been proposed, including social and economic changes (Lauritsen, Heimer & Lynch, 2009). As women are convicted of involvement in crime at higher rates their representation in prisons will likely increase as well. Therefore, it is important to consider female populations in studies of correctional misconduct.

Research on institutional misconduct suggests that the prison environment has a powerful influence on the behaviour of women offenders (Blanchette, Verbrugge, & Wichmann, 2002; Collie & Polaschek, 2003). Blanchette, Verbrugge and Wachmann (2002) found that in Canadian penitentiaries, Aboriginal women were more likely than their non-Aboriginal counterparts to be classified as either medium or maximum security and at the same time, they had higher rates of prison misconduct. Collie and Polaschek (2003) found a similar pattern of misconduct in a women's prison in New Zealand and the rate of institutional infractions was also positively related to security classification levels (e.g., there is a greater degree of misconduct in higher security units or facilities).

It is likely that a higher security classification increases the pains of imprisonment for all inmates. Not only are maximum security units characterized with more restrictions on inmate movements but there are also a greater number of correctional officers compared to lower security units, which might increase surveillance. In addition, women placed in maximum security facilities may have fewer visits with their family members—due to a limited number of these facilities in each state—which increases the pains of imprisonment (Collie & Polaschek, 2003).

Instruments used to determine security classification might not accurately assess female offenders' needs and risks (Hannah-Moffat, 2013). Salisbury et al. (2009) noted that in the U.S., custody classification levels were typically designed for male offenders as they represent the vast majority (93%) of the prison population (Carson & Sabol, 2012). Using instruments constructed for males is problematic as they may fail to address differences in the needs and risks of female offenders and their different pathways to crime (Bloom, Owen, & Covington, 2004; Wright, Salisbury & Van Voorhis, 2007).

The findings reported above suggest that an inmate's gender may play a role in the adjustment to prison and that security classification levels should take gender differences into account. In order to test that proposition, Wright and colleagues (2007) examined a sample of 272 women inmates admitted to the Missouri Department of Corrections. They investigated the effects of gender-responsive needs (e.g., histories of childhood abuse, mental illness as well as family and friendship relationships) on their prison adjustment during the first 12 months of their incarceration. These investigators found that all of these three factors were associated with prison misconduct. The investigators also highlighted the weaknesses of the traditional risk assessment

instruments, which are based on the offender's offence and criminal history (e.g., static factors that cannot be changed) in predicting the conduct of these women rather than dynamic risk assessments, which consider factors that can be changed such as attitude and motivation.

Inconsistent with the findings reported in previous U.S. and New Zealand studies, examination of the relationship between security classification and institutional misconduct in Canadian prisons by Gobeil, Blanchette and Barrett (2007) revealed that the classification tools used accurately predicted misconduct in the women offender population. These investigators examined the efficacy of the Security Reclassification Scale for Women (SRSW) in predicting misconduct. While the SRSW may classify a female offender at a particular security level, these women might actually be placed at a different level depending on the discretion of the prison authorities. Gobeil and colleagues (2007) found that the actual placement was not a good predictor of prison misconduct and the offender's SRSW classification was a more valid predictor of institutional behaviour. This finding lends support to the objective classification and placement practices undertaken in most prisons today. Further, that research suggests that involvement in prison misconduct in female populations was more likely to be a function of their individual characteristics rather than the prison environment.

A number of researchers have examined the level of support male and female inmates receive and the relationship of that support to their prison adjustment (Jiang & Winfree, 2006; Jiang, Fisher-Giorlando & Mo, 2005). The primary assumption that these investigators posit is that inmates who have higher levels of social support (e.g., positive relationships with family, friends and other inmates, access to prison programs and

informal social network inside prison) adjust more quickly and positively to institutional settings irrespective of gender. Jiang and Winfree (2006) conducted a multilevel analysis using a national sample of male and female state prisoners to examine: (a) the levels of social support these prisoners received, and (b) the impact of that support on male and female inmates' adjustment. Their study revealed that females had more social support from people outside of the prison than males and female prisoners were more likely than males to participate in activities organized by inmates. Moreover, the social supports that females received, especially related to their children, were more likely to result in reduced rule violations than male inmates receiving the same support.

Studies of the relationships between gender and misconduct have produced mixed findings. Several scholars reported that male inmates engaged in more prison misconduct than their female counterparts ( Harer & Longan, 2001; Kuanliang & Sorensen, 2008; Craddock, 1996 ) and that male inmates were more likely than females to be involved in violent misconduct (Griffin & Hepburn, 2006; Harer & Longan, 2001). Other studies have found that female inmates were more likely than males to engage in institutional misconduct (Cao et al., 1997; Gover et al., 2008). Jiang and Mo (2005) also found that female inmates had higher rates of minor misconduct than males. Lastly, a number of investigators have found that there were no significant gender differences in respect to prison misconduct and that male and female offenders had similar patterns of prison misconduct (Craddock, 1996; Harer & Langan , 2001). Yet, Craddock (1996) also indicated that while male inmates tended to engage in violent behaviour such as fighting, infractions by female prisoners were less serious.

Male and female offenders may also respond differently to the deprivations of the prison environment. Investigations of the ability of the importation and deprivation models to explain male and female inmate's behaviour have revealed mixed findings. For example, Gover and colleagues (2008) found that having a history of prior incarceration was a better predictor of misconduct committed by male inmates compared with females. Another study found that rule violations in previous incarcerations were positively associated with involvement in all types of misconduct for both male and female inmates (Drury & DeLisi, 2010). Moreover, a longer sentence was positively associated with high rates of misconduct for female prisoners, but less so for males (Gover et al., 2008). Drury and LeLisi (2010), on the other hand, found to increase involvement in violent and non-violent misconduct in both genders.

In contrast to studies reporting that non-White female inmates were more likely to engage in institutional misconduct (Blackburn & Trulson, 2010; Craddock, 1996; Gover et al., 2008; Walters & Elliot, 1999), African American females were found to have lower levels of rule violations (Drury & DeLisi, 2010). In addition, low levels of education were reported to be a predictive factor of misconduct for women offenders (Drury & DeLisi, 2010; Gover et al., 2008). Lastly, males with a violent criminal history were associated with higher involvement in serious prison misconduct whereas females with similar histories were not (Drury & DeLisi, 2010). In terms of the effect of age, women who were younger at their first arrest were reported to have more difficulties adjusting to the prison environment and engaged in more misconduct (Blackburn & Trulson, 2010; Loucks & Zamble, 2000).

With respect to women gang members, Ruddell and Scott (2011) found that females who were identified as gang members were two times more likely than their non-gang affiliated counterparts to be involved in institutional misconduct and three times more likely to commit violent acts. As a result, this group poses a greater threat to the prison's safety. This observation is consistent with Drury and DeLisi's (2010) finding that female gang inmates had a significantly higher involvement in major types of misconduct than non-affiliated prisoners.

The studies reported in this section examined a diverse range of offender populations in different places and eras and they are not necessarily valid predictors of inmate behavior in Canadian penitentiaries today. Gender differences in involvement in misconduct have rarely been examined in CSC institutions although the research suggests that these women may have different needs and risks than their male counterparts (Ruddell & Scott, 2011). As a result, methods of determining custody classification and rehabilitative programs for prisoners should take these differences into consideration. Adjustment to prison and institutional life can impact an individual in a negative or a positive way and recognizing gender differences in prison populations may reduce misconduct. A first step is to determine the prevalence of misconduct in female prison populations, and following that, whether their involvement is significantly different than males.

## **CHAPTER THREE DATA AND METHODOLOGY**

### 3.1 Methodology

This study examines the prison misconduct of all 18,075 federal offenders admitted to the CSC for new sentences between January 1st, 2006 and August 31st, 2009. For each of these offenders, a record of their conduct is collected by prison officials and that information is used in this research to conduct a statistical analysis that identifies the predictors of prison misconduct.

The data used in this study were collected from the Offender Management System (OMS), which is a database that is maintained by the CSC. The CSC data includes details about every offender's demographic characteristics, offence-related information and institutional misconduct from the time of their admission until their release date, as well as for any other re-admission to prison. This database is used to assess adjustment to prison based on demographic characteristics (age, gender, and self-reported race or ethnicity), their conviction status (e.g., whether they had been convicted of a violent offence) and gang membership. A number of other control variables are also considered, including the offender's risks, needs, security levels and prior incarceration. These data were collected as part of another study on the changing ethno-cultural characteristics of Canadian prisoners (Grant, 2011).

There are two reasons for using these data. First, these data are collected on a national level and information is reported on a daily basis from all federal correctional facilities across Canada, therefore it is very comprehensive. Second, the data reveals information about institutional activities including an offender's adjustment to prison

(e.g., whether they became involved in any misconduct offences). Although results from this study date back several years, these analyses are very relevant today as they help us better understand the factors that predict misconduct. For example, Camp, Gaes, Langan, and Saylor (2003) noted that gathering information on the characteristics that are associated with misconduct is desirable knowledge for correctional administrators. Correctional officials can use these findings to inform changes in policies and developing responses that are appropriate to the unmet needs and risks that these offenders pose.

As mentioned in the introduction and literature review, the variables investigated in this study are primarily derived from the importation hypothesis and are associated with the characteristics of the inmates rather than factors in the prison environment that contribute to misconduct. One indicator—the security level of the offender’s placement—is considered to be a proxy indicator of deprivation (e.g., higher security facilities would have higher levels of deprivation) and is used as a statistical control. While data related to the conditions within different facilities would help inform this study, they are not available. Therefore, the effects of other individual or institutional factors are not examined in this study.

### 3.2 Description of the Data

The vast majority of the 18,075 inmates admitted during the three year era between 2006 and 2009 were males (N=16,931) while 1,154 female inmates, representing only 6.3% of the inmate population, were admitted during this time period. In terms of the prisoners’ self-reported ethno-cultural background, Caucasians represented the largest proportion (65.2%), while Aboriginal and African Canadian inmates constituted 18.6%

and 8.3% respectively. Asian inmates (including South Asian, Southeast Asian and Chinese offenders) accounted for 4% of the prison population, and they are also included in the analyses. Collectively, other racial groups only made up 3.8% of those admissions. With respect to the inmate ages, the average age upon admission was 35.04 years. There were 1,726 offenders classified as gang members which represented 9.5% of the admissions during this era. Lastly, offenders who were convicted of violent offences represented roughly half of the inmate population at 47.8%, which is somewhat lower than the prevalence in the larger prison population (Public Safety Canada, 2012a).

### 3.3 Quantitative Research

Prior studies of prison misconduct have used both qualitative and quantitative approaches and each of these approaches has strengths and limitations. The primary goal of this study is to determine the statistical relationships between indicators of importation (e.g., demographic, offence-related and gang status) with prison misconduct for all 18,075 offenders. As such, this approach is more effective than using qualitative approaches, such as case studies that examine specific experiences for a small number of offenders that describe their involvement in misconduct or their adjustment to prison.

One disadvantage of using quantitative methods is that qualitative methods, such as conducting case studies or semi-structured interviews, would enable researchers to gain more detailed and richer information about the reasons for prison misconduct and why (or if) misconduct varies between different facilities. It is unlikely that researchers would be able to gain access to these prisoners as the CSC is restrictive in terms of letting

academic researchers access inmate populations, so a quantitative approach using secondary data is the best option available.

There is considerable precedent for using a quantitative approach to study prison misconduct. Camp and colleagues (2003) criticized using case studies to examine institutional behaviour because of the time to complete such research and that qualitative methodologies fail to capture the individual details which are important to make comparisons between different groups of prisoners from an entire admissions cohort. Thus conducting quantitative research enables researchers to recognize the characteristics of prisoners that may be associated whether with lower or higher levels of institutional misconduct.

### 3.4 Operational Definitions

#### 3.4.1 Dependent Variables: Major and Minor Prison Misconduct

Prisons have strict rules to ensure the safety and security of staff and inmates and the reasons why prisoners violate these rules have been a subject of investigation for decades. Institutional misconduct includes acts that are contrary to institutional rules and regulations, including involvement in violent incidents (Camp et al., 2003). Camp and colleagues (2003) observed that prison rules are restrictive and that prison misconduct involves some acts considered normal behaviour outside prison but characterize institutional life (e.g., eating in non-approved areas or at non-approved times). The CSC defines institutional misconduct in two categories: major and minor misconduct. Major misconduct includes assaults, property offences and using illegal drugs. Minor misconduct, by contrast, includes acts such as being in an unauthorized area or failing a

drug test (see Table 3.1). A review of the data shows that about one-half of all inmates engaged in minor misconduct at some point in their imprisonment and about one-fifth engaged in major misconduct. There is some precedent to using these data in studies of misconduct and Ruddell and Gottschall (2011) analyzed the same data set used in this study to examine the effect of gang membership on prison misconduct in federal institutions.

There are a number of different limitations associated with reporting misconduct offences. Many cases of minor misconduct go undetected although cases of serious misconduct such as an assault that requires hospitalization are more likely to be officially reported. In addition, there may be different thresholds for levying a misconduct charge by the correctional officers. Scholars have raised concerns in regard to the extent of discretion exercised by correctional officers when imposing prison sanctions (Light, 1990; Poole & Regoli, 1980).

Tolerance levels for sanctioning misconduct could also relate to the priorities of the facility in which a prisoner resides. While some administrators emphasized regimented and absolute institutional environment, other support more relaxed and rehabilitative approach (Camp and colleagues, 2003). As there are a large number of facilities that comprise the Canadian prison system ( $n = 57$ ), it is likely that these differences exist. Together, these factors may reduce the validity of these measures of prison misconduct (Ruddell & Gottschall, 2011).

The following sections describe the five key variables examined in this study.

Table 3.1 Categories of Misconduct: Canadian Federal Prisons (N = 18,075)

Misconduct Categories	Percent Inmates Involved
<b><u>Major Misconduct</u></b>	
Fights/assaults/threatens	20.6%
Create/participate in disturbance	
Escape/assist escape	
Using illegal drugs	
 <b><u>Minor Misconduct</u></b>	
Disobeys rule	50.3%
Refuses/leaves work	
Possess unauthorized item	
Fails/refuses urine sample	
Disrespect/abusive toward staff	
Take intoxicant into body	
Possess/deals in contraband	
Damage/destroy	
Disobey order	
Disrespect to provoke violence	
Create/participate to jeopardize security	
Prohibited area	
Possession stolen property	

### 3.4.2 Race

A prisoner's self-declared race at admission is used to define the ethno-cultural status for the offenders. When inmates are admitted to federal prisons, they self-report their ethno-cultural status to the admitting officers. The strength of self-reporting is that prisoners identify their race rather than having it described by the prison staff, which may reduce errors. The limitation is that some prisoners might not accurately report that information. The analyses include the following classifications of ethno-cultural status: White, Aboriginal, African Canadian, Asians (including offenders from South Asia,

South East Asia and China), Latin American inmates (also called Hispanic/Latino/Latina) and Arab/West Asians. Consistent with the definitions used by Statistics Canada, Aboriginal offenders include North American Indian, Métis and Inuit peoples. As noted above, most offenders in the CSC are White, although Aboriginal and African Canadian offenders are over-represented compared to their presence in the general population. Asians, Latin American inmates and “others” constituted less than 10% of the prison population admitted between 2006 and 2009. All of these indicators are coded in a dichotomous manner (e.g., Aboriginal = 0, All others = 1)

### 3.4.3 Gender

The classifications of men and women, as defined by the admitting correctional officer, are used in this study. As reported above, women inmates represent a minority population in Canadian penitentiaries, and they are also coded using dichotomous variables (e.g., Females = 0 and Males = 1).

### 3.4.4 Age

Consistent with prior research, prisoner ages are measured as a continuous variable using their age upon admission. The youngest inmate admitted to these institutions between 2006 and 2009 was 17 years of age whereas the oldest was 86 years old. The average age of the offender population at admission during the era from 2006 to 2009 was 35.04 years.

### 3.4.5 Conviction for a Violent Offence

The misconduct of offenders sentenced to prison for a violent offence will be compared against non-violent offenders, such as those convicted of property or drug offences. Public Safety Canada (2012a) reported that 67% of the offender population was serving sentences for committing violent crimes although the proportion of violent offenders admitted between 2006 and 2009 is slightly lower. Like the age and gender classifications, conviction for a violent offence is examined using a dichotomous variable (e.g., 0 = Non-violent offender and 1 = Violent offender).

### 3.4.6 Gang Membership

The Correctional Service of Canada defines offenders as gang members based on information gathered from law enforcement, documents from courts, reports from prior imprisonment, and/or a self-declaration from the offender that they are a gang member. The Institutional Parole Officer uses this information to identify whether a newly admitted offender is a gang member or otherwise associated with STG. One limitation of this approach is that failing to identify a gang member due to a lack of information will result in classifying these unidentified members as non-gang members (e.g., therefore undercounting the true population of gang members). In the period in which the data were collected 1,726 offenders were identified as gang members. It is worth noting that there may be some variation in the classification of gang members given that these individuals are admitted to different prisons throughout the nation. In this research misconduct committed by gang members will be compared with that of non-gang

members classifying these offenders into two groups (e.g., 0 = non-gang members and 1 = gang members).

### 3.5. Analytical Techniques

Consistent with the approach taken in previous research that has examined predictors of prison misconduct (Cunningham & Sorensen, 2007; Griffin & Hepburn, 2006; Kuanliang, Sorensen & Cunningham, 2008), this study uses logistic regression models to determine the individual-level predictors of major and minor misconduct of prisoners admitted to the CSC between 2006 and 2009. Logistic regression is a commonly used methodological strategy when the dependent variable has only two possible outcomes (Griffin & Hepburn, 2006). In this case, the offenders have either been involved in misconduct or not. The variables examined in this study include both continuous variables (e.g., age at admission, as well as needs, risks and custody level) and dichotomous variables, such as race, gender or conviction for a violent offence.

#### 3.5.1 Procedures:

In this study, the relationships between two dependent variables (major and minor misconduct) and the following independent variables are examined using logistic regression:

- (a) age at admission;
- (b) gender;

- (c) ethno-cultural status (the six largest ethno-cultural groups were treated as independent variables and were dichotomized; Aboriginal, African Canadian, Arab/West Asian, Asian; Latin American and White);
- (d) violent crime at conviction;
- (e) gang membership;
- (f) need level;
- (g) risk level,
- (h) security level, and;
- (i) prior incarceration.

The need, risk, security levels and prior incarceration are included in the analyses to act as statistical controls and those indicators are defined in Chapter Four. The zero-order correlations between the dependent variables and independent variables are calculated before estimating the logistic regression models to determine the degree to which the nine independent and misconduct dependent variables are related. Prior to the analyses a series of diagnostic tests were conducted on all of the variables to identify any characteristics that might influence the analyses (e.g., the presence of skewness).

## CHAPTER FOUR RESULTS

This chapter reports the descriptive statistics for the data examined in this study, describes how the variables were included in the analyses and presents the results of the logistic regression analyses. The process of classifying inmate's level of risk, need and custody are also described. It should be noted that of the control variables included in the regression models, the custody classification is considered as a proxy indicator of the deprivation theory of prison misconduct. This was the sole variable in the dataset that represents a prison's characteristics. The results of the analyses using bivariate correlations and logistic regression model follow the descriptions of the data.

### 4.1 Descriptive Analysis

Between January 1, 2006 and August 31, 2009, the CSC admitted 18,075 offenders and males constituted 93.6 % of those persons, while females represented 6.4% as shown in Table 4.1. The ages of the offenders in this period ranged from 17 to 85 years and the mean was 35.05 years ( $SD=11$ ). Female offenders were slightly younger and their average age was 34.80 years ( $SD=10$ ) while the average age for men was 35.04 years ( $SD=11.4$ ). In terms of ethnic diversity in Canadian federal prisons, the majority of prisoners were Whites representing over 65% of this cohort, followed by Aboriginals (18.6%), African Canadians (8.3%), Asians (3%), Arab/West Asians (1.3%), Latin Americans (0.9%) while other racial groups constituted less than 3% of the federal offender population. Of the 18,075 prisoners admitted, 3,356 were

Aboriginal persons. Almost one-tenth of the federal offender population (n=1,726) were classified as gang members and one-half of the inmates (50.5%) admitted during this era were incarcerated for committing a violent offence. Lastly, 30% of these federal inmates had previously admitted to prison before their admission between 2006 and 2009.

#### 4.2 Prior Sentence

Table 4.1 shows that 30% of the federal inmates admitted between 2006 and 2009 had previously been incarcerated. The prior criminal history of inmates has received increased attention by penologists curious about how their past experiences influence their current prison adjustment (see Drury & DeLisi, 2010). Irwin (1980) hypothesized that inmates who came to prison with juvenile or adult prison experiences to be at a higher risk of violating prison rules and victimizing other prisoners. Several studies of prison misconduct found that having a history of prior incarceration increases the likelihood of future misconduct (Camp et al., 2003; Griffin & Hepburn, 2006; Kuanliang & Sorensen, 2008). Prior incarceration is used in this study as a control variable to examine its influence on major and minor misconduct incidents in Canadian prisons. This indicator is coded as a dichotomous variable (yes= 1, no= 0).

*Table 4.1. Demographic Characteristics of Canadian Federal Prisoners Admitted Between 2006 and 2009 (n=18,075)*

Demographic Characteristics	Categories	Percentage
Gender	Male (n=16,921) Female (n=1,154)	93.6 6.4
Age at Admission	Age (mean) = 35.05, SD=11.3 Range: 17 to 86  Males (mean) = 35.04, SD=11.4 Females (mean) = 34.80, SD=10.0	
Ethnocultural Status/ Race	Whites (n= 11,785) Aboriginal (n= 3,356) Black (n=1,496) Arab/West Asian (n= 230) Asian (East and South) (n= 546) Latin American (n= 163) Other (n= 499)	65.2 18.6 8.3 1.3 3 .9 2.7
Aboriginal	Non Aboriginal (n=14,719) Aboriginal (n=3,356)	81.4 18.6
Gang Membership	Non gang (n=16,349) All gang (n=1,726)	90.5 9.5
Major Offence	Violent offenders (n= 9,078) Non-violent (n=8,899)	50.5 49.5
Prior Sentence	Yes (n= 5458) No (n= 12617)	30.2 69.8

#### 4.3 Risk, Needs, Reintegration Potential, and Custody level:

Table 4.2 shows the classification related information about the inmate population. Classification is used by prison systems to determine housing placements, the rehabilitative programs they will take, and is intended to result in the better

management of inmates. The process of classification takes into consideration the prisoner's criminal history including prior incarceration experiences, their current offence, as well as their personal strengths and weaknesses (Hardyman, Austin, Alexander, Johnson & Tulloch, 2002). In the CSC, four main assessments are considered in the classification of inmates during the Offender Intake Assessment (OIA): his or her level of rehabilitative need, reintegration potential (while this is a component of the inmate classification process this variable was not examined in this study), risk and security classification.

*Table 4.2. Classification of Need, Risk and Security Level (N = 18,075)*

	Categories	Percentage
Need Level	Low (n=1,675)	9.8
	Medium (n=5,584)	32.7
	High (n=9,837)	57.5
Risk Level	Low (n=2,817)	16.5
	Medium (n=7,079)	41.4
	High (n=7,200)	42.1
Custody Rating Scale	Minimum (n=6,483)	36.0
	Medium (n=9,518)	52.9
	High (n=1,999)	11.1

In CSC institutions, inmates are classified as having low, medium or high need. Seven factors are considered when assessing the level of need: employment and education, family and marital, associate and social interaction, substance abuse, community functioning, personal/emotional and attitude (see Blanchette, 1997 for a

detailed explanation of these factors). Prisoners with a higher need will require more rehabilitative interventions including, more intensive treatments and support.

In addition to classifying the level of need, the risk a prisoner poses while in prison is also assessed during the OIA. Risk assessment considers a number of static factors, which are things that cannot be changed, such as the age of an inmate when convicted of their first offence, their criminal history, and severity of their current offence (Motiuk, 1997). Offenders then are categorized into three risk levels: high, medium and low. High-risk offenders are typically placed in facilities with higher security levels (in the analyses higher values represent a greater need and risk). Appendix A reports the indicators that comprise the needs and risks scales as assessed during the OIA.

Lastly, each inmate is assigned a security classification of minimum, medium or maximum after his or her intake assessment. That assessment takes into account his or her prior escapes or attempts, criminal history and their potential threat to institutional and public safety (Fernandez & Neiman, 1998; Ruddell, & Gottschall, 2011). Inmates placed in a minimum security facility generally pose a limited risk to the community and are assessed as having a low risk of escaping. Because the conditions in maximum security are the most restrictive, it is posited that these inmates live in an environment with the highest level of deprivation (In the analyses reported below, minimum security indicates the prison placement associated with the lowest risk offenders and maximum security placement is reserved for those with the highest risk).

Table 4.2 shows that almost 60% of federal offenders admitted between 2006 and 2009 were classified as having high levels of need and less than 10% of them had the lowest level of need. In addition, 42% of these federal offenders had a high risk level, followed by a similar proportion (41.4%) assessed as medium risk, while less than 17% were assessed as low risk. In terms of inmate housing, approximately one half of the federal prison population (52.9%) were assigned to medium security custody, followed by 36% to minimum and about 11% to maximum security units.

#### 4.4 Bivariate Correlations

Appendix B presents the two dependent variables (major and minor misconduct) and the nine independent variables used in this study, their means, standard deviations, and the zero order correlations. The variables of interest were: (a) age at admission, (b) gender, (c) conviction for violent offence, (d) gang membership, (e) ethno-cultural status (White, African Canadian, Aboriginal, Arab/West Asian, Asian and Latin) and the four control variables included in the analyses (levels of need, risk, security and whether an offender had previously been incarcerated).

The zero-order correlations shows that involvement in minor misconduct was moderately associated with involvement in major misconduct ( $r = .304$ )<sup>2</sup>. In other

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<sup>2</sup> Person's  $r$  correlation is a measure of association between two variables and the values of association ranged from minus one which indicates to a perfect negative relationship to plus one which indicates to a perfect positive relationship. A correlation of zero ( $r = 0.0$ ) indicates that there is no association between the variables. Healey (2005) provided an interpretation of correlation strength and values between 0.00 and 0.30 signals a weak association, while values between 0.30 and 0.60 indicate a moderate association, and values above 0.60 are considered to be a strong relationship.

words, offenders who engaged in major misconduct were also likely to have engaged in minor incidents of misconduct as associates or perpetrators. Consistent with expectations, the bivariate analyses demonstrated that major misconduct was significantly associated with most of the demographic indicators. Younger prisoners had a significant although weak relationship with both types of misconduct (major  $r = -.208$ ; minor  $r = -.251$ ). In terms of the relationship between gender and misconduct, this analyses indicated that being female had a stronger association with major misconduct ( $r = -.036$ ) than their male counterparts, but there was a non-significant association between being female and engaging in minor misconduct ( $r = -.012$ ). The analyses also show clear variations between the ethno-cultural groups with respect to their associations with major and minor misconduct. With regards to the relationship between race and major misconduct, Aboriginal prisoners had the strongest association with major misconduct ( $r = .063$ ), followed by African Canadians ( $r = .033$ ). Arab/West Asian and Latin American offenders had the weakest relationships with major misconduct ( $r = -.010$ ). White offenders had a negative association with major misconduct ( $r = -.047$ ). With the exception of the significant association between female inmates and major misconduct, the correlations reported above are consistent with the hypotheses for the study.

A similar pattern was revealed regarding the relationships between the different ethno-cultural groups and involvement in incidents of minor misconduct. African-Canadian offenders had the strongest association with minor misconduct among all of the inmate groups ( $r = .048$ ) followed by Aboriginal offenders ( $r = .032$ ) while Arab/West Asian offenders had a very weak relationship with those violations ( $r = -$

.003). The association between White offenders and minor misconduct remained negative similar to that with major misconduct ( $r = -.044$ ).

Also, consistent with the importation hypothesis was the finding that violent offenders had a positive weak association with both dependent variables (major  $r = .170$ ; minor  $r = .105$ ). The same trend was found for STG affiliated prisoners with both types of misconduct (major  $r = .094$  and minor  $r = .078$ ).

The bivariate correlations also revealed the four control variables were positively related to both types of misconduct. Prisoners who were previously incarcerated had a weak although significant relationship with incidents of misconduct (major  $r = .065$ ; minor  $r = .072$ ). Increased levels of need and risk, variables that were highly correlated with each other, were also significantly associated with both misconduct variables (e.g., Need: major  $r = .193$ , minor  $r = .152$ ; Risk: major  $r = .175$ , minor  $r = .138$ ). Consistent with the deprivation proposition, there were statistically significant, although weak, relationships with major and minor misconduct and placement in maximum security facilities (major  $r = .291$ ; minor  $r = .254$ ).

The correlations between different inmate characteristics and the classification levels of need, risk and custody are shown in Appendix B. For example, Aboriginal offenders were most likely to have higher levels of risk ( $r = .177$ ), need ( $r = .174$ ) and placed in higher security custody ( $r = .116$ ) compared to White prisoners who had lower bivariate associations with those indicators. Furthermore, African Canadian offenders had a significant relationship with placement in maximum security ( $r = .068$ ). In addition, strong relationships exist between prior sentence and high levels of need, risk and custody (Risk  $r = .358$ ; Need  $r = .260$ ; and increased custody level  $r =$

200). Lastly, younger offenders had a moderate association with maximum security classification ( $r = -.353$ ) and with high levels of need ( $r = -.091$ ).

#### 4.5 Results – Multivariate Analyses

##### 4.4.1 Results for Major Misconduct

Table 4.3 demonstrates the results from logistic regression model that examined the influence of inmate characteristics on major prison misconduct. The first model, for major misconduct, was statistically significant,  $X^2(14) = 2352.727, p < .001$ , and the Nagelkerke  $r^2 = .200$  shows a modest model fit. With the exception of the ethno-cultural variables, all the independent variables included in the analyses were statistically significant predictors of involvement in major incidents of misconduct. In regards to the indicators of ethno-cultural status, Asian prisoners were negatively associated with misconduct. Consistent with the hypotheses and previous research, age was found to be a significant predictor of major misconduct ( $p < 0.001$ ) with younger inmates being more likely to be involved in major misconduct than older inmates. Similar findings regarding the inverse relationship between age and prison misconduct has consistently been reported in prior research (Cunningham & Sorensen, 2007; Flanagan, 1983; Goetting & Howsen, 1986; Kuanliang & Sorensen, 2008).

Table 4.3. Logistic Regression Predicting Major Misconduct Among CSC Inmates

Variables in the Equation	$\beta$	SE	Wald	df	Sig.	Exp( $\beta$ )
Gender	-.947	.082	134.346	1	.000	.388
Age at admission	-.049	.002	383.108	1	.000	.952
Aboriginal	-.221	.140	2.507	1	.113	.802
Black	.000	.147	.000	1	1.000	1.000
White	-.061	.134	.204	1	.651	.941
Arab/West Asian	-.186	.233	.640	1	.424	.830
Asian (East and South)	-.414	.196	4.479	1	.034	.661
Latin American	-.436	.267	2.670	1	.102	.646
Violent Crime	.318	.044	51.561	1	.000	1.374
Prior Sentence	.316	.049	40.837	1	.000	1.372
Gang membership	.270	.062	18.733	1	.000	1.310
Need level	.395	.045	77.798	1	.000	1.485
Risk level	.234	.039	35.533	1	.000	1.264
Security level	.715	.038	348.836	1	.000	2.044
<b>Constant</b>	<b>-1.957</b>	<b>.194</b>	<b>101.275</b>	<b>1</b>	<b>.000</b>	<b>.141</b>

With regard to the inmate's gender, the analysis revealed that female inmates were 38% more likely than their male counterparts to engage in major misconduct which is inconsistent with the hypothesis and the findings reported in prior U.S. prison studies (e.g., Camp et al., 2003; Harer & Langan, 2001). As the term major misconduct includes acts of serious incidents of verbal aggression, physical assaults and using weapons, this finding contradicts the results reported in previous research which posits that male inmates are more likely to engage in serious type of misconduct than are females (Kuanliang & Sorensen, 2008). However, this finding also reflects the mixed results found in literature concerning the relationship between gender and prison

misconduct. Similar results were reported by Cao et al. (1997), Gover et al. (2008) and Jiang (2005).

With one exception, the logistic regression models revealed that an inmate's ethno-cultural status was not statistically a significant predictor of misconduct. Inconsistent with expectations, being an Aboriginal or African Canadian offender was not a significant predictor of misconduct. Also being an Arab/West Asian or Latin American inmate was not a statistically significant predictor of involvement in major misconduct. However, Asian inmates had a negative statistically significant relationship with major misconduct ( $p < .034$ ). This finding regarding the weak predictability of the ethno-cultural status of an inmate mirrors the mixed results regarding race and major misconduct in several U.S. studies (see Fisher-Giorlando & Jaing, 2000).

In terms of the relationship between the offender's current offence and prison misconduct, the logistic regression model revealed that conviction for a violent offence was a statistically significant predictor of major misconduct ( $p < .001$ ) with violent offenders being 1.374 times more likely than non-violent offenders to be involved in these incidents and inmates who had previously been imprisoned were 1.372 times more likely to commit incidents of major misconduct ( $p < .001$ ). The findings for conviction for a violent offence and prior term of incarceration are consistent with other studies on prison misconduct (e.g., Cunningham & Sorensen, 2007; Davis, 1996; Griffin & Hepburn, 2006; Kuanliang & Sorensen, 2008).

With regards to the influence of being attached to a gang, consistent with the hypothesis and previous research, being a gang member was a statistically significant predictor of major misconduct ( $p < .001$ ) and these inmates were 1.31 times more likely

to engage in misconduct than non-gang members. This finding is similar to the findings reported in prior studies of prison misconduct (e.g., Cunningham & Sorensen, 2007; Drury & DeLisi, 2011; Gaes et al., 2002; Ruddell & Gottschall, 2011).

All three control variables (need, risk and security level) were statistically significant predictors of major institutional misconduct ( $p < .001$ ). Offenders who were incarcerated in maximum security custody were more than twice as likely to commit major misconduct acts as those placed in lower custody levels. This finding for security level is consistent with Fisher-Giorlando and Jaing's (2000) and Huebner's (2003) studies. Similarly, having a high level of need and risk greatly increased the likelihood of involvement in major disciplinary incidents compared to inmates with lower level of need and risk (1.485 and 1.264 times respectively).

Altogether, the results from these analyses revealed that ethno-cultural status was a poor predictor of major misconduct in Canadian federal prisons between 2006 and 2009. Inconsistent with expectations, male, Aboriginal and African Canadian offenders were not associated with committing more incidents of major misconduct. These findings suggest that higher levels of risk and need are more important in explaining an inmate's adjustment to prison. One unexpected finding was that women offenders were more likely to be involved in major misconduct than their male counterparts.

#### 4.4.2 Results for Minor Misconduct

Table 4.4 presents a parallel series of analyses to those reported in Table 4.3 using minor misconduct as a dependent variable. The model for minor misconduct was also statistically significant  $X^2(14) = 1974, p < .001$ , and the Nagelkerke  $r^2 = .146$  shows a

poorer model fit than the previous model.<sup>3</sup> Consistent with the results presented in Table 4.3 all of the independent variables were statistically significant predictors of minor misconduct except the indicators of ethno-cultural status. Once the other variables were considered, race or ethnicity was not a predictor of involvement in minor misconduct.

Despite the fact that almost half of the inmate population engaged in minor misconduct, being young remained a statistically significant predictor of minor misconduct ( $p < .001$ ). This finding of the inverse relationship between inmate age and minor misconduct is consistent with the hypothesis and prior research (see Blackburn & Trulson, 2010; McShane & Williams, 1989). Being a female offender was also found to be a statistically significant predictor of minor misconduct ( $p < .001$ ) and this finding is consistent with the results reported in Jiang's (2005) study. One limitation of this finding about gender and minor misconduct, however, is that there was no significant bivariate correlation between these two variables. This suggests that the finding of a significant relationship in the multivariate results could be due to a suppression effect (where interactions between variables contributed to a significant relationship). Consequently, being a female offender should not be counted as a significant predictor of minor misconduct.

With regard to the conviction for violent offence, the analyses revealed that this variable was also a statistically significant predictor of incidents of minor misconduct ( $p < .009$ ) with violent offenders being almost 1.1 times more likely to engage in minor misconduct than non-violent offenders. Prior imprisonment was also found to be a

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<sup>3</sup> The Nagelkerke  $r^2$  measures the goodness of fit to show the extent to which the model accurately predicts the outcomes for the dependent variables.

statistically significant predictor of minor misconduct ( $p < .001$ ) and these inmates were nearly 1.43 times more likely to commit minor misconduct acts than inmates serving their first prison term. In addition, being a gang member was found to be a statistically significant predictor of minor rule violations ( $p < .004$ ) and they were 1.18 times more likely to be involved in minor misconduct than non-gang members.

*Table 4.4. Logistic Regression Model Predicting Minor Misconduct Among CSC Inmates*

<b>Variables in the Equation</b>	<b>B</b>	<b>SE</b>	<b>Wald</b>	<b>df</b>	<b>Sig.</b>	<b>Exp(β)</b>
Gender	-.479	.069	47.579	1	.000	.619
Age at admission	-.044	.002	617.881	1	.000	.957
Aboriginal	-.203	.109	3.508	1	.061	.816
Black	.182	.116	2.474	1	.116	1.200
White	.008	.103	.006	1	.936	1.008
Arab/West Asian	.084	.176	.230		.632	1.088
Asian	.150	.139	1.169	1	.280	1.162
Latin American	-.279	.202	1.912	1	.167	.757
Violent Crime	.093	.036	6.889	1	.009	1.098
Prior Sentence	.362	.041	78.285	1	.000	1.436
Gang membership	.166	.057	8.524	1	.004	1.181
Need level	.142	.032	19.492	1	.000	1.153
Risk level	.158	.031	25.834	1	.000	1.171
Security level	.427	.031	187.299	1	.000	1.532
<b>Constant</b>	<b>.395</b>	<b>.149</b>	<b>7.085</b>	<b>1</b>	<b>.008</b>	<b>1.485</b>

Parallel with the previous results, these logistic regression analyses also revealed that an inmate's need, risk and custody rating levels were statistically significant predictors of minor disciplinary rules ( $p < .001$ ). Being classified as having a high need,

for example, increased the probability of engaging in minor misconduct by 1.15 times. Similarly, inmates who were rated as having higher risk were 1.17 times more likely to violate minor prison rules than their lower risk counterparts. Lastly, maximum security inmates were 1.53 times more likely to engage in minor disciplinary misconduct than lower security inmates. That finding provides some empirical support for the deprivation hypothesis.

#### 4.4.3. Summary of the Analyses

In order to better understand the predictors of prison misconduct a number of logistic regression models were estimated. The results revealed that the model predicting major misconduct had a better model fit, although the results of both series of analyses revealed that almost all the variables included in the analyses were statistically significant predictors of misconduct. Inconsistent with the hypotheses and prior U.S. research, the ethno-cultural status of the Canadian inmates was a poor predictor of involvement in major or minor rule violations. This suggests that other individual-level factors exert a more powerful influence on prison misconduct.

Consistent with prior studies younger inmates were more likely to engage in misconduct than their older counterparts. In addition, conviction for a violent offence and gang membership were also statistically significant predictors of major and minor misconduct which is consistent with the hypotheses. One unanticipated finding was that being a female increased the likelihood of being involved in both types of misconduct, although the relationship between gender and minor misconduct is due to a statistical interaction rather than a true relationship. Lastly, the analyses revealed that all the four

control variables, prior sentence and need, risk and security levels were significantly associated with both major and minor institutional misconduct.

As this study uses data on misconduct for more than 18,000 offenders, which is considered to be a large data set, a parallel series of analyses were conducted, using a random sample of 25% of the total number of offenders. These analyses were estimated to determine whether the results were consistent across the two data sets. The results from this supplementary series of analyses were identical to those reported above as there were no relevant differences in the findings. This held true for both the major and minor misconduct variables.

The findings reported in the analyses presented above lend empirical support to the importation explanation of prison misconduct for offenders admitted to CSC prisons between 2006 and 2009. In addition, these results also show the influence of the inmate's security level as offenders placed in higher security facilities were statistically associated with both types of institutional misconduct. This finding for the security level provides empirical support to the deprivation theoretical perspective.

## **CHAPTER FIVE**

### **IMPLICATIONS FOR POLICY, PRACTICE AND RESEARCH**

#### 5. 1 Summary of the Study

This thesis examined the predictors of misconduct in Canadian prisons. The first chapter provided background information about Canadian correctional systems, including institutions operated by the Correctional Service of Canada and the challenges created by prisoner misconduct for correctional staff and other inmates. The negative impact of institutional misconduct was discussed to provide a context for this research. Furthermore, the importance of examining factors that are associated with prison misconduct was described. Chapter one also listed the six hypotheses examined in this research and outlined the structure of the study.

Chapter Two provided a review of the extant literature about prison misconduct and described the two main theoretical perspectives. The theoretical approaches introduced in this chapter were the deprivation and importation models. Importation theory was introduced as the primary proposition examined in this study due to data availability. One limitation of this study is that with the exception of the security level all other variables were based on individual prisoner characteristics. The second Chapter also provided a comprehensive review of prior studies regarding the relationships between prison misconduct and the five variables of interest in the study: age, gender, race, conviction for a violent offence and gang membership.

Chapter Three introduced the methodological approach used in this thesis and explained why a quantitative approach was selected and specifically how logistic regression analyses enables researchers to study dependent variables that have a

dichotomous outcome (e.g., whether a prisoner engaged in misconduct or not). The third chapter also provided a review of the secondary data used in this study, including detailed information about the cohort of 18,075 offenders admitted to Canadian prisons between 2006 and 2009. Operational definitions of the five independent variables of concern and the two dependent variables (major and minor prison misconduct) were provided. A discussion of the limitations of using a quantitative approach to answer the hypotheses was also included.

The fourth chapter began with a description of the data used in this study and also described the four control variables, which were the inmate's level of need, risk, level of security and prior incarceration. The results of the zero-order correlations were also presented and the relationships between the independent and dependent variables described. After presenting the results of the correlations, the results from logistic regression models that examined the predictors of major and minor prison misconduct were reported.

The results indicated that incidents of major misconduct were less likely to occur than acts of minor misconduct. While approximately 20% of the offender population admitted between 2006 and 2009 engaged in major prison misconduct, about one-half of them committed acts of minor misconduct. Overall, the results showed that most of the variables considered in the analyses had statistically significant relationships with prison misconduct. Inconsistent with expectations all but one of the indicators of ethno-cultural status was a statistically significant predictor of involvement in major and minor institutional misconduct. The sole exception to that observation was that Asian inmates had a negative association with misconduct. As a result, this research shows that an

offender's needs and risk levels along with their custody level are the most important predictors of misconduct.

The following sections describe the implications that this study has for future research examining adjustment to the prison environment. The implications for extending the two theoretical perspectives reviewed in Chapter Two as well as the limitations of this study are described. Lastly, policy implications will also be discussed in light of the findings revealed in this study.

## 5.2 Theoretical Implications and Results Discussion

Two theoretical perspectives of prison misconduct, the deprivation and importation propositions, were laid out in Chapter Two. Both models are useful in understanding misconduct despite the different approaches from which theorists see the problem. While the focus of deprivation theory is on a prison's characteristics such as the number of inmates, length of sentence and degree of freedom (Sykes, 1958; Huebner, 2003), the focus of the importation approach is that inmate characteristics such as age, criminal history or conviction for a violent offence were thought to have a greater influence on the prison environment (Irwin & Cressey, 1962). Although it is desirable to examine measures of both models, this research was limited by the fact that the secondary data used in the analyses reported information about inmates rather than indicators of the prison environment, such as crowding, noise, levels of violence or the amenities available to the inmates. Therefore, while these data enabled a test of the importation theory, only one indicator (security level) was related to the deprivation hypothesis.

Consistent with the findings from research that has examined the relationships between age and different indicators of prison misconduct (Blackburn & Trulson, 2010; Cunningham & Sorensen, 2007; Flanagan, 1983; Goetting & Howsen, 1986; McShane & Williams, 1989), this research found that inmates who were younger had a greater involvement in both major and minor misconduct. The race or ethnicity of an offender, on the other hand, was not a statistically significant predictor of violating prison rules. The finding of an insignificant relationship between the different indicators of race and prison adjustment reflects the mixed results found in the correctional literature (e.g., Finn, 1995; Griffin & Hepburn, 2006). This finding is also inconsistent with the observations from ethnographic studies reporting that African American inmates were more likely to be convicted of breaking prison rules than their White counterparts (Steiner & Wooldredge, 2009).

Despite the fact that female offenders account for a small proportion of the 2006-2009 admissions cohort, being female was a statistically significant predictor of major misconduct examined in this study. Similar results were reported by Cao and colleagues (1997), Gover et al. (2008), Jiang (2005) and Drury and DeLisi (2010). The greater involvement of female inmates in rule violations compared to male inmates is inconsistent with prior criminological research that describes the disproportionate involvement in criminal activities by males (Cernkovich & Giordano, 2008; Steffensmeier & Allan, 1996) as well as most U.S. correctional studies that reported that female inmates were less likely to break prison rules (e.g., Craddock, 1996; Griffin & Hepburn, 2006; Harer & Longan, 2001; Kuanliang & Sorensen, 2008). It is possible that factors other than gender influenced a greater involvement in misconduct. Female

correctional facilities in Canada tend to be much smaller than male institutions and it is plausible that misconduct is more likely to be detected in these smaller facilities.

Another inmate characteristic examined in this study was gang membership and consistent with prior research (e.g., Drury & DeLisi, 2011; Gaes et al., 2002; Ruddell & Gottschall, 2011) that variable was a statistically significant predictor of major and minor institutional rule violations. These results reflect the difficulty that correctional staff and administrators face in dealing with this group given that over one-tenth of the federal inmate population is classified as gang-involved. In their investigation of different types of gang types in Canadian federal prisons, Ruddell and Gottschall (2011) noted that in spite of considerable variations between the different STG types, all prison gangs shared characteristics that result in high levels of institutional misconduct and they speculated that their gang affiliations may weaken their potential for a successful community re-entry.

Conviction for violent offence in the current sentence and having a history of prior incarceration were significantly associated with both types of rule violations and these results are similar to those found in several prior prison misconduct studies (e.g., Cunningham & Sorensen, 2007; Davis, 1996; Griffin & Hepburn, 2006; Kuanliang & Sorensen, 2008). The fact that conviction for a violent offence predicts involvement in misconduct raises some concern as 67% of Canadian prisoners were incarcerated for committing violent crimes (Public Safety Canada, 2012a). Yet, the term “violent offence” includes several different criminal acts into one category and the impact of individual offences is unknown. Prior research, for example, showed that a conviction for first-

degree murder was associated with less misconduct (Drury & DeLisi, 2011; Cunningham & Sorensen, 2006, 2007; Sorensen & Cunningham, 2010).

Lastly, inmates who were classified as having high levels of need and risk had a significant association with both types of prison rule violation. Although these were initially included as control variables, they had the strongest association with misconduct. That finding suggests that responding to the risks that these inmates pose and addressing their unmet needs may be a successful strategy to reduce misconduct.

The only variable that was available to evaluate the deprivation approach was the inmate's security rating and that indicator was a statistically significant predictor of prison misconduct. Moreover, the analyses showed that the custody level was among the strongest predictors of misconduct, a finding consistent with the prior research (see Gover et al., 2008; Harer & Steffensmeier, 1996; Huebner, 2003; Steiner & Wooldredge, 2008; Worrall & Morris, 2011). These results lend credibility to the assessments conducted during the offender's intake in terms of placing these offenders in higher security facilities.

Altogether these results reported above lend support to the importation model as an explanation for inmate misconduct in Canadian prisons. Being young, female, having a current conviction for a violent offence, being a gang member, having been previously incarcerated and having high levels of need and risk were all statistically significant predictors of major and minor misconduct. Inconsistent with expectations, an inmate's ethno-cultural status was not a statistically relevant indicator of explaining prison misconduct, with the exception of the finding that Asian offenders had significantly less involvement in misconduct compared to all other offenders.

On the other hand, the security level variable, which is an indicator of prison characteristics and the deprivation proposition, was found to be a statistically significant predictor of both types of misconduct. That is, despite of the higher level of physical restrictions on the movements of higher security prisons, imprisonment in these settings resulted in more involvement in prison rule violations.

The importance of this study stems from the fact that there has been a lack of empirical examination of how Canadian inmates adapt to the prison environment compared to a large body of U.S. research. The goal of this study was to evaluate whether inmate characteristics predicted prison misconduct. Addressing the hypotheses in this thesis advances our knowledge of the issue and may facilitate better prison management.

### 5.3 Study Limitations

Several limitations of the current study should be highlighted. First, despite the usefulness of using the data that were collected for another study, these data did not include information that would help us understand whether the prison environment influenced offender behavior. In their study of prison performance, Camp, Gaes, Langan and Saylor (2003) concluded that both individual characteristics and prison variables are essential in understanding prison misconduct. Lacking such variables, the researcher was only able to explore the relationships between inmate characteristics and prison misconduct from the importation theoretical perspective. Therefore, there is a need to develop a methodology that enables researchers in the future to examine the prison conditions or other variables connected with the ways that a prison population is managed. For example, one of the controversial issues in Canadian correctional systems

today is whether increased admissions in recent years that has led to double-bunking is associated with misconduct (see McKi, 2012). It is important to note, however, that the CSC does not currently collect that information in their OMS.

There are also limitations associated with reporting misconduct incidents. First, many incidents of misconduct go unrecorded either because inmates hesitate to report their victimization or because some incidents are minor, meaning that they might not be detected by correctional officers (e.g., an inmate being in an unauthorized area). Second, officers have considerable discretion and they may differ in laying institutional charges. As a result, inmates may not be equally treated for committing the same rule violation. This variation could exist between the different CSC institutions or within a single institution (e.g., different tolerance levels of the correctional officers and inconsistency in levying a charge) and as a result researchers would not be aware of such differences as all federal inmates across Canada were treated in the analyses as one population.

In terms of the generalizability of the findings, the results from this study should have acceptable external validity for Canadian prisons, due to the large population considered and the fact that offender admissions for three years were considered. At the same time, the Canadian prison population is different than in other nations (e.g., a high proportion of life imprisoned inmates and a higher proportion of violent offenders), so the findings might not be generalizable to prisons in other nations. Furthermore, the study might not be valid with respect to provincial and territorial correctional centers as the characteristics of these inmates differ from federal prisons (e.g., fewer violent offenders and persons serving shorter sentences).

#### 5.4 Future Research

With regard to the finding that women offenders had a higher involvement in misconduct, there might be several factors that could contribute to this finding and investigators should examine this relationship more closely. Future research should investigate characteristics that are distinctive to women in these institutions. Almost one-third (31%) of women inmates in Canadian federal institution suffered from mental illness compared to 15% of male inmates (Correctional Investigator of Canada, 2012, p. 6). It is also likely that the small proportion of female offenders (6% in CSC custody) results in placing them in smaller sized prisons compared to male facilities and this may result in a greater number of incidents being discovered as these women may be more closely watched compared to their male counterparts. Another possible explanation is that women offenders are distributed in six correctional facilities across Canada (CSC, 2012d) and they travel a greater distance from their homes and families than male offenders, a factor that may reduce family visits and increase their pains of imprisonment.

Investigators conducting misconduct research should also consider further disaggregating variables examined in the study and one example is the conviction for a violent offence. It may be fruitful to investigate the relationships between misconduct and different classifications of violent offences such as homicide, assault, domestic violence, armed robbery or sexual assault, rather than a composite variable. Prior research has revealed that inmates convicted of different types of violent crime pose different degrees of risk in their adjustment to prison (Sorensen & Cunningham, 2010). Future researchers may also consider disaggregating incidents of prison misconduct to variables such as

assault, threatening, possessing weapons and using drugs or alcohol. These variables were not available in the data used for these analyses.

This research showed that security placement was strong predictor of misconduct. As a result, investigators should obtain data that capture additional measures of the deprivation proposition. Such conditions would include crowding, access to amenities, access to rehabilitative and work programs or levels of social support. Results from research that considers the impact of prison factors on rule-breaking behaviours would have useful policy implications (see Camp et al., 2003). One potentially useful strategy is to develop an indicator that measures the correctional environment in every facility.

## 5. 5 Policy Implications

The findings of this study also have the potential to inform correctional practices or interventions that would result in improving safety through better risk classification assessments. Moreover, correctional administrators can benefit from such research as they can channel their resources by targeting the risks and needs of federal offenders. Ultimately, reducing acts of prison misconduct may contribute to an environment that is more conducive to rehabilitative programs, which may help integrate offenders both in the prison and ultimately the community. That in turn would increase public safety by reducing recidivism. In fact, a large number of ex-prisoners return to the community every year. Public Safety Canada (2012a) reported that 51% of CSC offenders are sentenced for less than five years and 25% were serving sentences between two and three years.

The results reported in this research may help correctional administrators better understand the relationships between inmate characteristics and prison rule violations. Federal prisons hold offenders after their conviction for committing serious crimes and many of them represent a genuine threat to the public safety (Knox, 2000). Housing them in correctional facilities creates challenges for successful correctional management. Therefore, providing the groups that cause the most prison misconduct with correctional programs that respond to their unmet needs and risks will help increase prison functioning and safety. For the goal of reducing incidents of misconduct, this research suggests that those who are younger, female, violent offenders and gang members should be the starting point of any intervention. Responding to the unmet needs of inmates who have previously been incarcerated as well as those classified as having high levels of need and risk should also be taken into consideration.

One of the challenges correctional administrators must confront is addressing the needs and risk of women offenders. Although not examined in this study, the high rate of mental illness is a well-documented issue among Canadian female prisoners (Correctional Investigator of Canada, 2012). In an assessment of all female inmates incarcerated in a CSC facility, 52% of women inmates suffered from posttraumatic stress disorder, 70% from depression and 83% had an antisocial personality disorder (Derkzen, Booth, McConnell & Taylor, 2013). These psychological conditions may worsen their adjustment to the prison environment and be an obstacle to their successful reintegration unless adequate treatment programs and consistent rehabilitative resources are provided to them.

Another inmate groups in need of additional interventions are gang members who were more likely than their non-gang counterparts to engage in both types of misconduct. STG members constitute a threat to the safety of correctional facilities as well as public safety upon their release (Guay, 2012; Winterdyk & Ruddell, 2010). Evaluations of programs that encourage gang-affiliated prisoners to leave the gang by changing their lifestyles and adopting pro-social values have revealed positive results (Public Safety Canada, 2012b). One specific policy-recommendation emerging from this study is that STG membership should be considered in the development of security rating instruments. At present gang membership is not on the CSC security-rating instrument, and this study shows that these offenders are at higher risk of engaging in misconduct than other inmates. Most U.S. prison systems currently consider gang membership in their security assessments (Winterdyk & Ruddell, 2010).

## 5.6 Summary and Conclusion

This study examined a number of inmate characteristics to determine their influence on major and minor prison misconduct in Canadian penitentiaries. The hypotheses were primarily drawn from importation theory, although the sole indicator of prison deprivation, the inmate's prison placement, was strongly associated with misconduct. Altogether, the results from this study further validate the importation theory suggesting that inmate traits and prior experiences are important predictors of inmate behavior in CSC institutions. The result for an offender's prison placement (their security rating) also lends some empirical support to the deprivation model as this variable was statistically significant predictor of both types of misconduct.

Future research should extend the investigation to include other inmate characteristics such as mental illness as well as variables that represent prison conditions to expand the test of deprivation perspective. With regards to implications for policy, the findings reported in this study have the potential for the development of assessment instruments and correctional programs and practices. Ultimately, by advancing our understanding of prison misconduct, we can work toward safer prisons and enhanced public safety when inmates return to the community.

## **APPENDIX A**

### **Indicators of Education and Employment:**

- 1) Finds learning difficult
- 2) Has learning difficulties or disabilities
- 3) Has physical problems which interfere with learning
- 4) Has memory problems
- 5) Has physical problems which interfere with work
- 6) Being unemployed
- 7) Has unstable job history
- 8) Has been laid off or fired from work
- 9) Being poor
- 10) Has difficulty with co-workers and supervisors

### **Indicators of Marital and Family relationships:**

- 1) Childhood lacked family ties
- 2) Mother or Father absent during childhood
- 3) Parents relationship dysfunctional during childhood
- 4) Spousal abuse during childhood
- 5) Family members involved in crime
- 6) Money problems affect relationship (s) past/present
- 7) Sexual problems affect relationship (s) past/present
- 8) Has been a victim of spousal abuse
- 9) Has no parenting responsibilities
- 10) Unable to control the child's behavior appropriately
- 11) Has been arrested for child abuse
- 12) Has completed a marital/family intervention program

### **Indicators of Associates/Social Interaction:**

- 1) Socially Isolated
- 2) Associates with Substance abusers

- 3) Many criminal acquaintances
- 4) Has been affiliated with a gang
- 5) Resides in a criminogenic area
- 6) Unattached to any community groups
- 7) Often victimized in Social relations
- 8) Has difficulty communicating with others

**Indicators of Substance Abuse (Alcohol and drugs):**

- 1) Abuses alcohol or drugs
- 2) Began drinking or using drugs at an early age
- 3) Drinks or uses drugs on a regular basis
- 4) Has combined the use of alcohol and drugs
- 5) Drinks or uses drugs to excess leisure time
- 6) Drinks or uses drugs to excess social situations
- 7) Drinking or using drugs interferes with employment
- 8) Drinking or using drugs interferes with marital/family relations
- 9) Drinking or using drugs interferes with social relations
- 10) Drinking or/and using drugs has resulted in law violations
- 11) Drinking or abusing drugs interferes with health
- 12) Has completed substance abuse treatment

**Community Functioning Indicators:**

- 1) Has unstable accommodation
- 2) Residence is poorly maintained
- 3) Has dental problems
- 4) Has outstanding debts
- 5) Has no bank account
- 6) Has participated in a community skills program
- 7) Has completed a community skills program

**Personal/Emotional Orientation Indicators:**

- 1) Feels especially Self-important
- 2) Ethnicity is problematic
- 3) Religion is problematic
- 4) Goal setting is unrealistic
- 5) Has disregard for others
- 6) Impulsive
- 7) Aggressive
- 8) Copes with stress poorly
- 9) Gambling is problematic
- 10) Has low frustration tolerance

**Attitude Indicators:**

- 1) Negative towards the law, police, courts and corrections
- 2) Negative towards rehabilitation
- 3) Employment, Marital/family relations have no value
- 4) Values substance abuse
- 5) Ethnically intolerant
- 6) Intolerant of other religions
- 7) Supportive of domestic violence
- 8) Lacks direction

## APPENDIX B

### CORRELATIONS, MEANS AND STANDARD DEVIATIONS: PRISON MISCONDUCT

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Major misconduct	-----															
2 Minor misconduct	.304*	-----														
3 Gender	-.036*	-.012	-----													
4 Age at admission	-.208*	-.251	.006	-----												
5 Aboriginal	.063*	.032*	-.059*	-.111*	-----											
6 Black	.033*	.048*	.010	-.119*	-.143*	-----										
7 White	-.047*	-.044	.042*	.184*	-.654*	-.411	-----									
8 Arab/West Asian	-.010	-.003	.020	-.026	-.054*	-.034	-.155	-----								
9 Asian	-.039*	-.009	.017	-.015	-.084*	-.053	-.242	-.020	---							
10 Latin American	-.010	-.009	.008	-.031	-.46*	-.029	-.131	-.011	-.017	-----						
11 Prior sentence	.062*	.072*	.090*	.228*	.080*	-.081	.056	-.051	-.089	-.051	-----					
12 Violent crime	.170*	.105*	.066*	-.058*	.135*	.002	-.063	-.004	-.072	.007	-.012	-----				
13 Gang member	.094*	.078*	.045*	-.137*	.140*	.059*	-.152*	.003	.012	.011	.028	-.020	----			
14 Need level	.193*	.152*	.073*	-.091*	.174*	-.050	-.007	-.056	-.139	-.042	.260*	.302*	.066*	----		
15 Risk level	.175*	.138*	.151*	.015	.177*	-.018	-.041	-.039	-.123	-.033	.358*	.309*	.080*	.620*	-	
16 Security level	.291*	.254*	.105*	-.353	.116*	.068*	-.109*	-.011	-.035	.010	.200*	.291*	.141*	.356*	.36	--
Mean	.21	.50	.94	35.04	.1857	.0828	.6520	.0127	.030	.0090	.30	.55	.0955	2.48	2.2	1.7
S Deviation	.405	.500	.244	11.304	.38885	.2755	.47635	.11209	.171	.0945	.459	.498	.2939	.667	.72	.64

\* $p < .05$

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