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The Impact of Staff Sexual Misconduct on U.S. Federal Prison Inmates' Mental and Physical Health

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This is to certify that the doctoral study by

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MS, Kasetsart University, 2015

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Doctoral Study Submitted in Partial Fulfillment

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Doctor of Public Health

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Abstract

Prison staff sexual misconduct is an ongoing issue in the United States, but little is known about how inmates' perceptions of staff sexual misconduct influence their mental and physical health. The purpose of this quantitative research study was to examine the relationship between staff sexual misconduct with federal prison inmates and prisoner mental health and rates of injury, and why inmates are not reporting sexual misconduct encounters. Ecological theory provided the theoretical foundation. The three research questions were designed to examine the relationships between nonconsensual sexual misconduct of prison inmates with prison staff and (a) serious mental health illnesses and (b) injuries experienced from nonconsensual sex with staff and (c) not reporting sexual contact with staff. Data from Part 2 of the 2011-2012 National Inmate Survey (N = 38,251) were analyzed. Binary logistic regression, multinomial logistic regression, and chi-square analysis were used to analyze the data. The results showed a statistically significant ($p < .001$) and predictive relationship between inmates' sexual experience with prison staff and serious mental health illness; results also showed that nonconsensual sex with staff predicted inmates' injuries and inmates not reporting sexual victimization. The study's implications for positive social change include providing additional knowledge to administrators that could inform the development of formal rules or policies about sexual relationships between prison staff and inmates that may delineate what is and is not tolerable staff behavior. Additionally, this study could have an impact on public health practice by highlighting the need for further studies on prison staff sexual misconduct, especially in state and federal prisons in the United States.

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Dedication

This study is dedicated to my mother, Somjai Chuchuai, and my husband, Robbin Grover. It is because of them I was able to complete such an unimaginable task. When I was in Thailand, I graduated with my master's degree, and my mother was the only one who supported me. I was here in the United States as an immigrant, unaware of American ways of life and trying to make my future better for my mother. I met my husband here in the United States, and he encouraged me to pursue higher education, and he taught me how to read and write correctly, which has been so much of a struggle during this journey. I felt I was nothing but a burden to my husband, but he always reminded me otherwise. Although I have been a full-time employee since the first day in school, I worked my way through the educational system with only the help of a few to guide me. I pushed beyond the limits of my barriers and excelled in all I did. I ensured that my success story laid the groundwork and inspired those who face trials similar to mine. This work is dedicated to my mother and my husband as a testimony that both of you gave me the strength and support to complete this journey.

Another important person, who believed in me and supported me in fulfilling my aspiration to achieve a doctoral degree and make this academic journey possible. I, therefore, dedicate this doctoral study with a special feeling of gratitude to Dr. Joseph Francis Robare and his family.

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Section 1: Foundation of the Study and Literature Review

Introduction

Prison staff sexual misconduct is an ongoing issue in the United States. Staff members have the power to impose punishments that affect everything from the length of inmates' sentences to their conditions of confinement. Inmates may feel unable to say no to sexual advances, and this lack of punishment may deter inmates from reporting abuse (Belitz, 2018). The 2003 Prison Rape Elimination Act (PREA, 2003) mandated that U.S. correctional systems regulate and reduce staff-on-inmate sexual misconduct in correctional facilities. Under PREA, prison system officials are expected to utilize a standard definition of prison rape to collect data to understand better sexual misconduct in correctional settings. This law also requires the Bureau of Justice Statistics (BJS) to manage sexual assault information in youth and adult correctional facilities. Notably, PREA's creation raised concerns that included the underreporting of incidents by victims, threats to facility security, insufficient staff training, and the potential danger to the public once abused inmates return to the community (PREA, 2003).

Each state in the United States differs in how authorities define sexual interactions between staff and inmates. Terms range from *sexual assault* to *sexual misconduct* to *unlawful sexual relations*, but most states have unique words that are not used in other states (Kowalski et al., 2020). Even with the establishment of PREA, many state correctional system officials do not collect sufficient information regarding sexual violence to inform efforts to prevent or investigate it (Fedock et al., 2016). The study of sexuality in prison has been mostly dismissed, inadequately investigated, and negatively

portrayed (Pardue et al., 2011). Consequently, literature on convict sexuality is incomplete. However, when examining the issue of sexuality in prison, the entire range of human behaviors that it encompasses arguably warrants consideration (Pardue et al., 2011). In addition, sex in prison may exist both in the convict population and among those incarcerated and those who staff facilities (Pardue et al., 2011). Therefore, examining this spectrum may offer a necessary and valuable foundation for fully explaining sexual practices behind prison walls.

Over the last decade, research has demonstrated that a substantial number of U.S. inmates have been victimized by prison staff. For example, the National Inmate Survey, 2008-2009 (NIS-2) reported that 2.8% of state and federal inmates and 2% of jail inmates had sexual contact with staff (Beck et al., 2010). In the report updated for 2011 to 2012, 3.2% of jail inmates and 4% of prison inmates reported they had been the victims of sexual assault by either staff or other inmates (Beck et al., 2013). The same report from 2011 to 2012 stated that 5.4% of prison inmates reported being sexually victimized by prison staff within the first year of admission (Beck et al., 2013). As these statistics document, many correctional officers have sexual interactions with inmates.

These interactions are ongoing amid a decline in the U.S. prison population. The number of inmates under the jurisdiction of state and federal correctional authorities declined by .9% from 1,613,803 in 2010 to 1,598,780 in 2011 (Carson & Sabol, 2012). Moreover, the inmate population in the United States in 2012 declined to 1,570,400 at year's end (Carson & Golinelli, 2014). The incidence of prison misconduct in U.S. correctional facilities still affects many individuals, in spite of the reduction of the overall

inmate population. This issue is compounded because of conflicting definitions of staff-on-inmate sexual misconduct. Kowalski et al. (2020) sought to better understand how states within the United States vary in their statute definitions of what constitutes correctional officer sexual misconduct. Kowalski et al. also examined how state correctional systems penalize this misconduct. Kowalski et al. found that states varied in terms of when they passed laws criminalizing correctional officer sexual misconduct and how misconduct is punished. Kowalski et al. found differences in how sexual misconduct is punished and the wide variation in language used to describe correctional officer sexual misconduct across states. Some states specifically describe misconduct, whereas others offer a very general definition. For example, many states fell into these categories: (a) misconduct in office, (b) criminal sexual penetration, (c) rape, and (d) sexual exploitation. Additionally, 24% of states labeled such behavior as sexual assault, 20% as sexual misconduct or custodial sexual misconduct, 8% as sexual conduct, 8% as sexual contact, and 8% as sexual relations or unlawful sexual relations (Kowalski et al., 2020). As these statistics illustrate, the definition of staff sexual misconduct is widely varying in U.S. correctional facilities.

Problem Statement

Sexual abuse, primarily staff sexual misconduct, is an epidemic in U.S. prisons. Prison sexuality is shaped by multiple social life levels determined by mainstream culture and amplified by the idiosyncratic subculture of correctional confinement (Pardue et al., 2011). U.S. Department of Justice data show that around 149,200 and 209,400 incidents of sexual victimization occur each year in correctional facilities (Kubiak et al., 2018), but

less than 10% of these incidents are reported (Kubiak et al., 2017). The reason for not reporting is that inmates fear prison staff as the key reason (Kubiak et al., 2017). However, imprisonment may be a specifically difficult environment to report sexual victimization, mainly if a prison staff member performed the sexual acts (Kubiak et al., 2017). Physical injuries like heart problems or asthma may merely serve as outward manifestations of psychological harm. Nevertheless, some courts are reticent to acknowledge that male inmates can suffer with psychological damage when sexually abused and assaulted by prison staff (Coker, 2014). Thus, it is essential to understand what factors influence the reporting of sexual assault during incarceration.

There is a problem in jails and prisons across the United States involving sexual misconduct, with approximately 88,500 inmates sexually victimized from 2008 to 2009 (Mazza, 2012), roughly 5 times the rate reported by administrators (Sapien, 2014). Even if these incidents are underreported, a comparison of the sexual abuse rates of inmates and free persons underscores the severity of the problem. The 2013 National Crime Victimization Survey, conducted by the BJS, found that the rate of rape and sexual abuse among free persons was 1.1 per 1,000 persons (Truman & Langton, 2015). An inmate's likelihood of becoming a victim of sexual abuse is roughly 30 times higher than that of a person on the outside (Truman & Langton, 2015). Although PREA was passed in 2003, fully applying the criterion in correctional settings was not mandated until 2014 (Kubiak et al., 2017). Sexual misconduct inflicted on an inmate by prison staff would always violate contemporary decency standards because it is illegal and not justified by a prison-management purpose (Coker, 2014). The coercive environment of imprisonment and the

position of power prison staff enjoy over inmates suggest that inmates cannot consent to sexual contact with prison staff (Coker, 2014).

Little is known about how inmates' perceptions of staff sexual misconduct influence mental health illnesses, mental health treatment or seeking behavior, and injuries from sex during incarceration. Despite the impact on their mental health and behavior, many inmates may not want to seek treatment (Ratkalkar & Atkin-Plunk, 2020). Inmates' choice to avoid seeking needed mental health treatment can have consequences that include worsening mental health symptoms, lack of accurate diagnoses and treatment, and substance abuse, all known risk factors for recidivism (Ratkalkar & Atkin-Plunk, 2020). Furthermore, leaving inmates' mental health issues unaddressed may affect resourced community health systems upon release (Brinkley-Rubinstein, 2013). Shermer and Sudo (2017) aimed to know how the correctional facility impacts the culture of enclosed prison sexual victimization. Shermer and Sudo found that fearing sexual victimization during imprisonment was likely among male inmates with mental health illnesses.

Sexual victims in correctional settings may be constrained by the reporting procedure (Kubiak et al., 2017). Prison inmates may be afraid that no one will believe them due to being a criminal (Culley, 2012). Kubiak et al. (2017) explored incarcerated women's experiences of staff sexual misconduct and examined the predictors of reporting those experiences to prison staff. Kubiak et al. found six predictors that are associated with inmates' reports of sexual victimization, including age at the time of the sexual acts, physical injury, multiple incidents, misconduct with several victims, the year of the

incident began, and how many years inmates have left in prison. Therefore, reducing staff sexual misconduct might make safety a priority for prison inmates. Also, it may be helpful to re-estimate the levels and categories of exclusion within correctional settings.

Purpose of the Study

The purpose of this quantitative research study was to examine the relationship between prison staff sexual misconduct with prison inmates and serious mental illness indications, injury during sexual contact with facility staff, and reasons for not reporting sexual contact with staff.

Research Questions and Hypotheses

I evaluated the three research questions (RQs) using the secondary data set from the National Inmate Survey, 2011-2012 (NIS-3; Bureau of Justice Statistics [BJS], 2021). The NIS-3 is part of the National Prison Rape Statistics Program, which gathers reports from the administrative register of sexual victimization directly from victims through surveys of inmates in prisons and jails (Beck, 2015b). The inmate surveys contain a wide range of data beyond measures of sexual victimization, including items useful for describing inmates held in state and federal prisons or local jails and their confinement experiences (Beck, 2015b). The BJS completed the NIS-3 between February 2011 and May 2012 (Beck, 2015b). The RQs in this study required the use of quantitative analysis to examine the relationships between the independent and dependent variables, as follows:

- RQ1: prison inmates and sexual misconduct with prison staff (the independent variable) and mental health illness (the dependent variable)

- RQ2: nonconsensual sexual misconduct between prison inmates and prison staff (the independent variable) and prison inmates' injuries (the dependent variable)

- RQ3: nonconsensual sexual misconduct between prison inmates and prison staff (the independent variable) and the reasons prison inmates are not reporting (the dependent variable)

In RQ3, there were five reasons for not reporting sexual contact with staff, which included (a) feared punishment by staff, (b) embarrassed or ashamed that it happened, (c) did not think the staff would investigate, (d) sex or sexual contact was consensual, and (e) did not want the facility staff person to get in trouble.

The RQs and hypotheses were as follows:

RQ1: What is the relationship between inmate's sexual experience with prison staff and serious mental health illness indicated?

$H_0 1$: There is no relationship between inmate's sexual experience with prison staff and serious mental health illness indicated.

$H_a 1$: There is a relationship between inmate's sexual experience with prison staff and serious mental health illness indicated.

RQ2: What is the relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur?

$H_0 2$: There is no relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur.

H_a2: There is a relationship between nonconsensual sexual misconduct of prison

inmates with prison staff and injuries that occur.

RQ3: What is the relationship between nonconsensual sexual misconduct of

prison inmates with prison staff and not reporting?

H_03: There is no relationship between nonconsensual sexual misconduct of prison

inmates with prison staff and not reporting.

H_a3: There is a relationship between nonconsensual sexual misconduct of prison

inmates with prison staff and not reporting.

Appendix A shows the correspondence of the study's RQs and the NIS-3 data set

question items.

Conceptual Framework

The conceptual framework that grounded this study was ecological theory.

Bronfenbrenner (1977) developed the ecological theory in the 1970s on the conception of

the environment and the dynamic relation between person and situation implied.

Bronfenbrenner believed that a person's development was affected by everything in their

surrounding environment. I used the ecological theory to understand the dynamic

interrelations between individual- and systems-level factors that influence the reporting

of sexual victimization. The ecological theory assumes that population groups have

unique qualities that provide a different interaction with the environment that influences

individuals' health decisions (Beckfield et al., 2015), in this case, reporting of sexual

victimization by prison staff. Despite the PREA recommendations, sexual assault persists

in U.S. prisons and jails, with only 8% of inmates who experience sexual assault

reporting their victimization (Kubiak et al., 2018). The problem of sexual victimization

during incarceration is widespread and common, with a compounded problem of low

reporting rates (Kubiak et al., 2018). In this study, I focused on gaps in the existing

research about what factors influence whether adult victims in incarcerated systems

report that they have been sexually victimized by prison staff.

I also used the ecological theory to illuminate a variety of factors influencing the

reporting of sexual victimization during incarceration. These factors include the role of

individual-level behavior, assault characteristics, the unique aspects and processes of the

prison system, and the social stigma surrounding individuals involved in the

criminal/legal system (Kubiak et al., 2018). The ecological theory's central assumption is

that, to achieve positive changes in health attitudes and behavior, it is necessary to

combine individual-level and environmental-level interventions (Ingram et al., 2016).

As these ecological frameworks illustrate, reporting is influenced by context. For

example, sexual assault in the military and college campuses has raised awareness about

the challenges embedded within specific social locations (Turchik & Wilson, 2010).

When sexual victimization occurs during incarceration or detention, reporting is likely

influenced by many factors, including the complex institutional and policy factors unique

to imprisonment that limit an individual's access to social support and community

resources (Kubiak et al., 2018). Unlike the situation that college students and military

personnel face, victims who are sexually assaulted while in jail or prison do not have

access to essential support services because they are incarcerated (Kubiak et al., 2018).

The stigma associated with criminal offender status may negatively affect the perceived

credibility of the victim. Institutional aspects such as the corporation or culture further affects individual health behavior relating to self-care (Beckfield et al., 2015). Thus, the unique context of prisons and jails requires an ecological framework attuned to that system's processes and characteristics.

There has not been a comprehensive analysis of barriers and facilitators of reporting within correctional settings that considers all levels of the ecological model (Kubiak et al., 2018). Existing studies focused on specific subsets of reporting issues (Garland & Wilson, 2013) or issues identified within inmate correspondence (Tewksbury & Mahoney, 2009). In every level of social ecology, significant gaps exist regarding understanding the reporting of sexual victimization in prisons. Given the low rates of reporting sexual victimization in U.S. jails and prisons, research is needed that illuminates both barriers and facilitators of this process, including individual-level decision-making, the role of social supports, prison-based policies, and actual practices about reporting (Kubiak et al., 2018). Moreover, research is needed that attends to the interactions across levels and factors to understand better reporting methods and how to facilitate better reporting within prisons. Given the multitude of gaps, utilizing ecological theory to guide reviews of this literature and expanding research may support the development of a purposeful research agenda to improve the reporting of sexual victimization in prisons (Kubiak et al., 2018). Therefore, I used the ecological theory to focus my attention on the relationship between inmates and the prison environment.

Nature of the Study

I engaged in quantitative research and a secondary data analysis with a correlational design to evaluate the sexual misconduct of prison staff and inmates in the NIS-3, 2011-2012 survey. I examined the relationship between prison staff's sexual misconduct with prison inmates resulting in inmates' mental health illness, injuries, and lack of misconduct reporting. A quantitative approach is appropriate for situations where systematic, standardized comparisons are needed (Bowling, 2002). The use of statistical methods in the quantitative analysis means that the study is often considered reliable generally due to larger sample sizes instead of a qualitative approach (Bowling, 2002; Creswell, 2013).

There were two independent variables for answering the three RQs to measure the impact of prison staff sexual misconduct (sex with prison staff and nonconsensual sex with prison staff). Those two independent variables predicted three dependent variables (serious mental health illness indicated and injured when having sexual contact with facility staff). The final dependent variable contained sub-questions of reasons for not reporting sexual contact with staff. Correlational designs do not describe causation but relationships between variables that may occur concurrently, unlike experimental techniques (Krause, 2018). The correlational design was the most appropriate research method for this study compared to other research methods because my purpose was to find the relationships between the predictor and outcome variables.

The targeted population included inmates held in adult facilities at the time of the survey and past time spent in disciplinary or administrative segregation or solitary

confinement. The NIS-3 comprised two questionnaires: (a) a survey of sexual

victimization and (b) a survey of mental and physical health, past drug and alcohol use,

and treatment for substance abuse. Inmates were randomly assigned to receive one of the

questionnaires. At the time of the interview, the content of the survey remained unknown

to facility staff and the interviewers (Beck et al., 2013). The NIS-3 survey was

administered to 91,177 inmates aged 18 or older, including 38,251 inmates in 233 state

and federal prisons and 52,926 inmates in 358 jails (Beck, 2015b). The results were

nationally representative of prison and jail inmates at the time of the survey.

Literature Search Strategy

I conducted the literature review for this study using various electronic databases

that I accessed through the Walden University Library. I also obtained literature from

websites. I applied a search strategy to identify the most relevant published material to

address the RQs. The search strategy I used provided a means of efficiently identifying

the information necessary to carry out the literature review on the subject of prison staff

sexual misconduct. I used two information vendors ProQuest and EBSCOhost. Six online

databases in this study are PubMed, ScholarWorks, SAGE, ScienceDirect, Taylor &

Francis, and Springer Link. Three other resources, including websites of the BJS and

Inter-University Consortium for Political and Social Research (ICPSR) and the search

engine Google Scholar, were also explored to retrieve relevant information.

Planning a strategy carefully increases the probability of retrieving information

more significant to the researched area (Ogunjirin, 2020), and searching online databases

using keywords saves time and effort (Lee, 2019). A keyword-based search has its

advantages because it involves creating a list of articles according to relevance, authors, date, and publication. This literature search strategy included (a) a carefully worded RQ, (b) a list of keywords and synonyms with alternative spellings, (c) a list of databases for data search, (d) formulation of inclusion and exclusion criteria, (e) selection of a time frame within which the literature of interest should have been published, and (f) a precise and methodical way of working and recording the literature search progress (Ogunjirin, 2020). After formulating the RQs, I used various search terms to explore the topics of interest for this study. Keywords and concepts for the literature search included *prisoners*, *inmates*, *facility staff*, *correctional officer*, *misconduct*, *sexual violence*, *sexual behavior*, *sexual activities*, *sexual assault*, *sexual abuse*, *sexual harassment*, *sexual violence*, *prison*, *correctional facility*, *jails*, and *PREA*. I then conducted a search using several databases storing pertinent publications. To be included, studies had to fit the following criteria: (a) be available in full-text, (b) be published in English, (c) use the inmate population as the study sample, (d) relate to prison staff sexual misconduct for inmate population, (e) examine the inmate population's sexual victimization and health risks, and (f) be peer-reviewed.

Literature Related to Key Variables and/or Concepts

The literature review for this study includes the following: (a) peer-reviewed studies, (b) studies on the association between the prison staff sexual misconduct on prison inmates, (c) studies published in English, and (d) studies published in all regions of the world.

Overview of the Inmate Population

Incarceration is painful for inmates, even without the threat or experience of being sexually victimized. This threat is real as prison staff's sexual victimization of inmates is a reality in some correctional institutions (National Institute of Corrections, 1996). In a report prepared for 2011 to 2012, 3.2% of jail inmates and 4% of prison inmates in the United States revealed that they were victims of sexual assault by either staff or other inmates (Beck et al., 2013). Inmates may report their experiences of sexual victimization for a range of specific purposes, including seeking housing unit changes (e.g., to gain safety from another inmate), protection from abusive correctional staff, and access to physical and mental health services (Kubiak et al., 2018).

Overview of Sexual Misconduct in Correctional Settings

Providing safety through regulation is one of the main aspects of the daily work of prison staff. However, both inmates and staff commonly face highly adverse experiences in correctional facilities (Vogel et al., 2020). Sexual misconduct can be defined as any of the following: (a) sexual assault, (b) attempts to commit sexual assault, (c) sexual abuse, (d) sexual coercion, (e) sexual harassment, sexual contact, (f) obscenity, (g) unreasonable invasion of privacy, (h) behavior that is sexual, and (i) conversations suggesting a romantic or sexual relationship (Beck, 2015a; Kowalski et al., 2020; Simpson et al., 2016). Staff sexual misconduct is any behavior or act that is in any way sexual in nature and directed toward an offender by a correctional officer, vendor, contractor, or any person that is a representative of the facility (Beck, 2015a; Kowalski et al., 2020). Sexual abuse by correctional staff against inmates violates multiple international human rights'

standards yet, despite federal policy efforts, remains a concern in the United States (Fedock et al., 2016).

Furthermore, indirect or direct exposure to threats, violence, and the perception of not being safe in an environment can be harmful to inmates (Vogel et al., 2020). Isolation and correctional staff's inability to exercise discretion may contribute to an environment more favorable to staff's unethical behavior. If the culture is negative, then organizational crises may result (Mei et al., 2017). In this way, having an institution with a high fear of rape can negatively affect the prison's safety and security. Since the passage of PREA in 2003, the prevalence of sexual violence in U.S. prisons has become a focus of policy makers and researchers (Browne et al., 2015). The rate of sexual victimization in prison is even higher for vulnerable prison populations, including gay and bisexual inmates (Beck et al., 2013) and those with a history of child sexual abuse (Wolff et al., 2007).

In addition to being sexually victimized in prison (Warren et al., 2009), gay and bisexual inmates and inmates with a history of child sexual abuse perceived rape to be a significant threat of imprisonment at higher rates than nonvulnerable prison populations (Ratkalkar & Atkin-Plunk, 2020). Unwilling sexual contact with a staff person is defined as a "result of physical force, pressure, or offers of special favors or privilege" (Beck et al., 2010, p. 9). Furthermore, staff sexual misconduct is a broad category that includes victimization as defined in this manner. It also includes invasion of privacy, indecent exposure, sexually offensive or invasive touching by staff, and requests for sexual acts (Kubiak et al., 2018). Sexual contact between inmates and staff is, under most state law,

illegal, regardless of indicated consent, due to the inherent power differentials in these two social positions (Kubiak et al., 2018).

Mental Illnesses Among Prison Inmates

Mental illness and female status are signals of vulnerability inside the prison. Prison staff appear willing to use physical and sexual violence against people with mental illness because of their more discordant behavior (Just Detention International, 2013) and are more able to exert their influence because of the inmate's greater vulnerability (less able to fight back or resist). Likewise, prison staff appear willing and able to use their power for a sexual advantage over more vulnerable people either due to their mental illness or female status (Caravaca Sánchez & Wolff, 2016).

One large population-based study utilizing multivariate analysis reported male inmates who recounted a mental illness and prior sexual advances across social ecology levels. Significant research gaps exist in understanding barriers and facilitators to reporting sexual victimization in prisons (Kubiak et al., 2018). Inmates' sexual health is regularly excluded from community sexual health and behavioral surveys based on household or telephone sampling, representing an under-researched population (Simpson et al., 2016). In prison, sexual violence can have devastating mental, physical, and sexual health consequences for individuals and the communities and loved ones to which most inmates return (Simpson et al., 2016). Regardless of the sexual abuse history, inmates are more likely to experience mental anguish if they fear sexual victimization (Ratkalkar & Atkin-Plunk, 2020). Being exposed to sexual abuse (witnessing or knowing about

incidents of sexual violence) is associated with inmates' fear of being victimized in prison (Worley et al., 2010).

Previous studies suggest that prison conditions are harsh; inmates experience physical and sexual victimization and adverse psychological outcomes. For instance, anxiety, depression, post-traumatic stress disorder, health-related concerns (Boxer et al., 2009; Walsh et al., 2012; Zweig et al., 2015), and attempted suicide while incarcerated (Encrenaz et al., 2014). The consequences of perceiving rape as a threat in prison are vast for correctional staff and incarcerated individuals' well-being. Higher prison rape awareness may contribute to violence among inmates (Worley et al., 2010) and negative mental health consequences for inmates, including increased fear, psychological distress, chronic anxiety, depression, and suicidal ideation related to the stress of targeted sexual aggression (Haney, 2012).

PREA requires that at-risk inmates, including gay and bisexual inmates, be screened for appropriate housing and services upon their first entrance to prison and jail. A remarkable number of gay and bisexual inmates are more likely to be afraid of sexual victimization. They need mental health treatment, and prison staff should seek treatment for this in-danger population (Ratkalkar & Atkin-Plunk, 2020).

Caravaca Sánchez and Wolff (2016) estimated self-reported physical and sexual violence rates, both inmate-on-inmate and staff-on-inmate, for people with and without mental illnesses residing in Spanish prisons. Caravaca Sánchez and Wolff found that 39.1% of male inmates with any mental illness reported being physically victimized either by an inmate or staff member compared with 16.4% of inmates without a mental

illness. For female inmates, 29.7% of the population with a mental illness reported being physically victimized either by an inmate or staff compared to 17.5% of inmates without a mental illness. Females with a mental illness were also significantly more likely to report being physically or sexually victimized by either a staff member or inmate than female inmates without a mental illness. Caravaca Sánchez and Wolff concluded that mental illness was significantly associated with any physical or sexual victimization, especially for staff-on-inmate victimization while incarcerated. Therefore, these findings support the research hypothesis that prison is particularly unsafe for people with mental illnesses.

Injuries and Sexual Violence Among Prison Inmates

From 2011 to 2012, about 3.2% of inmates surveyed in jails and 4% in prisons reported sexual abuse in the previous year of incarceration, increasing incidence among high-risk cohorts (Beck et al., 2013; Beck et al., 2014). Using these rates, and 740,000 person-years of jail and 1,460,000 person-years of prison, estimate that 23,680 new cases of sexual assault occur in jails and 58,400 in prisons each year (Ford et al., 2017). Siegler et al. (2017) reported that overall rates of traumatic brain injury in the New York City jail system are more than 3,100 per 100,00 person-years. Because there is no standard or mandated reporting of injuries in jails and prisons (except for those resulting in death or those relating to sexual assault), head trauma's national burden during incarceration is unclear (Kaba et al., 2014). National injury surveillance does not exist for the incarcerated. However, New York City's correctional health service has established a comprehensive injury surveillance system, reporting an injury rate of 736 cases per 1,000

person-years. Of these, 66% (486 per 1,000 person-years) were violent or intentional

(Ford et al., 2017; Ludwig et al., 2012). Using this rate as a national proxy, Ludwig et al.

estimated that 58,400 new intentional injuries occur in jail and 70,956 in prison each

year.

According to Siegler et al. (2017), researchers modified the injury documentation

in the New York City jail-based electronic health record in June 2012. During the 42

months of the analysis, 10,286 head trauma incidents occurred in the NYC jail system.

Mild traumatic brain injury (mTBI) occurred in 1,507 of these instances (15%). Groups

represented in the head trauma and mTBI cohort included males, people under the age of

23, and people who accessed mental health services. The two most frequent causes of

head trauma and mTBI were inmate fights and force by the jail security staff (Siegler et

al., 2017).

In the retrospective review of 500 sexual assault victims aged 18 years or older,

McLean et al. (2011) found that 72% had extragenital injuries. The rate of extragenital

injury was significantly higher than that of genital injury, 23% (McLean et al., 2011). In

some cases, the detection of general body injury was more than twice as standard as

detecting genito-anal injury in sexual assault victims (Sugar et al., 2004). While the

extragenital injury was a common finding in sexual assault victims, it is also possible for

victims to be absent from any extragenital injuries. In other cases, 52% of patients

alleging sexual assault were absent of extragenital and genital injury (Palmer et al.,

2004). In addition, the wide range and prevalence of extragenital injury suggest that

sexual assault victims can present with no injuries. Failure to protect people from harm

while incarcerated creates physical and sexual assault victims who require medical and psychological treatment. Inmates who spent more than 5years in prison were over 4 times as likely to report sexual coercion and over 3 times as likely to report threats of sexual force than those who had spent less than 1 year in prison (Simpson et al., 2016).

Trauma related to sexual victimization and fear of assault is central to the experience of gay and bisexual men both in correctional settings (Browne et al., 2015) and in the community (Cramer et al., 2012). Gay and bisexual inmates are often relegated to low power positions and are more likely to be perceived as targets for sexual victimization than their heterosexual counterparts. In addition, officers and inmates may perceive men who are victims of sexual assault as homosexual regardless of their identified orientation, contributing to their loss of social power (Fleisher & Krienert, 2006). Thus, sexual victimization alone can increase an inmate's risk of being targeted by future perpetrators.

Reports of Sexual Victimization by Prison Inmates

Most research on sexual violence has focused on women's experiences and has occurred in a general community context. Very little research has focused on men as victims, but both men and women are in reality. Correctional officers may demonstrate less concern about sexual violence in prison among male inmates than among female inmates (Beck & Harrison, 2006). Beck et al. (2013) found that male inmates in correctional facilities have a slightly higher likelihood of being victimized. Simpson et al. (2016) used the Sexual Health and Attitudes of Australian Prisoners (SHAAP) survey data to examine inmates' characteristics and other factors associated with sexual coercion

among men in Australian prisons. Simpson et al. (2016) found that men who identify as
nonheterosexual were over 7 times more likely to report having experienced sexual
coercion in prison and more than twice as likely to having experienced a threat of sexual
force compared with their heterosexual counterparts. Simpson et al. also found that those
who reported unwanted sexual activity were 8 times as likely to report experiences of
sexual coercion in prison compared to those who had not reported unwanted sexual
activity outside prison.

From 2009 to 2011, female staff committed sexual misconduct with male inmates
in over half of substantiated cases (Beck et al., 2014). Even more concerning, Beck
(2015a) reported that the 2014 findings show female staff perpetrators of sexual
misconduct are overrepresented in prisons, jails, and juvenile facilities. In addition,
heterosexual inmates, incarcerated persons who identify as lesbian, gay, bisexual, and
transgender (LGBT) have a higher chance of being victimized by correctional staff (Beck
et al., 2013). Specifically, 1.7% of heterosexual jail inmates report being victimized by
staff (Beck et al., 2013), whereas 4.3% of LGBT inmates report victimization. For
prisons, 2.1% of heterosexual inmates and 5.4% of LGBT inmates experience
victimization. Across the United States, Malkin and DeJong's (2018) survey results
revealed that almost half of the states have published PREA-consistent policy protections
for transgender inmates, and several where the policies conflicted with federal law.

A survey by the Centers for Disease Control and Prevention (2010) found that
44% of women and 23% of men within the United States have experienced some form of
sexual victimization (Stemple & Meyer, 2014). For victims of sexual assault, the process

of reporting the incident and seeking help is an intensely emotional experience, fraught with uncertainty and challenges (Ullman, 2010). All across social-ecological levels, significant gaps in research exist in terms of understanding barriers and facilitators to reporting sexual assault in prisons (Kubiak et al., 2018). Two extensive epidemiological-based surveys on sexual violence in United States prisons found that 4% of inmates reported incidents of sexual victimization (Beck et al., 2013; Wolff et al., 2007). These challenges are significantly heightened within the prison, jail, and other correctional detention facilities. The individual is without access to outside supports and dependent upon correctional personnel within the institutional system for assistance in reporting and gaining access to help.

The rate of sexual victimization in the United States general population over 12 months was estimated at 1.3%. By contrast, rates of sexual victimization are 3 to 5 times higher for prison populations (Truman et al., 2013). Wolff et al. (2009), using self-reported data from over 7,800 inmates across 14 prisons during 6 months, estimated rates of 6% for sexual violence (including inappropriate sexual contact and sexual assault). A large-scale study by Beck et al. (2013) reported rates of 4% over 12 months or since admission to the facility if less than 12 months. In these studies, sexual victimization was defined as nonconsensual sexual activities (oral, anal, or vaginal penetration) and sexually inappropriate touching. Prison-based research has estimated prevalence rates ranging from 5.8 to 21% of inmates experiencing physical assault over a 6 to 12 month period of incarceration (Kuo et al., 2014; Teasdale et al., 2016; Wolff et al., 2009). Several studies have explored factors predicting prison victimization. Rates of inmate

victimization are predicted by inmate gender, age, race/ethnicity, education, and marital status (Kuo et al., 2014; Teasdale et al., 2016; Wolff et al., 2008; Wooldredge & Steiner, 2012). Research also suggests that victimization rates vary by perpetrator type (staff or inmate). For example, Wolff et al. (2009) found that inmate-on-inmate physical or sexual victimization was more common among female than male inmates (32.3% versus 22.3%), while staff-on-inmate physical or sexual victimization was higher among male than female inmates (28% versus 12.8%).

Many inmates have been subjected to sexual abuse by correctional staff. For instance, in 2005, 14.1% of substantiated cases of staff sexual misconduct across federal, state, and local correctional facilities in the United States involved pressure or an abuse of power (Beck & Harrison, 2006). From 2009 to 2011, about 9.6% of substantiated staff sexual misconduct cases resulted from pressure or abuse of power (Beck et al., 2014). Sexual violence or misconduct may occur through manipulation, such as a quid pro quo bargain between two participants with unequal power. Compliance occurs, for instance, when inmates reluctantly engage in sexual acts with staff to gain protection, out of fear, or to avoid other victimization. Finally, there is coercion, such as covert or overt pressure to have a sexual relationship (Pardue et al., 2011).

Prison staff is responsible for enforcing correctional policies and keeping inmates safe from sexual violence and other threats (Connor & Tewksbury, 2013). Most research continues to focus on how actual prison rapes impact inmates' fear. However, Fleisher and Krienert (2006) suggested there is value in understanding how inmates are impacted by the perception of rape and how different aspects of the environment can increase a

person's fear. For example, inmate interviews uncovered that staff sometimes frighten

new inmates with discussions of rape during orientation and indicated that sexual

violence is a part of prison life or their punishment, which impacted the inmates' anxiety

level (Fleisher & Krienert, 2006). In addition, staff may directly threaten inmates or

perpetrate sexual violence in prisons (Beck et al., 2013). This is because prison staff play

a key role in the screening process of inmates for housing and protection upon admission

under PREA guidelines. The prison staff either prevent at-risk inmates by assigning them

to protective housing (Connor & Tewksbury, 2013) or threaten inmates by setting

housing with known sexual predators (Fleisher & Krienert, 2006). Fear of rape is

consequently a driving force that shapes social behaviors in prison. Inmates who fear

sexual violence may avoid areas outside their cells associated with rape, such as showers,

dorms, and common locations (Connor & Tewksbury, 2013). In addition, incarcerated

men who fear rape may engage in harmful behavior, such as participating in protective

pairing, in which an inmate exchanges sexual favors for the protection of another inmate

(Trammell, 2011).

Conclusion of the Literature Review

Sexual relationships between inmates and prison staff should not happen. One of

the most significant pieces of legislation regarding correctional settings' sexual

misconduct was the passage of the PREA in 2003. Even with the establishment of PREA,

many state correctional systems do not collect sufficient information regarding sexual

violence to inform efforts to prevent or investigate it (Fedock et al., 2016). Rape and

sexual assault among inmates are likely to be grossly underreported (Steiner &

Wooldredge, 2014). In addition to the reasons for not reporting on the outside, such as fear of retaliation, embarrassment, self-blaming, not believing the act was rape or sexual assault. Inmates also may not report because they are worried about the possible repercussions they may experience, including segregation or transfer to another prison, done in the name of safety (Miller, 2010). Kowalski et al. (2020) utilized statutory analysis to document how the staff's sexual misconduct is defined and punished across state correctional systems. The most notable finding is that although the District of Columbia and the 50 states of the United States have statutes designed to protect inmates from being sexually victimized by correctional staff, they are still far from being protected from sexual victimization (Kowalski et al., 2020).

Reducing sexual issues in correctional settings is a public health priority. Sex in the community is more likely to be consensual, whereas sex behind bars can be a mutually desired activity or coercive. Consensual sex still occurs in prisons, yet contemporary research is troubled by a lack of conformity in measurement across the few empirical studies focused on consensual prison sex (Borchert, 2016). Inmates are found to be violated by prison staff, and the sexual misconduct rule may be issued harsh penalties (Borchert, 2016). However, it should be the same penalties for prison staff who committed sexual misconduct. Therefore, this study focused on prison staff's sexual misconduct with prison inmates and the potential result that they will suffer mental health illness, injuries, and lack of misconduct reporting.

Definitions

Injury occurrence from sexual victimization: Extragenital injury is the most common finding in sexual assault victims during the forensic examination; the percentage of sexual assault victims documented with at least one extragenital injury ranged from 46% to 82% (Maguire et al., 2009; McLean et al., 2011).

Inmate: Any person incarcerated or detained in a prison or jail (DeComo, 2013).

Mental health: The foundation for emotions, thinking, communication, learning, resilience, and self-esteem (World Health Organization [WHO], 2018). Mental health is also key to relationships, personal and emotional well-being, and contributing to community and society (WHO, 2018).

Mental illnesses: Health conditions involving changes in emotion, thinking, or behavior (WHO, 2018).

Nonconsensual sexual acts: The most severe form of victimization, such as touching between the penis and the vulva; the penis and the anus; and the mouth and the penis, vulva, or anus (BJS, n.d.). Nonconsensual sexual acts also include excavating another person's anus or genital area, either by a hand, finger, or equipment (BJS, n.d.).

Prison: Longer-term facilities than jails that are overseen by a state or the federal government and that typically hold felons and persons with sentences of more than a year; however, the sentence length may vary by state (BJS, n.d.). Six states (Connecticut, Rhode Island, Vermont, Delaware, Alaska, and Hawaii) have an integrated correctional system that combines jails and prisons. A small number of private prisons are facilities

run by private prison corporations whose services and beds are contracted out by state or federal governments (BJS, n.d.; DeComo, 2013).

Prison staff: A person responsible for the care, custody, and control of individuals who have been arrested and are awaiting trial while on remand or who have been convicted of a crime and sentenced to serve time in a prison, jail, or similar form of secure custody (Costello et al., 2015). Staff members, who are known as correctional, detention, or penal officers, are also responsible for the facility's safety and security (Costello et al., 2015).

Prisoners: Inmates confined to long-term facilities run by state or federal government or private agencies. They are typically felons who have received a sentence of incarceration of 1 year or more (BJS, n.d.). The sentence length may vary by state because a few states have one integrated prison system in which both prison and jail inmates are confined in the same types of facilities. The prison population lives in a specific place, and they are deprived of liberty against their will. This can be by confinement, captivity, or forcible restraint (BJS, n.d.).

Rape: Forced sexual intercourse, including both psychological coercion and physical force (BJS, n.d.). Forced sexual intercourse means vaginal, anal, or oral penetration by the offender(s). This category also includes incidents where the penetration is from a foreign object, such as a bottle, and includes attempted rape, male and female victims, and both heterosexual and same-sex rape (BJS, n.d.). Attempted rape includes verbal threats of rape (BJS, n.d.).

Sexual abuse: Abuse that can take many forms in prison. Legal terms and definitions differ from one country to another and, within many countries, from one region to another. Just Detention International (2015) defined sexual abuse in prison as any unwanted sexual contact, including threats by other inmates, or any sexual contact at all by a staff member, with or without penetration, regardless of the gender of the perpetrator or victim. Sexual abuse happens in women's and men's prisons, and perpetrators may be of the same or opposite gender as their victims (DeComo, 2013; Just Detention International, 2015).

Sexual assault: A wide range of victimizations that are distinct from rape or attempted rape. These crimes include attacks or attempted attacks generally involving unwanted sexual contact between victim and offender (BJS, n.d.). Sexual assaults may or may not involve the application of force and may include grabbing or fondling (BJS, n.d.). Sexual assault also includes verbal threats (BJS, n.d.).

Sexual victimization: Any forced sexual activity with inmates, such as nonconsensual sexual acts, noncontact unwanted sexual experiences, unwanted sexual contact, sexual coercion, forcible rape, alcohol- or drug-facilitated assault or rape, and all other sexual activities with facility staff (BJS, n.d.; Pinchevsky et al., 2020).

Staff-on-inmate sexual victimization: Either consensual or nonconsensual sexual misconduct on an inmate by staff (BJS, n.d.). Staff consists of an employee, volunteer, contractor, official visitor, or other organization dealers; family, friends, and other visitors are not defined as staff in BJS (n.d.) data.

Staff sexual misconduct: Consensual or nonconsensual sexual activities on an inmate by staff, including romantic relationships (BJS, n.d.). Sexual activities include touching; attempted or threatened sex or requests to have sex; indecent exposure; the takeover of inmates' privacy; or staff watching prisoners for sexual reasons unconnected to authority duties or as a sexual reward (BJS, n.d.).

Assumptions

In conducting the study, I had several assumptions that determined the structure and contributed to the formulated method and research approach. The initial assumption that the inquiry was based on is that inmates have poorer health regarding sexual misconduct by prison staff (Kowalski et al., 2020). In particular, I assumed that this population had a low report on sexual victimization because of several reasons. Considering that various levels of social ecology are incorporated, this illuminated a variety of factors influencing the reporting of sexual victimization during incarceration. These factors include the role of individual-level behavior, assault characteristics, the unique aspects and processes of the prison system, and the social stigma surrounding individuals involved in the criminal/legal system (Kubiak et al., 2018).

Another assumption that guided this study was that inmates have poorer mental health associated with physical and sexual victimization during incarceration (see Caravaca Sánchez & Wolff, 2016; Ratkalkar & Atkin-Plunk, 2020). Inmates with mental illness had higher rates of staff-on-inmate sexual victimization (see Beck et al., 2013). Despite the impact that fear of victimization has on mental health and behavior, many inmates are reluctant to seek treatment (Ratkalkar & Atkin-Plunk, 2020). Fear of rape,

especially for those at risk of victimization (gay and bisexual), is a factor that can

critically affect inmates' psychological well-being (Ratkalkar & Atkin-Plunk, 2020). The

PREA also recognizes this problem, which contains several protections for transgender

inmates; specifically, the prison administration understands critical definitions of

"transgender." Those inmates are provided with the appropriate classification and

housing, and they are kept safe from victimization by other inmates and staff (Malkin &

DeJong, 2018). The severity of the sexual victimization, whether the offender used a

weapon, or whether the victim sustained severe injuries. Also, whether the victim

received medical treatment for the incident has been found to increase the probability that

the victimization will be reported (Fowler et al., 2010). This may indicate a need for

public health services and the correctional facility to facilitate and reduce the inmates'

health risks.

Prison sexual victimization leads to inmates' inability to have an excellent

physical and mental health status. Such individuals may be unable to report staff sexual

misconduct for several reasons (Ratkalkar & Atkin-Plunk, 2020). Another significant

mental health issue among prison populations was previously found in various research

samples. Caravaca Sánchez and Wolff (2016) identified that the prevalence of physical

and sexual victimization is higher among male and female inmates with a mental illness

than those without a mental illness. Shermer and Sudo (2017) also supported this finding;

the most significant risk factors for being frightened of being a sexual victim during

imprisonment are males with a mental health disorder and overheard sexual victimization

within the prison. I hypothesized a relationship between inmate's sexual experience with

prison staff and severe mental health illness indicated, nonconsensual sexual misconduct with injuries that occur, and reasons for not reporting sexual victimization.

Scope and Delimitations

I sought to understand and limit establishing the relationships between prison staff sexual misconduct on inmates' mental health issues, injuries from sexual victimization, and reasons that inmates are not reporting. I assessed the relationship between three dependent variables: (a) serious mental illness indications, (b) injuries during sexual contact with facility staff, and (c) reasons for not reporting sexual contact with staff. There were two independent variables: (a) sex with staff and (b) nonconsensual sex with staff. I used secondary dataset analysis of NIS-3, inmates' sexual victimization by prison staff, which included variables of interest. This study was guided by a conceptual framework adapted from Bronfenbrenner's (1977) ecological theory that provided a framework to theorize, inform, and research the interaction between individual and system-level factors. The ecological theory was used to focus my attention on the relationship between inmates and the prison environment.

Limitations

This study's limitation is that I used the NIS-3 2011-2012 data set, the most recent national-level data set that limits data on changes that may have been implemented since this data was collected. However, the BJS, ICPSR, and the National Archive of Criminal Justice Data (NACJD) teams sent me the confirmation emails stating that NIS-3 is the most recent NIS data and the next NIS (NIS-4) is expected to be administered during 2021 (see Appendix B). This means that the NIS-4 will be available for public access

later in 2022. Additionally, the challenge when using secondary data with the vulnerable population is that data access is required to submit an Institutional Review Board (IRB) approval and the application, which may take some additional time. Furthermore, the challenge was to access the data and the requirements for using the NIS-3, which only available physical enclave visit at ICPSR's location in Ann Arbor, Michigan (see Appendix C).

Significance

This quantitative study had three research questions and three hypotheses to examine the relationships between prison staff sexual misconduct and inmates' serious mental illness, injuries during sexual contact with facility staff, and reasons for not reporting. This study's results contribute to social change by filling a gap to increase awareness of prison staff's sexual misconduct and rape prevention services in correctional facilities. Although PREA of 2003 mandates the institute to follow the Commission's national standards and be engaged and disseminated by the Attorney General to terminate sexual victimization in prison, staff sexual misconduct and prison rape still exist. This portion of the population may have serious mental illness indications from being forced to have sex. The aim is also to bring the attention of PREA, given the length of time since the passage of PREA, more research is needed to examine inmates' perceptions of safety and the threat of rape and why inmates did not want to report when they are forced to have sex with staff. The study's results may contribute to PREA compliance issues and improve literature published on the criminal justice system and prison policy making (Lee, 2019). This study's results influence positive social change in prison staff sexual

misconduct, and there is a need for leaders who communicate expectations and develop professional standards.

Summary and Conclusions

Sexual misconduct poses threats to inmates, and it is a violation of victims' rights and feeling safe in the facility for the period of their incarceration (Lee, 2019). Prison rape and sexual assaults have created health and financial problems at almost every jail or prison facility in the East Coast states (Lee, 2019). This study can help prison management and policy-making institutions develop tools to decrease sexual victimization in prison. The results can help develop dialogues among correctional security staff, offenders, administrative personnel, law enforcement agencies, legislators at the state and federal levels, advocacy groups, and the citizens residing in the United States. In Section 2, I will discuss the methodology I used to address the gap in the literature and answer the RQs for this investigation.

Section 2: Research Design and Data Collection

Introduction

This was a quantitative, secondary data analysis using a correlational research design. The study's primary purpose was to examine the relationship between prison staff sexual misconduct with prison inmates and serious mental illness indications, injuries during sexual contact with facility staff, and reasons for not reporting sexual contact with staff. The NIS-3 data provide measures of inmates' housing status on a single day, including whether the inmates spent any time in restrictive housing in the past 12 months or since coming to the facility, and the total amount of time they had spent (Beck, 2015b). In this section, I describe the research design and rationale, including the study variables, the design's connection to the RQs, and the chosen method's constraints. This section includes an overview of the methodology, including information on the study population, sampling technique, procedures, measurement instruments, and data analysis plan. I also describe the ethical aspects of the study, including IRB approvals, agreements entered into to access the data, and ethical concerns related to data collection and confidentiality.

Research Design and Rationale

I used a correlational research design. One limitation of correlational research designs is that it is difficult to conclude the causal relationships among the measured variables (Asamoah, 2014). Although there are limitations, correlational research designs allow the researcher to study behavior in the everyday life of population members. The researcher can also use correlational designs to make predictions (Asamoah, 2014). This

design represents a general approach to research that focuses on assessing the covariance among naturally occurring variables. It is also known as associational research, in which relationships among two or more variables are studied without any attempt to influence them. There is no manipulation of variables in correlational research. According to Asamoah (2014), a correlation does not imply causality. Although this type of research could be used to determine if two variables have a relationship, it does not allow researchers to determine if one variable causes changes in another variable. The data collection for the NIS-3 consisted of computer-assisted personal interviewing, audio computer-assisted self-interviewing, and a shorter paper questionnaire (Beck et al., 2013). Therefore, using this design saved time and money and enhanced the privacy of the study participants.

I used binary logistic regression to examine the relationship between prison staff sexual misconduct with prison inmates and serious mental illness indications (RQ1) and injuries during sexual contact with facility staff (RQ2). Multinomial logistic regression was performed to examine the relationship between prison staff sexual misconduct with prison inmates and why inmates are not reporting the sexual misconduct encounters (RQ3). As is standard with most social research, an alpha level (α) of .05 and a power of .8 $(1 - \beta)$ was applied. The accepted probability of Type 1 errors was set at 5% ($\alpha = .05$) and Type 2 errors at 20% ($\beta = .2$). These error assumptions are generally acceptable for this type of research and are predisposed to falsely eliminating alternate hypotheses (London, 2019).

Study Variables

I examined the nature of the relationship between inmates who had sex with staff (the independent variable) and serious mental health illness indicated (RQ1; the dependent variable). I also examined the relationships between nonconsensual sex with staff (the independent variables) and injuries during sexual contact with facility staff (RQ2) and the reasons prison inmates are not reporting (RQ3; the dependent variables). Creswell and Creswell (2018) defined dependent variables as those variables researchers strive to explain any changes. In contrast, the independent variables are those that describe the change in the dependent variables. Inmates' sex with staff may relatively influence serious mental health illness. Nonconsensual sex with staff may lead to prison inmates being injured and why prison inmates are not reporting sexual victimization. Table 1 includes a description for each of the variables.

Table 1

Variable Descriptions and Measurements

Variable name	Variable description	Variable type
Dependent variables		
Serious mental health illness indication	This refers to the serious mental health illness indicated and coded as 0 = No; 1 = Yes; -9 = Missing.	Numeric
Injuries during sexual contact with facility staff	This refers to the inmates injured when they had sexual contact with facility staff. Injury level is coded as 1 = Yes, 2 = No, -9 = Missing, -3 = Refusal, -2 = Don't know, -1 = Implied No.	Numeric
Reasons prison inmates are not reporting	There are five reasons for not reporting sexual contact with staff: (a) feared punishment by staff, (b) embarrassed or ashamed that it happened, (c) didn't think the staff would investigate, (d) sex or sexual contact was consensual, and (e) didn't want the facility staff person to get in trouble. Each reason is coded as 1 = Yes, 2 = No, -9 = Missing, -3 = Refusal, -2 = Don't know, -1 = Implied No.	Numeric
Independent variables		
Sex with staff	This refers to assault by staff that had sex with inmate and coded as 0 = No, 1 = Yes, -9 = Missing.	Numeric
Nonconsensual sex with staff	This refers to inmate had non-consensual sex with staff and was coded as 0 = No, 1 = Yes, -9 = Missing.	Numeric

Note. The variables were categorical.

Connections of Research Design to the Questions and Scientific Knowledge

I investigated the relative influence of inmate sex with staff on serious mental health illnesses among inmates. I also examined whether the nonconsensual sexual misconduct of prison staff with inmates influences prison inmates' injuries and why

prison inmates are not reporting sexual victimization. Previous scholars have focused on gaps in the existing research about factors influencing whether adult victims in incarcerated systems report being sexually victimized. These researchers did not use manipulation and secondary data analysis involving correlational research design (Kubiak et al., 2018).

In this study, I conducted a quantitative secondary data analysis using a correlational design. The correlational design was based on the proof model where researchers obtain data from random samples of the population (see Frankfort-Nachmias et al., 2015). Using the NIS-3 was challenging due to this being a unique population and the data being very restricted (BJS, 2021). Therefore, the correlational design was suitable because the NIS surveys contain a wide range of data beyond measures of sexual victimization, including items useful for describing inmates held in state and federal prisons and local jails and their confinement experiences (Beck, 2015b).

The NIS-3 consisted of computer-assisted personal interviewing, audio computer-assisted self-interviewing, and a shorter paper questionnaire (Beck et al., 2013). Some inmates resided in the administrative or disciplinary partition or were otherwise considered too severe and dangerous to be interviewed. Some were inmates refused to come to the interview room, and some were inmates who the staff were reluctant to bring to the interview room for other reasons (Beck, 2015b).

The investigators obtained the roster of inmates before collecting data at each prison. Inmates who were age 15 or younger and inmates who had not been charged and discharged before data collection were excluded from the roster. Inmates ages 16 to 17

years old (juveniles) were sampled separately (Beck, 2015b). The national estimates for

state prisons were 1,154,600 adult males, 83,400 adult females, and 1,700 juveniles ages

16 to 17 (IPCSR, n.d.). For federal prisons, there were 190,600 adult male and 13,200

adult female inmates; there were no juveniles ages 16 to 17 in federal custody (IPCSR,

n.d.). Finally, for jails with an average daily population of six or more inmates, there

were 628,620 adult male inmates, 91,551 adult female inmates, and 5,700 juveniles ages

16 to 17 (IPCSR, n.d.).

Secondary analysis of existing data is cost effective and increases the overall

efficiency of research efforts (Cheng & Phillips, 2014). The collection and analysis of

existing data is faster than collecting and analyzing primary data (Cheng & Phillips,

2014). The collection and analysis of existing data, if available, avoids duplication of

efforts, saves time, and reduces cost (Cheng & Phillips, 2014; Frankfort-Nachmias &

Nachmias, 2008; Rossetti et al., 2015). This study approach also reduces ethical issues

associated with primary data collection and analysis and better guarantees the privacy and

confidentiality of the respondents of the original study (Cheng & Phillips, 2014). I used

the archived data of the NIS-3 survey in the United States. This study contributes to

understanding the relative influence of the broader prison system in sexual victimization.

This study provides information on the relationship between prison staff sexual

misconduct with prison inmates' health outcomes and why inmates are not reporting

sexual victimization.

Methodology

I study used secondary data set analysis from a quantitative NIS-3 survey conducted by RTI International. Binary logistic regression and multinomial logistic regression analyses were the most prominently used statistical tool to assess data. They were relied upon to answer the three RQs in this quantitative study.

Population

The NIS-3 2011-2012 survey conducted in the United States constituted the study's target population. I aimed to examine the relationship between inmates who had sex with prison staff, and serious mental health illnesses indicated. The default for the inclusion was administered to 91,177 inmates aged 18 or older, including 38,251 inmates in 233 state and federal prisons and 52,926 inmates in 358 jails (Beck, 2015b). There are three parts in the NIS-3, including (a) Part 1: Sexual Victimization in Local Jails Reported by Adult Inmates, (b) Part 2: Sexual Victimization in State and Federal Prisons Reported by Adult Inmates, and (c) Part 3: Sexual Victimization in Local Jails and State Prisons Reported by Juvenile Inmates (IPCSR, n.d.). I used Part 2, which had 38,251 respondents.

Sampling and Sampling Procedures

It is often expensive to include every individual or unit in a study; therefore sampling is, done. According to Frankfort-Nachmias and Nachmias (2008), a sample is a subset of sampling units that share the target population's attributes; this allows the generalization of findings on a sampled population to the target population. In this study, the sampling unit was the state and federal prisons used in the NIS-3 survey. The NIS-3

used the probability of selection and adjusted for nonresponse to each inmate and then

summarized each facility to provide facility-level estimates of the percentage of inmates

held in restrictive housing in the past 12 months (Beck, 2015b). After finishing the

interviews, inmates' information was weighted to allocate national-level and facility-level

evaluations. Each interviewed inmate determined an initial weight proportional to the

inverse probability of selection within each sampled prison. A set of measuring factors

was requested to the initial weight to reduce the possible bias because of nonresponse and

to allow national assessments (IPCSR, n.d.). Each qualified adult inmate was determined

by a random number and categorized in ascending order. The investigators selected the

inmates from the list up to the intended number of inmates measured by the sampling

measurement that considered the designed response rate, the desired level of accuracy,

and the prison's size (Beck, 2015b). Therefore, the study data set contained the required

information for this study's variables, enabling answering the RQs.

The sample was supplemented with information obtained during the NIS-1 and

NIS-2. For the NIS-3, there was a total of 241 selected state and federal prisons facilities;

seven closed before the start of data collection: Metro State Prison (Georgia),

Hillsborough Correctional Institution (Florida), Gates Correctional Institution

(Connecticut), Brush Correctional Facility (Colorado), Burnet Company Intermediate

Sanction Facility (Texas), and Diamondback Correctional Facility (Oklahoma). One

facility, Chittenden Regional Correctional Facility (Vermont), transitioned from holding

males to females during the data collection period and was considered a closed facility.

All other selected prison facilities participated fully in NIS-3 (IPCSR, n.d.). Therefore,

the NIS-3 was conducted in 233 states and federal prisons, 358 jails, and a sample of 16

special facilities were drawn to represent the inmate populations in the five militaries, six

Indian countries, and five immigration and customs enforcement (ICE) facilities between

February 2011 and May 2012 (IPCSR, n.d.). I used only Part 2, inmates aged 18 or older

in state and federal adult confinement facilities (including military facilities) in the

United States, which means not including the Indian country and ICE (IPCSR, n.d.).

State and federal prisons were respectively sampled with probabilities of selection

proportionate to size (as measured by the number of inmates held in state prisons on

December 30, 2005, and federal prisons on September 9, 2010; IPCSR, n.d.). Military,

Indian country, and ICE facilities were sequentially selected with probability

proportionate to the adjusted number of inmates in the facility. The size (population)

measures were adjusted to reduce the probability of selection among facilities (IPCSR,

n.d.). Facilities on the sampling frame were stratified by inmates' sex and that the facility

had mental health support:

- Among facilities that housed males, the measure of size for prisons that held

  male inmates and participated in the NIS-1 in 2007 or NIS-2 in 2008-09 were

  adjusted to lower their probability of selection in the NIS-3.

- Among prisons with an inmate population that was at least 50% female, the

  measure of size for prisons that participated in the NIS-2 was reduced to lower

  their probability of selection in the NIS-3.

- The measures of size were further adjusted to increase the probability of

  selection of facilities with large juvenile populations.

Within each stratum, facilities on the sampling frame were first sorted by region, state, and public or private operation.

- The sample measures of size for prisons housing only female inmates were increased by a factor of five to ensure a sufficient number of women and allow for meaningful analyses of sexual victimization by gender. This led to an allocation of 51 female facilities (out of 233) in the sample.

- An additional 25 facilities were allocated to the stratum with prisons that provide the mental health support, and another 20 prisons were allocated to the strata that housed juveniles.

- This led to the allocation of 66 facilities known to have a mental health function: 49 male prisons and 17 female prisons, and 38 prisons that housed juveniles.

Prisons were sampled to guarantee that at least one prison in every state was selected. Federal prisons were combined and retained as a state for sampling plans. The remaining prisons were chosen from each region with probabilities proportionate to size (IPCSR, n.d.).

Sample Size Justification

The power calculations were performed using the G*Power software (v. 3.1.9.7), developed by Faul et al. (2009). G*Power was used to calculate the sample size for statistical power of .8; conventional alpha (α) is the level of significant value for the study was set at $\alpha = .05$. The statistical power of .8 assumes that an effect was detected in 80% of cases when it is present (Frankfort-Nachmias & Nachmias, 2008). An α of .05

assumes that there was only a 5% probability of erroneously rejecting a true hypothesis (Frankfort-Nachmias & Nachmias, 2008). Using the G*Power software, I performed a power analysis for logistic regression with one predictor. I chose the z tests - logistic regression, analysis with a priori: compute required sample size - given α, power, effect size, input tail(s) for a two-tailed test. Odds ratio = 3.44, Pr(Y=1|X=1) HO = .06, α err prob = .05, power (1-β err prob) = .8, R^2vother X = .04, X distribution = binomial and X parm μ = .5. For output parameters, critical z = 1.959964. Total sample size = 247 (this is the number of needed participants to achieve significance). Actual power = .8002769. Therefore, G*Power provided a sample size of 247 adult prison inmates in the United States who participated in the NIS-3 for a two-tailed test. A sample size of 193 adult prison inmates in the United States participated in the NIS-3 for a one-tailed test. Based on the G*Power sample size calculation, a sample size of 247 for a two-tailed test is needed to achieve significance. The data set being used has 38,251 respondents in state and federal prisons.

Figure 1

G*Power Plot Sample Analysis
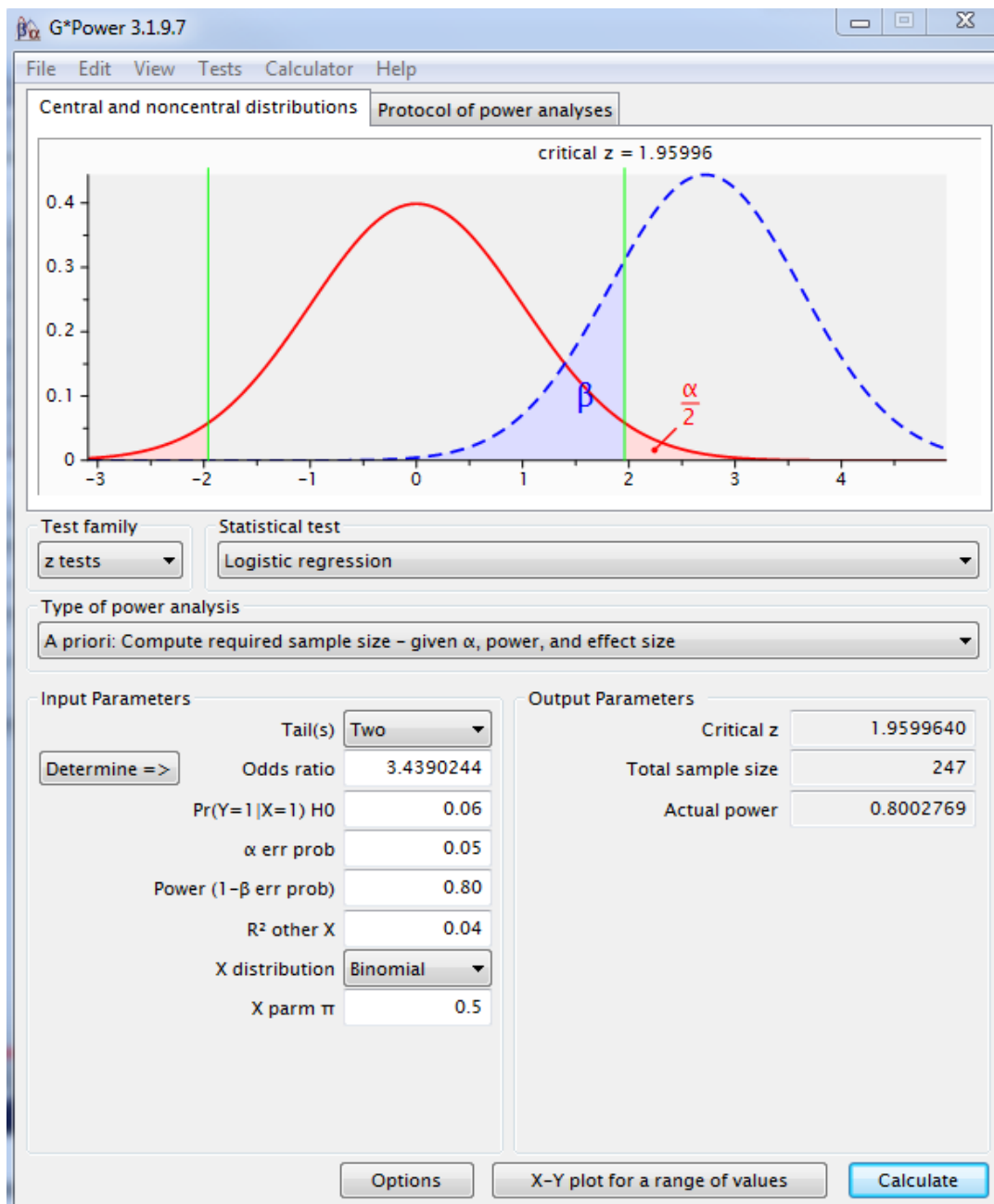
Procedures for Archival Data

The NIS-3 2011-2012 survey within the ICPSR data is part of the BJS National Prison Rape Statistics Program, which gathers mandated data on the incidence and prevalence of sexual assault in correctional facilities under PREA 2003. Due to the sensitive nature of the data and to protect respondent confidentiality, the data are restricted from general dissemination. These data are enclave-only and may only be accessed at ICPSR's location in Ann Arbor, Michigan. Users wishing to view these data must first contact the NACJD, complete an application to use the ICPSR Data Enclave, and receive permission to analyze the files before traveling to Ann Arbor, Michigan (see Appendix C).

Applications for using the data enclave were reviewed to ensure that confidential information would not be compromised. ICPSR does not evaluate the scientific merit of research proposals. Data enclave staff check the dates proposed for enclave use and assess any data manipulation services and additional software requests. The request was made to meet with the ICPSR research associate most familiar with the requested data and who reviews the proposal for disclosure risks. The ICPSR contacts the researcher if additional information is needed and schedule enclave use when the application is approved.

After visiting the physical enclave data, the outputs I requested to remove from the enclave were vetted by ICPSR for disclosure risk. The target review period is 10 business days from the date of submission. Review time for output will vary in length and proportion to the size and scope of the requested output. A single output request should

contain up to 50 pages. Requests for review of more than 50 pages will be assessed on a case-by-case basis and may not be completed in the target review period. Requests for an output review exceeding 50 pages are normally granted for physical data enclave users because researchers possess fewer opportunities to access and analyze restricted data. No output may be removed or transcribed in any form without approval by ICPSR staff. This includes sending any information via email, even simple statistics or screenshots, and even only to ICPSR staff or the project team. Doing so would constitute a violation of the legal agreement with ICPSR and the University of Michigan. Before requesting an output review, some requirements need to be met for the NACJD output vetting.

Instrumentation and Operationalization of Constructs

The NIS-3 is a trustworthy survey database because it is involved with the National Prison Rape Statistics Program, which gathers reports of sexual victimization from the administrative register and the incrimination of sexual victimization straight from victims via investigation of inmates in prisons. Sexual victimization in state and federal prisons reported by adult inmates contains data regarding assaults on inmates by staff or other inmates in adult confinement facilities, including prisons, penitentiaries, prison hospitals, prison farms, boot camps, and centers for the reception, classification, or alcohol and drug treatment. Variables include those on the nature, location, perpetrator, and injuries sustained during an assault, as well as reporting behavior. The data set also contains demographic information on respondents and facility characteristics, but no personally identifiable information (PII) can be removed from the enclave; no individuals or facilities can be identified.

The NIS-3 is comprised two questionnaires: (a) a study of sexual victimization and (b) an analysis of mental and physical health, former drug and alcohol use, and substance abuse treatment. In analyzing sexual victimization in the study, I assessed the inmates who had nonconsensual sex with staff, had serious mental illness indications, and were injured during sexual contact with facility staff. I also assessed reasons why prison inmates are not reporting sexual victimization. In addition, all information obtained through the NIS-3 survey is kept confidential, as the data are aggregated and de-identified.

Data Analysis Plan

I analyzed descriptive and inferential statistical data to test the research hypotheses for this study. To analyze the data for this study, I used the Statistical Package for the Social Sciences (SPSS) version 27 (IBM Corp, 2020a). The logistic regression analysis was used to test the hypotheses of this study since it is suitable to analyze the relationship between one or more predictor variables with a categorical outcome variable (Sreejesh et al., 2014; IBM Corp., 2020b). I performed a binary logistic regression to examine the relationship between prison staff sexual misconduct with prison inmates and serious mental illness indications (RQ1) and injuries during sexual contact with facility staff (RQ2). The data analyses were performed using the multinomial logistic regression to examine the relationship between prison inmates' nonconsensual sex with staff and why inmates are not reporting the sexual misconduct encounters (RQ3). To determine the adequacy of the model, the Hosmer and the Lemeshow test was performed. The Nagelkerke R^2 test was used to measure how likely the variation in the outcome variable

can be described by the model (Sreejesh et al., 2014; IBM Corp., 2020b). The statistical significance of each predictor variable was determined using the Wald test and test significance. The expected B coefficient, Exp(B), and the confidence intervals (CI) provided the change in the odds for each increase in one unit of the predictor variables (Sreejesh et al., 2014; IBM Corp., 2020b).

Data Cleaning and Screening Procedures

I visited the physical enclave data to analyze the NIS-3 data from ICPSR in SPSS format. The data set contained multiple variables, and the first step I took was to ascertain the presence of all the variables for my study compared to the codebook. The next step was to combine the five reasons for not reporting sexual contact with staff into one new variable. I was unsure of double-checking for coding errors, missing data, and outliers (see Leech et al., 2008). The next step was to produce frequency tables by variable to assess for independent variables, dependent variables, and demographic variables. The study was a quantitative correlation design to examine the relationship between prison staff sexual misconduct with prison inmates and serious mental illness indications, injuries during sexual contact with facility staff, and reasons for not reporting sexual contact with staff. Given this purpose, I formulated the following RQs and hypotheses.

Research Questions and Hypotheses

RQ1: What is the relationship between inmate's sexual experience with prison staff and serious mental health illness indicated?

$H_0$1: There is no relationship between inmate's sexual experience with prison staff and serious mental health illness indicated.

H_a1: There is a relationship between inmate's sexual experience with prison staff

and serious mental health illness indicated.

RQ2: What is the relationship between nonconsensual sexual misconduct of

prison inmates with prison staff and injuries that occur?

H_02: There is no relationship between nonconsensual sexual misconduct of prison

inmates with prison staff and injuries that occur.

H_a2: There is a relationship between nonconsensual sexual misconduct of prison

inmates with prison staff and injuries that occur.

RQ3: What is the relationship between nonconsensual sexual misconduct of

prison inmates with prison staff and not reporting?

H_03: There is no relationship between nonconsensual sexual misconduct of prison

inmates with prison staff and not reporting.

H_a3: There is a relationship between nonconsensual sexual misconduct of prison

inmates with prison staff and not reporting.

Appendix A contains shows the correspondence of the study's RQs and question items

from the NIS-3 data set.

Statistical Analysis

SPSS Version 27 was used to perform the descriptive statistic counts and

frequencies to lay the foundation for the data analysis plan. Descriptive and inferential

analyses followed these checks. The independent and dependent variables (see Table 1)

were computed to analyze the study RQs. The binary logistic regression and multinomial

logistic regression analysis were applied because it was an appropriate statistical test for

this study. Both the independent and dependent variables were category variables. Both

logistic regression analyses outcomes were used to determine whether to reject or accept

the null or alternative hypotheses in answering the RQs.

<div align="center">**Threats to Validity**</div>

This research required considering the valid threats imposed by the chosen

research method, data, and procedures. In this type of quantitative study, scholars should

consider distinguishing between external/internal validity and construct validity that

influence the results' plausibility: (Wahyuni, 2012). External/internal validity is essential

for quantitative studies, impacting research findings to the broader population and other

settings. In this study, as a secondary data analysis study, a known threat to this study's

validity was unaccounted errors in data collection. Unaccounted errors in data collection,

if any, have the potential to cause inherent bias.

External Validity

Creswell (2013) pointed out that a threat to external validity occurs when a study's

findings are generalized to individuals who do not fit study participant characteristics or

settings. This happens when the researcher erroneously draws an incorrect inference from

the sample data. Additionally, selection bias did not threaten this study's validity because

the responses from interviewed inmates were weighted to provide national-level and

facility-level estimates.

Internal Validity

When such factors affect the researcher's ability to draw meaningful conclusions

from a study, threats to internal validity become eminent and concerning (Creswell,

2013). The internal validity is addressed by ensuring the research measures what was intended to measure (Frankfort-Nachmias et al., 2015). Validity is obtaining the highest possible truth in the research, including the probability of generalizing the results to other settings (Ferguson, 2004). Grounding the research in a theoretical framework reduces internal validity threats (Ferguson, 2004). The research cited in the study supported the theoretical framework related to the relationship between inmates and the prison environment.

Construct Validity

Construct validity refers to construct or statistical conclusion validity. The survey instrument was grounded in theory and measures what is intended to measure (see Frankfort-Nachmias et al., 2015). The research design must be connected to the theoretical construct to reduce the threat of validity (Ferguson, 2004). How eager participants are, the experiment's expected outcome, and novelty disruptions can affect the validity (Ferguson, 2004). Relating the study measurement to the theoretical construct makes the results generalizable across the target population in different settings and contexts (Frankfort-Nachmias et al., 2015). The construct validity source is the problem of describing the questionnaire responses' perception, causing a potential misinterpretation and misleading statements when interpreting the results.

Ethical Procedures

The ethical considerations relating to human subject research are irrelevant for this study because I utilized secondary data analysis of de-identified data from the NIS-3 2011-2012. This study's only ethical requirement is the ethical obligation to treat primary

data collected by other investigators sensitively, professionally, and delicately. The broadest ethical issue with secondary data research is the inappropriate use of primary data sources; for instance, surreptitious utilization makes the research process easier and quicker but deprives it of the ethical dimension. To address the ethical issues in secondary research, researchers must be aware of the initial misalignment between the purpose and the data sourced (Weiner, 2014). Previous NIS collections excluded inmates aged 17 or younger due to special human subject issues (related to consent and assent, as well as the risk of trauma in the survey process) and statistical issues (related to clustering of youth and the need to oversample to ensure a representative sample; United States Department of Justice [USDOJ] et al., 2015). The NIS-3 juvenile selection was restricted to inmates aged 16 to 17 to address consent and risk issues (USDOJ et al., 2015). It is also necessary to remember that inmates participating in NIS-3 were granted their informed consent for participation and took part in it because they trusted the correctional facility's credibility as the national authority of crime.

There are steps to make the secondary research process ethical for accessing and using secondary data related to whether the data collected can be objective where replicable analytical techniques are used to avoid data distortion misinterpretation. It is necessary to note that the essence of secondary research presents ethical dilemmas. There is a fundamental distinction between reanalyzing primary data collected by other researchers in the same manner and offering a new, fresh, or even conflicting opinion on what that data suggests from a public health scholar's viewpoint. This means closely

analyzing the original study and the data collected by those researchers and providing a new interpretation of what the findings suggest.

RTI International conducted the NIS-3 data, which they have more than 50 years of experience designing, conducting, and reporting surveys. RTI International (n.d.) supports public health and clinical research studies for commercial and federal clients. RTI International (n.d.) language methodologies apply survey methodology principles to ensure that all translated survey documents are linguistically and culturally appropriate. In addition, the data collection process complied with Walden University IRB's standards including the researcher providing privacy, confidentiality, and anonymity to the participants. An application to conduct the research was submitted to Walden University IRB to obtain the research, receive the data set, and the ICPSR required the IRB approval form from the investigator's sponsoring institution. Therefore, this study was approved by the Walden University IRB before analyzing the data to protect participants' rights. There were no other ethical concerns regarding this study.

Protection of Participants' Rights

I had no direct interaction with study participants, as secondary data was used. Further, the participants in the NIS-3 data set are the prison inmates in the United States, and no PII can be removed from the enclave, no individuals or facilities can be identified. Additionally, the study required the Walden University IRB approval to meet the required ethical standards. The IRB approval number for this study is 06-14-21-0993762.

Feedback on Institutional Review Board Application

Before getting IRB approval, I obtained preliminary ethics feedback from the IRB by first completing Form A (Description of Data Sources and Partner Sites Support) and completed the Collaborative Institutional Training Initiative (CITI Program) as the doctoral student researcher. This preliminary ethics feedback helped me identify and resolve any privacy or ethical problems that may have arisen before submission for formal IRB approval (Walden University, 2019). I obtained Walden IRB approval and application from ICPSR approval before traveling to Ann Arbor, Michigan. Despite not being able to receive the data set due to the restricted data, I submitted the request outputs to the NACJD staff to review the disclosure risks to get approval to utilize the results.

Summary

In Section 2 of this study, I discussed the research design and rationale, the methodological details of the research, the study population, the rationale for selecting a quantitative research method, and how the sample size was decided. G*Power software (v. 3.1.9.7) analysis was used to determine sample size. The section concluded by discussing sampling strategies and procedures, threats to validity and reliability. Data were analyzed using SPSS Version 27. The binary logistic regression and multinomial logistic regression analysis were used for the descriptive statistical and inferential analyses. In this section, I reiterated the RQs and the key variables of interest. Operational descriptions of variables were displayed using a table. Lastly, I discussed the relevant ethical considerations. In the next section, I will present the results and findings of the analysis.

Section 3: Presentation of the Results and Findings

Introduction

The purpose of this quantitative doctoral study was to examine the relationship between prison staff sexual misconduct with prison inmates and serious mental illness indications, injuries during sexual contact with facility staff, and reasons for not reporting sexual contact with staff. The study participants were prison inmates who were surveyed in the NIS-3. I used SPSS Version 27 (IBM Corp, 2020a) to answer the RQs and to test the hypotheses, which included

RQ1: What is the relationship between inmate's sexual experience with prison staff and serious mental health illness indicated?

$H_0$1: There is no relationship between inmate's sexual experience with prison staff and serious mental health illness indicated.

H_a1: There is a relationship between inmate's sexual experience with prison staff and serious mental health illness indicated.

RQ2: What is the relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur?

$H_0$2: There is no relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur.

H_a2: There is a relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur.

RQ3: What is the relationship between nonconsensual sexual misconduct of prison inmates with prison staff and not reporting?

$H_0$3: There is no relationship between nonconsensual sexual misconduct of prison

inmates with prison staff and not reporting.

H_a3: There is a relationship between nonconsensual sexual misconduct of prison

inmates with prison staff and not reporting.

In Section 1, I presented the foundation of the study and a literature review. That

section included the problem statement, purpose of study, significance of the study, the

study's theoretical framework, RQs and hypotheses, nature of the study, literature review,

assumptions, scope and delimitations, and a summary and conclusion. In Section 2, I

outlined the research design and rationale and methodology, including sample size,

operational description of variables, and threats to validity. The section also included

discussion of ethical considerations and a summary.

In this section, I detail the data collection process of the secondary data set used in

the research study. This section also includes descriptive and demographic characteristics

of the sample population, followed by a discussion of results for each RQ. The results are

presented using descriptive statistics, an evaluation of statistical assumptions, and

reporting of inferential statistics. I present the results of the binary and multinomial

logistic regression tests. Section 3 ends with a summary and a discussion of whether to

reject or accept the null hypothesis, transitioning to Section 4.

Accessing the Data Set of Secondary Analysis

RTI International collected the secondary data set I analyzed in this study under a

cooperative agreement with the BJS (Beck et al., 2013). RTI International collects reports

of sexual victimization from administrative records and allegations of sexual

victimization directly from victims through surveys of inmates in prisons and jails. The BJS implemented this program to meet the requirements of PREA (Beck, 2015b). There was a data user agreement in place by the IPCSR to analyze the data of interest. I also received approval from the Walden University IRB in order to analyze the relevant data of interest from the IPCSR.

The NIS-3 was comprised two questionnaires: (a) a survey of sexual victimization and (b) a survey of mental and physical health, past drug and alcohol use, and treatment for substance abuse (Beck et al., 2013). In conducting the interviews, which averaged 35 minutes in length, the researchers used the data collection methods of computer-assisted personal interviewing, audio computer-assisted self-interviewing, and a shorter paper questionnaire (see Beck et al., 2013). A shorter paper questionnaire was made available for inmates who could not come to the private interviewing room or interact with the computer (Beck et al., 2013). The hypotheses testing followed a quantitative methodology based on the selected NIS-3 part of the National Prison Rape Statistics Program (Beck, 2015b).

The interviewers asked audio computer-assisted self-interviewing survey items related to staff sexual misconduct in a different order. Inmates were first asked about being pressured or being made to feel they had to have sex or sexual contact with the staff and then asked about being physically forced (Beck et al., 2013). In addition, inmates were asked if any facility staff offered favors or special privileges in exchange for sex. Finally, inmates were asked if they willingly had sex or sexual contact with staff.

All reports of sex or sexual contact between an inmate and facility staff, regardless of the level of coercion, were classified as staff sexual misconduct (Beck et al., 2013).

Inclusion and Exclusion Criteria

The researchers sampled the number of inmates within each facility based on criteria related to the expected prevalence rate of sexual victimization, with the desired level of precision and an expected response rate (Beck, 2015b). To be included, each eligible adult inmate was assigned a random number and sorted in ascending order. Inmates were selected from the list up to the expected number of inmates determined by the sampling criteria (Beck, 2015b).

Selecting prisons and inmates within prisons, the NIS-3 researchers excluded community-based facilities, such as halfway houses, group homes, and work release centers. Among adult prison inmates, 38,251 inmates responded to the sexual victimization survey (ICPSR, n.d.). For both prison and jail facilities, a roster of inmates was obtained just prior to data collection at each facility. Inmates aged 15 or younger, who had not been arraigned, and inmates released prior to data collection were deleted from the roster. Inmates who were ages 16 to 17 were sampled separately and have been excluded from this report (Beck, 2015b).

Demographic Characteristics of the Sample Population

Table 2 displays the baseline demographics, including gender, age group, race, education, time since admission, marital status, and sexual orientation of this study's sample population. The study's participants consisted of 38,251 respondents who answered the sexual victimization survey in NIS-3. The majority of respondents in this

survey were male (78.4%), with the highest percentage (18.6%) in the 45–54 year-old-age group. When looking at respondents' race, there were almost equal numbers of White and Black respondents (34.5% and 33.6%, respectively). The majority of respondents in this survey reported having less than a high school education (56.3%); for most, time since admission was 1–5 years (36.2%), marital status was never married (52.3%), and sexual orientation was heterosexual (86.7%; see Table 2).

Table 2

Descriptive Statistics of Inmates

Variable	Frequency	Percent	Valid percent	Cumulative percent
Gender				
Male	30004	78.4	80.1	80.1
Female	7373	19.3	19.7	99.7
Transgender	101	.3	.3	100
Total	37478	98	100	
Missing	733	1.9		
Refusal	25	.1		
Do not know	15	0		
Total	38251	2		
Age Group				
18–19	1064	2.8	2.8	2.8
20–24	4965	13	13	15.8
25–29	5862	15.3	15.3	31.1
30–34	6192	16.2	16.2	47.3
35–39	5065	13.2	13.2	60.5
40–44	4865	12.7	12.7	73.2
45–54	7111	18.6	18.6	91.8
55 or older	3127	8.2	8.2	100
Total	38251	100	100	
Race				
White	13206	34.5	34.9	34.9
Black	12856	33.6	34	68.9
Hispanic	7448	19.5	19.7	88.6
American Indian	709	1.9	1.9	90.5
Asian	253	.7	.7	91.2
Pacific Islander	164	.4	.4	91.6
Multiracial	3178	8.3	8.4	100
Missing		437	1.1	
Total		38251	100	
Education				
Less than high school	21548	56.3	56.5	56.5
High school or GED	7537	19.7	19.8	76.3
Some college/Associate degree	6266	16.4	16.4	92.7
College degree or higher	2779	7.3	7.3	100
Total	38130	99.7	100	
Missing	121	.3		
Total	38251	100		
Time since Admission				
Less than 1 month	2639	6.9	6.9	6.9
1–6 months	10658	27.9	27.9	34.8
6–12 months	6770	17.7	17.7	52.5
1-5 years	13828	36.2	36.2	88.7
5–10 years	2862	7.5	7.5	96.1
10 years or more	1474	3.9	3.9	100
Total	38231	99.9	100	
Missing	20	.1		

Variable	Frequency	Percent	Valid percent	Cumulative percent
Total	38251	100		
Marital status				
Married	6727	17.6	18	18
Widowed	875	2.3	2.3	20.4
Divorced	7438	19.4	19.9	40.3
Separated	2278	6	6.1	46.4
Never married	19999	52.3	53.6	100
Total	37317	97.6	100	
Missing	934	2.4		
Total	38251	100		
Sexual orientation				
Heterosexual	33157	86.7	88.4	88.4
Bi-sexual	2998	7.8	8	96.4
Homosexual	892	2.3	2.4	98.8
Other	468	1.2	1.2	100
Total	37515	98.1	100	
Missing	736	1.9		
Total	38251	100		

Almost 80% of the inmate respondents were male, and less than 1% were transgender. There were eight age groups; the majority, close to 20%, was 45-54 years old, followed by 30-34 years old (16.2%) and 25-29 years old (15.3%). There were seven race groups; the majority was White, followed by Black (34.5% and 33.6, respectively). Almost 20% of respondents identified as Hispanic, 8% reported that they were multiracial, and 2% are American Indian. Asian and Pacific Islander reposted less than 1% for each. More than half of the respondents reposted their education level less than high school (56.3%), followed by high school or GED (20%), some college/associate degree (16.4%), and a college degree or higher (less than 10%). There were six groups for the time since admission; most of them were within 1-5 years (36.2%), followed by 1-6 months and 6-12 months (27.9% and 17.7%, respectively). The percentages for the groups with a time since admission of less than 1 month, 5–10 years, or 10 years or more were less than 10% each. More than 50% of respondents reported they never married; the

percentage values for respondents who reported they were divorced or married were

19.4% and 17.6%, respectively. Less than 10% in each group reported being separated or

widowed. Finally, for sexual orientation, almost 90% reported being heterosexual.

Results

Descriptive Statistics

The majority of respondents reported "No" sex with staff (97.4%), and over 80%

reported "No" serious mental illness indicated (see Tables 3 and 4).

Table 3

Descriptive Statistics for Inmate Sex With Prison Staff

		Frequency	Percent	Valid percent	Cumulative percent
Valid	No	37257	97.4	97.5	97.5
	Yes	971	2.5	2.5	100
	Total	38228	99.9	100	
Missing	Missing	23	.1		
Total		38251	100		

Table 4

Descriptive Statistics for Indicated Inmate Serious Mental Illness

		Frequency	Percent	Valid percent	Cumulative percent
Valid	No	30862	80.7	83.5	83.5
	Yes	6101	15.9	16.5	100
	Total	36963	96.6	100	
Missing	Missing	1288	3.4		
Total		38251	100		

However, when looking at the nonconsensual sex with staff, 98.2% reported "No," which

meant that sex with staff most likely was consensual (see Table 5). For the injured during

sexual contact with facility staff variable, the majority of respondents reported "Implied No" with 95.5%, about 2% reported "No," and less than 1% reported "Yes" injured during sexual contact with facility staff (see Table 6).

Table 5

Descriptive Statistics for Nonconsensual Inmate Sex With Prison Staff

		Frequency	Percent	Valid percent	Cumulative percent
Valid	No	37577	98.2	98.3	98.3
	Yes	651	1.7	1.7	100
	Total	38228	99.9	100	
Missing	Missing	23	.1		
Total		38251	100		

Table 6

Descriptive Statistics for Injuries During Inmate Sexual Contact With Prison Staff

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	94	.2	11.3	11.3
	No	735	1.9	88.7	100
	Total	829	2.2	100	
Missing	Missing	863	2.3		
	Refusal	23	.1		
	Do not know	3	0		
	Implied no	36533	95.5		
	Total	37422	97.8		
Total		38251	100		

There were five reasons for not reporting sexual contact with staff variables that needed to be combined into one new variable. When reviewing each reason, the majority of respondents reported "Implied No" with 95.9% of feared punishment by staff, less than 1% reported either "Yes" or "No" (See Table 7).

Table 7

Descriptive Statistics for Reasons for Not Reporting Inmate Sexual Contact With Prison

Staff – Feared Punishment By Staff

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	306	.8	47	47
	No	345	.9	53	100
	Total	651	1.7	100	
Missing	Missing	880	2.3		
	Refusal	16	0		
	Do not know	16	0		
	Implied no	36688	95.9		
	Total	37600	98.3		
Total		38251	100		

The majority of respondents reported "Implied No" with 95.9% of

embarrassed/ashamed, less than 1% reported "Yes," and 1.2% reported, "No" (See Table

8). The majority of respondents reported "Implied No" with 95.9% did not think the staff

would investigate, less than 1% reported "Yes," and 1.1% reported "No" (See Table 9).

Table 8

Descriptive Statistics for Reasons for Not Reporting Inmate Sexual Contact With Prison

Staff – Embarrassed/Ashamed

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	219	.6	33.2	33.2
	No	440	1.2	66.8	100
	Total	659	1.7	100	
Missing	Missing	880	2.3		
	Refusal	14	0		
	Do not know	10	0		
	Implied no	36688	95.9		
	Total	37592	98.3		
Total		38251	100		

Table 9

Descriptive Statistics for Reasons for Not Reporting Inmate Sexual Contact With Prison

Staff – Did Not Think Staff Would Investigate

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	240	.6	37.3	37.3
	No	403	1.1	62.7	100
	Total	643	1.7	100	
Missing	Missing	880	2.3		
	Refusal	14	0		
	Do not know	26	.1		
	Implied no	36688	95.9		
	Total	37608	98.3		
Total		38251	100		

The majority of respondents reported "Implied No" with 95.9% of sexual contact

consensual and did not want staff person to get in trouble, 1% reported "Yes" and less

than 1% reported "No" (See Tables 10 and 11). Finally, when combined these five

reasons into one, the majority of respondents reported "Implied No" with 95.9% of a new

variable, 1.3% reported, "More than three reasons," and .2% reported "None of these

reasons" (See Table 12).

Table 10

Descriptive Statistics for Reasons for Not Reporting Inmate Sexual Contact With Prison

Staff – Sexual Contact Consensual

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	376	1	57.8	57.8
	No	274	.7	42.2	100
	Total	650	1.7	100	
Missing	Missing	880	2.3		

		Frequency	Percent	Valid percent	Cumulative percent
	Refusal	14	0		
	Do not know	19	0		
	Implied no	36688	95.9		
	Total	37601	98.3		
Total		38251	100		

Table 11

Descriptive Statistics for Reasons for Not Reporting Inmate Sexual Contact With Prison

Staff – Did Not Want Staff To Get In Trouble

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	373	1	57.4	57.4
	No	277	.7	42.6	100
	Total	650	1.7	100	
Missing	Missing	880	2.3		
	Refusal	21	.1		
	Do not know	12	0		
	Implied no	36688	95.9		
	Total	37601	98.3		
Total		38251	100		

Table 12

Descriptive Statistics for Reasons for Not Reporting Inmate Sexual Contact With Prison

Staff (Combined)

		Frequency	Percent	Valid percent	Cumulative percent
Valid	None of these reasons	70	.2	10.5	10.5
	Feared, embarrassed/ashamed, Did not think staff would investigate	21	.1	3.1	13.6
	Sexual contact consensual	46	.1	6.9	20.5

		Frequency	Percent	Valid percent	Cumulative percent
	Did not want staff person to get in trouble	17	0	2.5	23.1
	More than three reasons	514	1.3	76.9	100
	Total	668	1.7	100	
Missing	Missing	880	2.3		
	Refusal	10	0		
	Do not know	5	0		
	Implied no	36688	95.9		
	Total	37583	98.3		
Total		38251	100		

Statistical Analysis Assumptions for Logistic Regression

This section details the results of the hypothesis tests based on the NIS-3 survey to examine the relationship between prison staff sexual misconduct with prison inmates and serious mental illness indicated, injured when sexual contact with facility staff, and reasons for not reporting sexual contact with staff.

Assumptions of logistic regression for the United States were met. There are different types of regression depending on purpose of the study and variable measurement (Stoltzfus, 2011). Logistic regression may include only one or multiple independent variables, although examining multiple variables is normally more informative because it reveals the unique contribution of each variable after adjusting for the others (Stoltzfus, 2011). To ensure that logistic regression produces an accurate model, some important elements that must be taken into account include independent variable selection and choice of model building strategy (Stoltzfus, 2011). Logistic regression requires quite large sample sizes. Multiple logistic regression needs at least 10 participants per independent variable, and some statisticians recommend at least 30 participants for each parameter to be estimated (Sreejesh et al., 2014; IBM Corp., 2020b).

The sample size in this study was exceeded with an analytic sample size of 247. Finally, binary logistic regression requires the dependent variable to be binary involving two groups (Sreejesh et al., 2014; IBM Corp., 2020b). For the multinomial logistic regression assumption, if the dependent variable is measured at the nominal level, they must be with more than two groups (IBM Corp., 2020c; Zhang et al., 2022). Multinomial logistic regression is a useful tool for solving multi-classification problems (Zhang et al., 2022). Inferential statistics were used to answer the study's RQs by using binary logistic regression as all dependent variables were measured on a nominal scale with two possible answers (Yes or No) for RQ1 and RQ2. For RQ3, multinomial logistic regression as the dependent variable was measured on a nominal level with more than two possible answers. Therefore, for this study, I met both logistic regression assumptions regarding the level of measurement for the dependent variable.

The Nagelkerke R^2 test was used to determine how much variation in the dependent variable could be explained by the model (Sreejesh et al., 2014). The expected B coefficient, Exp(B) proved by the Wald test, was used to determine the statistical significance of each variable's impact on the dependent variable. Along with the confidence intervals (CI), these measures indicate the change in the odds for each increase in one unit of the independent variable (Sreejesh et al., 2014). It is important to note that the study had substantial missing data, which were coded appropriately before running the analysis.

Research Questions and Hypotheses Test Results

The results section begins with the relationship between inmate's sexual experience with prison staff and serious mental health illness indicated results using binary logistic regression and odds ratio outcomes to determine whether or not to reject or accept the null hypothesis based on the 5% level of significance. The findings of the statistical analyses are organized by RQ.

Research Question 1 Results

The binary logistic regression analysis was used to determine if there was a relationship between inmates' sexual experience with prison staff and serious mental health illness indicated. The logistic regression model was statistically significant ($\chi2 = 319.553$, $p = <.001$) as shown in Table 13. The predictor variable, sex with staff, was tested to verify there was no violation of the assumption of the linearity of the logit. The model explained 1.5% (Nagelkerke R^2) of the variance in serious mental illness indicated variable as shown in Table 14. The overall percentage of participants that the logistic regression model correctly predicted was 83.5%, as shown in Table 15. The predictor variable, sex with staff, in the logistic regression analysis was found to contribute to the model. The unstandardized Beta weight for the Constant; $B = (-.343)$, $SE = .068$, $Wald = 25.205$, $p <.001$. The unstandardized Beta weight for the predictor variable: $B = (-1.325)$, $SE = .7$, $Wald = 360.864$, $p <.001$. The estimated odds ratio favored a decrease of nearly 73% [$Exp (B) = .266$, 95% CI (.232, .305)] for serious mental health illness indicated every one unit increase of sex with staff (See Table 16). The results in inmates had sex with staff ($p = <.001$). Therefore, I rejected the null hypothesis. The findings

indicated that there was a statistically significant relationship between inmates' sexual

experience with prison staff and serious mental health illness indicated with the

Nagelkerke's R^2 statistic provided the overall model's effect size.

Table 13

Logistic Regression of Inmates' Sexual Experience With Prison Staff and Serious Mental

Illness Indications When Controlling for Sex With Prison Staff

Omnibus tests of model coefficients		Chi-square	df	Sig.
Step 1	Step	319.553	1	<.001
	Block	319.553	1	<.001
	Model	319.553	1	<.001

Table 14

Model Summary for Logistic Regression of Inmates' Sexual Experience With Prison Staff

and Serious Mental Illness Indications When Controlling for Sex With Prison Staff

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	32754.250[a]	.009	.015

Table 15

Classification Table for Logistic Regression of Inmates' Sexual Experience With Prison

Staff and Serious Mental Illness Indications When Controlling for Sex With Prison Staff

	Observed		Predicted		
			serious mental illness indicated		Percentage
			No	Yes	correct
Step 1	Serious mental illness	No	30855	0	100
	Indicated	Yes	6090	0	0
	Overall percentage				83.5

a. The cut value is .5.

Table 16

Variables in the Equation for Logistic Regression of Inmates' Sexual Experience With

Prison Staff and Serious Mental Illness Indications When Controlling for Sex With Prison

Staff

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B) Lower	Upper
Step 1[a]	Sex with staff(Yes)	-1.325	.07	360.864	1	<.001	.266	.232	.305
	Constant	-.343	.068	25.205	1	<.001	.71		

a. Variable(s) entered on step 1: Sex with staff.

Research Question 2 Results

The binary logistic regression analysis was used to determine if there was a

relationship between nonconsensual sexual misconduct of prison inmates with prison

staff and injuries that occur. The logistic regression model was statistically significant ($\chi 2$

$= 47.962$, $p = <.001$) as shown in Table 17. The predictor variable, nonconsensual sex

with staff, was tested to verify there was no violation of the assumption of the linearity of

the logit. The model explained 11.1% (Nagelkerke R^2) of the variance in injuries during

sexual contact with facility staff variable as shown in Table 18. The overall percentage of

participants that the logistic regression model correctly predicted was 88.7%, as shown in

Table 19.

Table 17

Logistic Regression of Inmates' Nonconsensual Inmate Sex With Prison Staff and Injuries

During Inmate Sexual Contact With Prison Staff

Omnibus tests of model coefficients		Chi-square	df	Sig
Step 1	Step	47.962	1	<.001
	Block	47.962	1	<.001
	Model	47.962	1	<.001

Table 18

Model Summary for Logistic Regression of Inmates' Nonconsensual Inmate Sex With

Prison Staff and Injuries During Inmate Sexual Contact With Prison Staff

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	538.214[a]	.056	.111

a. Estimation terminated at iteration number 7 because parameter estimates changed by

less than .001.

Table 19

Classification Table for Logistic Regression of Inmates' Nonconsensual Inmate Sex With

Prison Staff and Injuries During Inmate Sexual Contact With Prison Staff

			Predicted Injured during sexual contact with facility staff		Percentage
	Observed		Yes	No	Correct
Step 1	Injured during sexual contact with facility staff	Yes	0	94	0
		No	0	735	100
	Overall percentage				88.7

a. The cut value is .5.

The predictor variable, nonconsensual sex with staff, in the logistic regression

analysis was found to contribute to the model. The unstandardized beta weight for the

constant; B = (4.159), SE = .504, $Wald$ = 68.121, p <.001. The unstandardized beta

weight for the predictor variable: B = (-2.487), SE = .517, $Wald$ = 23.156, p <.001. The

estimated odds ratio favored a decrease of nearly 92% [$Exp (B)$ = .083, 95% CI (.03,

.229)] for injuries when inmates had sexual contact with facility staff every one unit

increase of nonconsensual sex with staff (see Table 20). The results in nonconsensual sex

with staff (p = <.001). Therefore, I rejected the null hypothesis. The findings indicated

that there was a statistically significant relationship between nonconsensual sexual

misconduct of prison inmates with prison staff and injuries that occur with the

Nagelkerke's R^2 statistic provided the overall model's effect size.

Table 20

Variables in the Equation for Logistic Regression of Inmates' Nonconsensual Inmate Sex

With Prison Staff and Injuries During Inmate Sexual Contact With Prison Staff

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1[a]	Nonconsensual sex with staff(Yes)	-2.487	.517	23.156	1	<.001	.083	.03	.229
	Constant	4.159	.504	68.121	1	<.001	64		

a. Variable(s) entered on step 1: Nonconsensual sex with staff.

Research Question 3 Results

Table 21 contains the dependent variable and independent variables. Focusing on

the dependent variable, the number of valid observations in the model totals 668

distributed among the five categories. The proportion of valid responses for each

category are listed under marginal percentage. Model fitting information located in Table

21 indicates that the significance of the final model is $p < .001$, indicating rejection of the null, meaning the final model is a good fit.

The multinomial logistic regression model was used to predict whether the nominal independent variables of nonconsensual sex with staff influenced the nominal dependent variable of reasons for not reporting sexual contact with facility staff and whether nonconsensual sex with staff best predicts each reason.

Table 21

Case Processing Summary for Logistic Regression of Inmates' Nonconsensual Inmate Sex With Prison Staff and Reasons for Not Reporting Inmate Sexual Contact With Prison Staff

		N	Marginal percentage
Reasons for not reporting sexual contact with facility staff	None of these reasons	70	10.5%
	Feared, embarrassed/ashamed, did not think staff would investigate	21	3.1%
	Sexual contact consensual	46	6.9%
	Did not want staff person to get in trouble	17	2.5%
	More than three reasons	514	76.9%
Nonconsensual sex with staff	No	249	37.3%
	Yes	419	62.7%
Valid		668	100%
Missing		37583	
Total		38251	

The logistic regression model was statistically significant ($\chi2 = 46.293$, p<.001) as shown in Table 22.

Table 22

Model Fitting Information for Logistic Regression of Inmates' Nonconsensual Inmate Sex

With Prison Staff and Reasons for Not Reporting Inmate Sexual Contact With Prison

Staff

	Model fitting criteria	Likelihood ratio tests		
Model	-2 log likelihood	Chi-Square	df	Sig.
Intercept Only	80.801			
Final	34.508	46.293	4	<.001

The predictor variable, nonconsensual sex with staff, was tested to verify there

was no violation of the assumption of the linearity of the logit. The model explained 83%

(Nagelkerke R2) of the variance in reasons for not reporting sexual contact with facility

staff variable as shown in Table 23.

Table 23

Pseudo R-Square for Logistic Regression of Inmates' Nonconsensual Inmate Sex With

Prison Staff and Reasons for Not Reporting Inmate Sexual Contact With Prison Staff

Cox and Snell	.067
Nagelkerke	.083
McFadden	.042

Table 24 contains the predictor variable, nonconsensual sex with staff, in the

multinomial logistic regression analysis was found to contribute to the model. The

unstandardized beta weight for the predictor variable: $B = (-.324)$, $SE = .28$, *Wald* =

1.335, $p > .05$. The estimated odds ratio favored a decrease of nearly 28% *[Exp (B) =*

.723, 95% CI (.418, 1.253)] the odds of the participants who reported "no" for

nonconsensual sex with staff selecting "none of these reasons" rather than "more than three reasons" is .723 times that is greater than the odds for somebody who reported "yes" for nonconsensual sex with staff. The unstandardized Beta weight for the predictor variable: $B = -2.403$), $SE = 1.029$, $Wald = 5.456$, $p < .05$. The estimated odds ratio favored a decrease of at 91% *[Exp (B) = .09*, 95% CI (.012, .679)] the odds of the participants who reported "no" for nonconsensual sex with staff selecting "feared, embarrassed/ashamed, and did not think staff would investigate" rather than "more than three reasons" is .09 times that is greater than the odds for somebody who reported "yes" for nonconsensual sex with staff. The unstandardized beta weight for the predictor variable: $B = (1.634)$, $SE = .348$, $Wald = 22.026$, $p < .05$. The *Exp (B)* = 5.125, 95% CI (2.590, 10.14) the odds of the participants who reported "no" for nonconsensual sex with staff selecting "sexual contact consensual" rather than "more than three reasons" is 5.125 times that is greater than the odds for somebody who reported "yes" for nonconsensual sex with staff. Finally, the unstandardized beta weight for the predictor variable: $B = (1.199)$, $SE = .516$, $Wald = 5.401$, $p < .05$. The *Exp (B)* = 3.316, 95% CI (1.207, 9.113) the odds of the participants who reported "no" for nonconsensual sex with staff selecting "did not want staff person to get in trouble" rather than "more than three reasons" was 3.316 times that is greater than the odds for somebody who reported "yes" for nonconsensual sex with staff. Therefore, I rejected the null hypothesis for RQ3. The findings indicated a statistically significant relationship between nonconsensual sexual misconduct of prison inmates with prison staff and not reporting with the Nagelkerke's R^2 statistic provided the overall model's effect size.

Table 24

Parameter Estimates for Logistic Regression of Inmates' Nonconsensual Inmate Sex With

Prison Staff and Reasons for Not Reporting Inmate Sexual Contact With Prison Staff

Reasons for not reporting sexual contact with facility staff[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% C.I. for Exp(B) Lower bound	Upper bound
None of these reasons	Intercept	-1.89	.152	155.182	1	<.001			
	[Nonconsensual sex =No]	-.324	.28	1.335	1	.248	.723	.418	1.253
	[Nonconsensual sex =Yes]	0[b]	.	.	0	.	.	.	.
Feared, Embarrassed/ Ashamed, Did not think staff would investigate	Intercept	-2.806	.23	148.541	1	<.001			
	[Nonconsensual sex =No]	-2.403	1.029	5.456	1	.02	.09	.012	.679
	[Nonconsensual sex =Yes]	0[b]	.	.	0	.	.	.	.
Sexual contact consensual	Intercept	-3.317	.294	127.427	1	<.001			
	[Nonconsensual sex =No]	1.634	.348	22.026	1	<.001	5.125	2.590	10.14
	[Nonconsensual sex =Yes]	0[b]	.	.	0	.	.	.	.
Did not want staff person to get in trouble	Intercept	-4.01	.412	94.78	1	<.001			
	[Nonconsensual sex =No]	1.199	.516	5.401	1	.02	3.316	1.207	9.113
	[Nonconsensual sex =Yes]	0[b]	.	.	0	.	.	.	.

a. The reference category is: More than three reasons.

b. This parameter is set to zero because it is redundant.

Summary

In this section, the results and findings from the secondary data analysis of prison inmates' sexual experience with prison staff and serious mental health illness indicated, nonconsensual sexual misconduct of prison inmates with prison staff and prison inmates injuries that occur, and the reasons prison inmates are not reporting sexual victimization. This section included a brief purpose, the RQs, the null and alternative hypothesis, study demographics, data collection of secondary data set, inclusion and exclusion criteria, and study demographic characteristics of the sample population. This section also included descriptive statistics, statistical analysis assumptions for logistic regression, RQs, and hypothesis test results. I investigated two categorical independent variables (sex with staff and nonconsensual sex with staff) and three categorical dependent variables (serious mental health illness indicated for prison inmates, injuries during sexual contact with facility staff, and why prison inmates are not reporting sexual victimization).

The RQ1 and RQ2 were addressed by performing a binary logistic regression analysis to test for association between the one independent variable and one categorical dependent variable with two groups. RQ3 was addressed by performing a multinomial logistic regression analysis to test for association between the one independent variable and one categorical dependent variable with two or more groups.

For RQ1, I tested if there was any statistically significant relationship between prison inmates' sexual experience with prison staff and serious mental health illness indicated. The binary logistic regression analysis results for the relationship between prison inmates' sexual experience with prison staff and serious mental health illness

indicated $p <.001$. This informed the decision to reject the first null hypothesis. The findings indicated that there was a statistically significant relationship between inmates' sexual experience with prison staff and serious mental health illness indicated.

For RQ2, I tested if there was any statistically significant relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur. The results emanating from the binary logistic regression analysis tested for the relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur showed $p <.001$. This informed the decision to reject the second null hypothesis. The findings indicated that there was a statistically significant relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur.

For RQ3, I tested if there was any statistically significant relationship between nonconsensual sexual misconduct of prison inmates with prison staff and not reporting. The results emanating from the multinomial logistic regression analysis test for the relationship between nonconsensual sexual misconduct of prison inmates with prison staff and not reporting showed $p <.001$ for each reason. This informed the decision to reject the last null hypothesis. The findings indicated a statistically significant relationship between nonconsensual sexual misconduct of prison inmates with prison staff and not reporting.

In Section 4, I discussed the results and findings of this study in relation to the literature and theoretical framework discussed in Section 1 of this study. The limitations

of this study, implications for positive social change and recommendations emerging

from the interpretation of the results and findings are also discussed in Section 4.

Section 4: Application to Professional Practice and Implications for Social Change

Introduction

There have been numerous studies of the individual factors associated with the risk of sexual victimization within the prison (Kubiak et al., 2018). Because there is a lack of formal support systems for victims of sexual assault in prison, as evidenced among community providers, advocates have difficulty reconnecting or following up with inmate victims who they meet during medical exams within community hospitals (Kubiak et al., 2018). Because of barriers imposed by the prison system, the public, community advocates note, may have difficulty understanding that prisoners can be victims too. Kubiak et al. (2018) noted that to assess the success of zero tolerance of sexual victimization in prisons and to improve reporting, the interactions between ecological factors need to be explored and understood.

To address the problem of prison staff sexual misconduct, I posed three RQs along with corresponding hypotheses:

RQ1: What is the relationship between inmate's sexual experience with prison staff and serious mental health illness indicated?

RQ2: What is the relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur?

RQ3: What is the relationship between nonconsensual sexual misconduct of prison inmates with prison staff and not reporting?

To answer these RQs, I conducted a quantitative study with a correlational design. Quantitative research was selected because it is useful in exploring scientific inquiries

(Nachmias & Nachmias, 2008). When applying a quantitative method, the sample

population is placed into groups similar and distinct from others. Quantitative researchers

can quantify opinions, attitudes, and behaviors to assess the population and the

correlation between a variable and a particular outcome (Nachmias & Nachmias, 2008).

Quantitative research was appropriate because the data collected were numerical and

continuous as opposed to text. Data were collected from the state and federal prisons in

the United States for NIS-3 2011-2012. To carry out this study, I analyzed secondary data

from the IPCSR, an organization that maintains and provides access to a vast archive of

social science data for research and instruction.

The main purpose of this quantitative research study was to examine the

relationship between prison staff sexual misconduct with prison inmates and serious

mental illness indications, injuries during sexual contact with facility staff, and reasons

for not reporting sexual contact with staff. The results of this study uncovered that in the

NIS-3 survey for state and federal prisons, most respondents were male (78.4%) between

the ages of 45 and 54 years old (18.6%). When looking at respondents' race, there were

almost equal numbers of White and Black respondents (34.5% and 33.6%, respectively).

The majority of respondents in this survey reported having less than a high school

education (56.3%), 1-5 years for time since admission (36.2%), never married for marital

status (52.3%), and heterosexual sexual orientation (86.7%).

Interpretation of the Findings

In this section, I examined the results of the study in the context of the literature

review and the theoretical framework, when applicable. The literature from Section 1

provided further insights into the findings of this study, while the theoretical framework was helpful in interpreting the results. The lack of contextual data creates new avenues for future research. I used binary logistic regression analysis for RQ1 and RQ2 and multinomial logistic regression analysis for RQ3. I interpret the results by RQ.

Research Question 1

Using the data collected from state and federal prisons in the United States, I uncovered that the majority of respondents reported "No" sex with staff (97.4%), and over 80% reported "No" serious mental illness indicated. Only 2.5% of respondents reported "Yes" that had had sex with staff, and only 15.9% reported "Yes" for serious mental illness indicated. Upon statistical analysis, the results for the chi-square and logistic regression analyses both indicated that there was a statistically significant relationship between inmates' sexual experience with prison staff and serious mental health illness indicated, $p < .001$.

The literature supported that prison staff appear willing to use physical and sexual violence against people with mental illness, because of their more discordant behavior (Just Detention International, 2013), and they are able to exert their influence because of the inmates' greater vulnerability (i.e., they are less able to fight back or resist). Likewise, prison staff appear willing and able to exert their power for a sexual advantage over more vulnerable people, either due to their mental illness or female status (Caravaca Sánchez & Wolff, 2016). Regardless of the sexual abuse history, inmates are more likely to experience mental anguish if they fear sexual victimization (Ratkalkar & Atkin-Plunk, 2020). Being exposed to sexual abuse (witnessing or knowing about incidents of sexual

violence) is associated with inmates' fear of being victimized in prison (Worley et al., 2010).

Focusing upon the theoretical framework, Kubiak et al. (2018) reported that male inmates who reported a mental illness and prior sexual advances varied across social ecology levels and that significant gaps in research exist in understanding barriers and facilitators to reporting sexual victimization in prisons. Caravaca Sánchez and Wolff (2016) found that 39.1% of male inmates with any mental illness reported being physically victimized either by an inmate or staff member compared with 16.4% of inmates without a mental illness. Caravaca Sánchez and Wolff concluded that mental illness was significantly associated with physical or sexual victimization, especially staff-on-inmate victimization while incarcerated. Therefore, the findings of this study for RQ1 supported the research hypotheses that there is a relationship between inmates' sexual experience with prison staff and indication of serious mental health illness. Thus, prison environment is a particularly unsafe place for people with mental illnesses.

Research Question 2

Using the data collected from state and federal prisons in the United States, I uncovered that the majority of respondents reported "No" for nonconsensual sex with staff (98.2%), and only 1.9% reported "No" injured during sexual contact with the facility staff. Only 1.7% of respondents reported "Yes" that they had nonconsensual sex with staff, and only .2% reported "Yes" for injuries when they had sexual contact with facility staff. This means that when inmates had sex with staff, it was consensual and there were no injuries. Upon statistical analysis, the results for chi-square were statistically

significant, $p < .001$. For the logistic regression analysis, the results indicated that there was a statistically significant relationship between nonconsensual sexual misconduct of prison inmates with prison staff and injuries that occur, $p < .001$.

The literature in Section 1 revealed that because there is no standard or mandated reporting of injuries in jails and prisons (except for those resulting in death or those relating to sexual assault), the national burden of such trauma during incarceration is unclear (Kaba et al., 2014). National injury surveillance does not exist for the incarcerated. Although extragenital injury was a common finding in sexual assault victims, it is also possible for victims to be absent of any extragenital injuries. In addition, the wide range and prevalence of extragenital injury suggest that sexual assault victims can present with no injuries. Several studies indicated that sex with staff causes inmates to have injuries. For instance, New York City's correctional health service has established a comprehensive injury surveillance system, reporting an injury rate of 736 cases per 1,000 person-years (Ford et al., 2017). Of these, 66% (486 per 1,000 person-years) were violent or intentional (Ford et al., 2017). In a retrospective review of 500 sexual assault victims aged 18 years or older, McLean et al. (2011) found that 72% of the victims had extragenital injuries. The rate of extragenital injury was significantly higher than that of genital injury, 23% (McLean et al., 2011). In some cases, the detection of general body injury was more than twice as standard as detecting genito-anal injury in sexual assault victims (Sugar et al., 2004). The findings for this study for RQ2 supported the research hypotheses. Additionally, sexual victimization alone can increase an inmate's risk of being targeted by future perpetrators.

Research Question 3

Using the data collected from state and federal prisons in the United States, I combined five variables encompassing reasons for not reporting sexual contact with staff into one new variable. Upon statistical analysis, the results for chi-square were statistically significant, $p <.001$. For the multinomial logistic regression analysis, the results indicated that there was a statistically significant relationship between nonconsensual sexual misconduct of prison inmates with prison staff and not reporting, $p <.001$.

The findings for RQ3 supported Beck et al.'s (2013) finding that male inmates in correctional facilities have a slightly higher likelihood of being victimized. Simpson et al. (2016) used the SHAAP survey data to examine inmates' characteristics and other factors associated with sexual coercion among men in Australian prisons. Simpson et al. found that men who identify as non-heterosexual were over 7 times more likely to report having experienced sexual coercion in prison and were more than twice as possible to report having experienced a threat of sexual force compared with their heterosexual counterparts. Either heterosexual inmates or incarcerated persons who identify as LGBT have a higher chance of being victimized by prison staff (Beck et al., 2013). Specifically, 1.7% of heterosexual jail inmates report being victimized by staff (Beck et al., 2013), whereas 4.3% of LGBT inmates report victimization. For prisons, 2.1% of heterosexual inmates and 5.4% of LGBT inmates experience victimization. Although most of the respondents in this study were heterosexual (86.7%), there were also bisexual and gay male and/or lesbian respondents (7.8% and 2.3%, respectively). For victims of sexual

assault, the process of reporting the incident and seeking help is an intensely emotional experience, fraught with uncertainty and challenges (Ullman, 2010). All across social-ecological levels, significant gaps in research exist in terms of understanding barriers and facilitators to reporting sexual assault in prisons (Kubiak et al., 2018). Therefore, the findings for this study on RQ3 supported the research hypotheses that there is a relationship between nonconsensual sexual misconduct of prison inmates with prison staff and not reporting. Because when looking at the data set, it is challenging to understand why inmates reported "Implied No" (not deny but not accepted) for each reason. Finally, when looking at each reason, most participants reported "More than three reasons" ranging from feared, embarrassed/ashamed, and did not think the staff would investigate to sexual contact was consensual and did not want staff person to get in trouble.

Limitations of the Study

The primary limitation of this study was that I used secondary data. Therefore, I had no control over the methodology used to collect the data (see Cheng & Phillips, 2014). This lack of control proved especially troublesome in this study. There were variables (Injuries during inmate sexual contact with prison staff and reasons for not reporting inmate sexual contact with prison staff) that had substantial missing data. Additionally, since the data were very restricted, I had to travel to Ann Arbor, Michigan, to analyze the NIS data for the physical data enclave only. If I need to use the data again, I will only need to revisit Ann Arbor, Michigan only. Although the NIS-3 was collected nearly 10 years ago, this was the latest inmate survey data that included sexual

victimization. I received the confirmation email from the NACJD and BJS staff that the most recent NIS data is the NIS-3, which is the 2011–12 survey, and the NIS-4 was expected to be administered during 2021 (see Appendix B).

Recommendations

While quantitative analysis results were used to identify the results with two independent variables to predict three dependent variables listed in this study, some were statistically significant; future research opportunities remain. This study yielded many interesting results, but there are still avenues for future research. For example, one of the independent variables was nonconsensual sex with staff that was used to predict the injured when due to having sexual contact with facility staff, but the other potential variable was consensual sex with staff. Additionally, the demographic variables, such as age group, time since admission, and sexual orientation, could also be potential variables to predict sexual victimization within the prison. I recommend that additional studies for further research that are grounded in the strengths and limitations of the current research as well as the literature are reviewed.

I used Part 2: Sexual Victimization in State and Federal Prisons Reported by Adult Inmates, 2011–12. However, Part 1: Sexual Victimization in Local Jails Reported by Adult Inmates and Part 3: Sexual Victimization in Local Jails and State Prisons Reported by Juvenile Inmates offer valuable data. They may be useful to a future researcher who is interested in studying sexual victimization as experienced by these inmate populations in these specific settings. The future research could also focus on the outcome of sexually transmitted diseases in prison inmates. Additionally, the NIS-4 was

in process for 2021, and I would recommend further studies to contact NACJD and

ICPSR for the availability for public use and the application process. Finally, the

methodological and theoretical approach used in this study were appropriate, cost-

effective, and easier to use, thus they will generate more interest in further research on

this topic using similar methods.

Implications for Professional Practice and Social Change

Professional Practice

A positive social change will provide additional knowledge to administrators and

officials for formal rules or policies about sexual relationships between correctional staff

and inmates, which may delineate what is and is not tolerable staff behavior. Correctional

facilities could use this study's results to address leadership and operational issues and

understand the relationship between prison staff sexual misconduct and inmates' health.

Sexual misconduct poses threats to inmates, and it is a violation of victims' rights and

feeling safe in the facility for the period of their incarceration (Lee, 2019). Prison rape

and sexual assaults have created health and financial problems at almost every jail or

prison facility in the East Coast states (Lee, 2019). This study could help prison

management and policy-making institutions develop tools to decrease sexual

victimization in prison. The results could help develop dialogues among correctional

security staff, offenders, administrative personnel, law enforcement agencies, legislators

at the state and federal levels, advocacy groups, and the citizens residing in the United

States.

I highlighted the relationship between inmates' sexual experience with prison staff, serious mental health illness indicated, and the relationship between nonconsensual sexual misconduct of prison inmates with prison staff and not reporting. Specifically, the results suggest that inmates' sexual experience with prison staff is a predictor of serious mental health illness indicated. Also, nonconsensual sex with staff predicts inmates' injuries and inmates not reporting sexual victimization. The value of this research will be most appreciated by further researchers who have an interest in this study's variables. The results deliver an additional framework for a survey on inmates' sexual victimization by prison staff sexual misconduct. The findings from this study contribute to the overall understanding of the nature of inmates' sexual victimization within prison in the United States.

Positive Social Change

Additionally, this study also contributes to positive social change and public health practice by adding to the literature and providing a renewed focus for further studies on prison staff sexual misconduct, especially in state and federal level. From a social change standpoint, finding the reasons why inmates are less likely to report staff sexual misconduct, it would be substantial to better understand and seek strict measures to reduce prison staff sexual misconduct.

<div align="center">

Conclusion

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In this quantitative, correlational study, I examined the relationship between prison staff sexual misconduct with prison inmates and the potential resulting inmates' mental health illness, injuries, and lack of misconduct reporting. There were two

independent variables included in this study: (a) sex with staff and (b) nonconsensual sex with staff. There were three dependent variables included in this study: (a) serious mental illness indicated, (b) injuries during sexual contact with facility staff, and (c) reasons for not reporting sexual contact with facility staff.

I found that prison inmates had sex with staff is predicting serious mental illness indicated and nonconsensual sex with staff is predicting inmates' injuries and reasons for not reporting sexual contact with facility staff. This means that all three RQs were statistically significant. I found that the majority of inmates reported they did not have sex with prison staff 97.4%, but when looking at the nonconsensual sex with staff, the majority of inmates report "No" was 98.2%, this means that when they had sex with prison staff, it was most likely consensual. Sex in the community is more likely to be consensual, whereas sex behind bars can be a mutually desired activity or coercive a tool used to establish a hierarchy (Spaulding et al., 2001). My finding filled on gaps in the existing research about what factors influence whether adult victims in incarcerated systems will report that they have been sexually victimized. Although 95.9% of inmates answered "Implied No" to the questions of reasons for not reporting sexual contact with prison staff, looking at the reasons alone, 1.3% of inmates reported "more than three reasons" between feared punishment by staff, embarrassed/ashamed, did not think staff would investigate, sexual contact consensual, did not want staff person to get in trouble. Using ecological theory to guide this review, various levels of social ecology are incorporated, illuminating a variety of factors influencing the reporting of sexual victimization during incarceration (Kubiak et al., 2018). Therefore, this might be

associated with the outcome of why most inmates in the NIS-3 survey reported "Implied No" for reasons of not reporting of sexual victimization during incarceration. This findings revealed that other factors should be taken into consideration when attempting to determine the reasons of inmates not reporting sexual victimization.

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Appendix A: Secondary Data Collection Tool

Research question	Interview question
RQ1: What is the relationship between inmate's sexual experience with prison staff and serious mental health illness indicated?	1. STAFF_ASSAULT - SEX WITH STAFF. Do you have sex with staff? (Yes, No, and Missing). 2. MH_K6_SCORE3 - SERIOUS MENTAL ILLNESS INDICATED. Do you have a serious mental illness indicated? (Yes, No, and Missing).
RQ2: What is the relationship between non-consensual sexual misconduct of prison inmates with prison staff and injuries that occur?	1. STAFF_ASSAULT_NONCONSENT. Do you have nonconsensual sex with staff? (Yes, No, and Missing). 2. When you had sex or sexual contact with facility staff, were you ever injured? (Yes, No, and Missing).

RQ3: What is the relationship between non-consensual sexual misconduct of prison inmates with prison staff and not reporting?	1. STAFF_ASSAULT_NONCONSENT. Do you have nonconsensual sex with staff? (Yes, No, and Missing).
	2. When you had sex or sexual contact with facility staff, why didn't you report it to a facility staff person? (Yes, No, Missing, Refusal, Don't know, and Implied No)
	  2.1 You were afraid or scared of being punished by facility staff?
	  2.2 You were embarrassed or ashamed that it happened?
	  2.3 You didn't think staff would investigate?
	  2.4 You had the sex or sexual contact willingly?
	  2.5 You didn't want the facility staff person to get in trouble?

Appendix B: Email Correspondence Regarding Access to Data Set

To whom it may concern,

My name is Wanwisa Grover. I am a doctoral student in public health at Walden University. For my dissertation, I am interested in the prisoners/inmates' sexual behaviors and would like to conduct it on the National level. Based on my program, students must be conducting a quantitative study design by using a secondary dataset. I found the National Inmate Survey, 2011-2012 on the IPCSR is the current survey. However, I found the National Inmate Survey (NIS-4) 2018-19 report, but is it possible to use the secondary dataset from this survey? I also found the Prison Rape Elimination Act (PREA) Data-Collection Activities, 2019, but again I am looking for the dataset rather than the report. The help that I would need from you may be just the codebook from the newest survey. The survey could be associated with the PREA survey or any survey associated with the prisoners/inmates' sexual during imprisonment. What do I need to be able to utilize the dataset? Any help from you will be very appreciated.

Best Regards,

Walden University Doctoral Candidate

The IPCSR Team replied:

Hello Wanwisa,

Thank you for reaching out. Unfortunately, 2011-2012 is the most recent data currently available from the National Inmate Survey.

The Bureau of Justice Statistics Team replied:

Good morning and thank you for your emails.

As the PREA Data-Collection Activities, 2020 report explains, the NIS-4 is expected to be administered during 2021. The National Survey of Youth in Custody, 2018 reports are perhaps what you're referred to you when you say 2018-19 reports? Those come from a different survey, the National Survey of Youth in Custody (NSYC-3). NIS is adult correctional facilities.

The most recent NIS data is the NIS-3, which is the 2011–12survey. That dataset is accessible by applying with ICPSR. The NSYC-3 data have not yet been archived, and the codebook is not yet available either.

Appendix C: Data Use Agreement

Hello Wanwisa,

My apologies! ICPSR experienced an organization-wide issue with our email system yesterday, but things are now back up and running. As a next step, we are happy to inform you that your enclave application has been approved, and we are ready to schedule your visit! Please let me know your preferred visit dates/times.

The enclave is located at the Perry Building on the University of Michigan campus, 330 Packard St, Ann Arbor, MI, and is open Monday-Friday from 9-5 EST. There is no parking available in the Perry Building parking lots. Rather, you can find paid street parking across from the Perry building on Division Street or may pay to park in nearby City of Ann Arbor parking structures (for example, 324 Maynard St). For a map of Ann Arbor city parking lots and structures, please visit a2dda.org/transportation. If you will need any Stata commands, syntax, or other files loaded into your enclave workspace, please send us these files ahead of your visit.

There is no internet access or USB connectivity on the enclave computers. Any output (e.g., tables, charts) that you would like to remove from the enclave after your visit will need to be vetted by us for disclosure risk. Therefore, we ask that you be prepared to request only the amount of output that you would need for a typical publication (usually 10 or fewer tables/charts), since we will be unable to review large amounts of output. There are several vetting rules we check for, including that there is no identifying or sensitive information in your output, that any tables have cell sizes >10, and others. Please review the attached document for our full output review guidelines. If

any of your output needs to be modified or redacted before we release it to you, we will

communicate this to you and work with you to find a solution. We will email your

approved output to you after your visit.

In light of the COVID-19 pandemic, additional enclave safety procedures have

been put in place. To comply with University policies, and to protect you and our staff,

we need you to understand and follow the procedures in the attached document.

Our key highlights from this document:

- A maximum of two researchers will be scheduled to work in the enclave per day.

- You must wear a mask at all times, even when you are alone in the enclave.

- You must complete a daily self-screening questionnaire (indicated in the attached

  procedures document). We will ask for

- evidence that you have completed this prior to your use of the enclave.

- If you are ill or may have been exposed to COVID-19, please reschedule your

  visit.

- Researchers who do not follow these procedures may be suspended from using

  the ICPSR Physical Data Enclave.

Please sign and return the attached COVID user guidelines document, as well as

ICPSR's pledge of confidentiality (attached). Otherwise, please let me know your

preferred visit dates, and let me know if you have any questions!