THE EFFECTS OF CORRECTIONAL EDUCATION ON PRISON MISCONDUCT

by

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ABSTRACT

OLIVIA SHAW. The Effects of Correctional Education on Prison Misconduct. (Under the direction of DR. SHELLEY JOHNSON)

The relationship between correctional education and recidivism rates have often been overwhelming with support. However, the examination of whether correctional education affects prisoner misconduct is significantly underrepresented in criminological research. This study aims to determine whether participation in a correctional education program reduces rates of prisoner misconduct. The data utilized for the study was collected by the Bureau of Justice and included a nationally representative sample of male and female inmates within state and federal correctional facilities. However, for the purpose of the study only federal inmates were examined. Results revealed that those that participated in education were more likely to engage in prison misconduct. As for policy implications, the adoption of the RNR model, specifically including components of cognitive behavioral therapy programs were addressed.

DEDICATION

This thesis is dedicated to my best friend, Lauren Cook, whose friendship is truly one of a kind. I am incredibly lucky to have such a wonderful companion in my life and am grateful for the continuous support received during my graduate school experience in North Carolina. This work is also dedicated to the essential workers and to those who lost their life as a result of the coronavirus pandemic. We are truly indebted to the healthcare workers who have consistently risk both their physical and mental health to care for those affected by COVID-19. Lastly, this piece is dedicated to those who are or have been under the control of criminal justice system. This project aims to provide important discussions on the efficacy of correctional programs and contribute to better outcomes of re-entry success.

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CHAPTER 1: INTRODUCTION

America has one of the highest incarceration rates in the world, contributing to a major social and fiscal dilemma for the criminal justice system. The growth in the prison population for the past 40 years has been well-documented. In 2019, there were approximately 1.4 million incarcerated individuals within state and federal correctional facilities (Carson, 2020). A product of the high rates of incarceration can be attributed to the popularity of the "crime control movement" (Clear, 2009). High crime rates during the 1960s-1970s, followed by excessive drug usage by youth led to public concern about "super predators" or a new type of youth offender, one who would use their gang involvement and create chaos in society (Latessa, Johnson, & Koetzle, 2020; Dilulio, 1995). In doing so, the conservative perspective was adopted and promoted harsher sentences and policies in regard to arrest as well as the abandonment of prison services and the increase in punitive programs/services (Latessa et al., 2020). Therefore, the "get tough movement" was conceived and was built on the concepts of deterrence where the belief that swift, certain, and severe punishment would incapacitate current offenders, deter future offenders, and contribute to a reduction in the crime rate (Latessa et al., 2020; Clear, 2009).

Due to the failed responsibility of the criminal justice system, one major social dilemma is the revolving door of recidivism rates and re-incarceration rates. The concept of recidivism generally bolsters the belief of the return of a previously incarcerated individual to a correctional setting. According to the 2018 report presented by the Bureau of Statistics, 68 % of prisoners that were released from prison were likely to be arrested within 3 years of their release. Following the previous trend, that percentage increased as the years increased, concluding that prisoners had an

83% chance of being arrested for a new offense in the 9th year of being released (Alper, Durose, & Markman, 2018). Due to these alarming rates of recidivism, correctional agencies began to re-examine how to rehabilitate incarcerated individuals.

The transition from the old penology values that pertain to punitive measures of deterrence, to the new penology values of rehabilitation, has led to an influx in the development of correctional research. For correctional institutions, the difficulty in determining the risk of recidivism can be cumbersome. The measurement of risk largely involves external factors such as families, previous criminal histories, employment, education, and drug use. Therefore, correctional institutions have begun to analyze inmates based on their treatment needs in order to reduce the rate of recidivism. Current correctional programs often include educational programming, employment programming, cognitive behavioral therapy (CBT), chemical dependency (CD) programs, sex offender treatment, mental health programs, domestic violence programs and re-entry programs (Duwe, 2017). The ultimate goal of these programs is to contribute to offender desistance and ultimately a reduction in recidivism (National Institute of Justice, 2008). Therefore, correctional research has become extremely valuable in determining which programs work on the post-release outcomes of previously incarcerated offenders.

One of the many barriers to positive offender re-entry is a previously incarcerated individual's educational status. Individuals who are detained by the criminal justice and correctional system often have little educational skills. Low educational skills of offenders include, poor academic performance in reading, writing, math and oral communication skills (Haigler, Harlow, O'Connor, & Campbell, 1994; Spangenberg, 2004). Forty-one percent of inmates in the nation's state and federal prisons and local jails and 31% of probationers had not completed high school or its equivalent. In comparison, 18% of the general population age 18 or

older had not finished the twelfth grade (Pope, Vanchieri, Gostin, et al., 2007). Today, educational programs are an integral part of correctional programming and include a variety of programs from basic education programs to higher education programs (Cecil, Drapkin, MacKenzie, & Hickman, 2000). Extant research has been conducted by criminologists on the effects of educational programs and have generally concluded an inverse relationship. Inmates who participated in correctional education programs had lower rates of recidivism and the time to recidivism was longer than any other correctional education program rates (Hall, 2015).

However, criminological research on this topic has largely ignored the relationship between participation in correctional education and prison misconduct. The results of the few available studies yield inconclusive results with some studies finding that there was an inverse relationship. Specifically, Lahm (2009) found that inmates who participated in educational program particularly college education programs were less likely to engage in prison misconduct. In contrast, Lagenbach, North, Aagaard, and Chown (1990), found that there was no difference in rates of prison misconduct in inmates who participated in a televised educational versus those who did not. Acts of prison misconduct pose a myriad of dilemmas to correctional agencies including concerns about public safety, prison safety, financial tension, and an increase in sentence length which then contributes to prison overcrowding (Berk, Kriegler, & Baek, 2006; Cao, Zhao, & Van Dine, 1997; Steiner, Butler, & Ellison, 2014).

Given the increasing support for the use of educational programs in reducing recidivism rates, further exploration on the examination of prison misconduct as a surrogate for community-based recidivism measures would be advantageous. Previous research on the correlation between education participation and prison misconduct has generally utilized restrictive data that limits the external validity of the study (Adams et al., 1994; Lahm, 2009; Langenbach et al., 1990;

Latessa et al., 2015). For example, Lahm (2009), used self-reported data which may be susceptible to biases and primarily focused on male inmates. The current study will add to the gaps in the current literature on participation in correctional education programming and prisoner misconduct by exploring this relationship with a nationally representative sample. In doing so, results from this study will provide valuable information on this relationship and may create better insight on post-release outcomes (Lahm, 2009). Secondly, examining prison misconduct with a large sample including both men and women, will allow for a better understanding of how other important variables such as age, race and gender impact this relationship (Lahm, 2009).

CHAPTER 2: LITERATURE REVIEW

Correctional Support for the RNR Model

Within the field of criminology, the support for the rehabilitation model has been agnostic about which treatment programs work for specific inmates since the 1970s. Such skepticism was fueled by Robert Martinson's (1974) study proclaiming that nothing works to reduce recidivism rates. Due to the publication of this piece, the abandonment of rehabilitative programs within correctional facilities became a reality within such a period (Latessa, et al., 2020). With the abandonment of rehabilitative programs, correctional policies began to shift from rehabilitative to punitive methods that encouraged "tough on crime" legislation focusing on incapacitation and deterrence. However, punitive methods of incapacitation and deterrence often had the reverse effect (Andrews & Bonta, 2010; Latessa et al., 2020). The negative effects of punitive correctional methods led criminologists to reconsider the rehabilitation approach. In doing so, a collection of analyses began to reveal that there is more than meets the eye when examining correctional program efficacy. Examination of program efficacy through meta-analyses unveiled that there was a combination of effective principles for intervention which were outline by Canadian criminologists, Andrew, Bonta and Gendreau through the Risk, Needs and Responsivity (RNR) model (Andrews & Bonta, 2010; Cullen, 2013; Smith, Gendreau, & Swartz, 2009).

Risk

Foundationally, the RNR model engenders interventions that include behavioral, conditional, and learning perspectives. The aggregation of these perspectives then provides a plan on how and who to properly treat (Cullen, 2013). The first component of the RNR is the risk principle. Interventions that are included within the risk principle focus on the risk factors that are associated with a particular offender (Cullen & Gendreau, 2000). Specifically, there are two

types of risk factors that should be considered, static and dynamic predictors (Cullen, 2000). Static predictors of risk include components of an offender that cannot be changed. An example of a possible static predictor risk could be an offender's criminal history. Conversely, dynamic predictors of risk are factors predictors that are malleable and can be changed (Cullen, 2000). Examples of dynamic predictors include antisocial or pro-criminal attitudes, having pro- criminal friends or associates, and temperamental or personality factors (Cullen & Gendreau, 2000). In addition, to the criminogenic risk factors mentioned above, Andrews and Bonta (2010) outlined several non-criminogenic factors that are not considered to be criminogenic on their own but establish functionality of the offender (Caudy, Tang, Ainsworth, Lerch, & Taxman, 2013). Such dynamic non-criminogenic risk factors include lack of educational attainment and or literacy deficiencies, imperfect employment history, insecure residency, mental illness, and little to no prosocial leisure time activities (Caudy, et al., 2013). Although seemingly unimportant, these factors contribute to human productivity and thus when combined with criminogenic factors are strong predictors in recidivism. Additionally, non-criminogenic risk factors determine a participant's success in correctional programming (Caudy, et al., 2013; Latessa et al., 2020).

Therefore, the risk principle involves assessment on the probability of an individual committing criminal acts and complementing correctional intervention with an individual's risk level. For this reason, program interventions should focus on high-risk offenders rather than low risk offenders (Latessa et al., 2020; Bonta, 2013). Program interventions should focus on high-risk offenders because low risk offenders are less likely to return to prison. When low risk offenders are subjected to intensive programs, results conclude that their rate of failure increases (Latessa et al., 2020). This result is due to the fact that low risk offenders that are enrolled in intensive programs are done so with high-risk offenders. When both low and high-risk offenders

are treated together deviant behavior may be reinforced causing an interruption in the factors that make offenders low risk (Latessa et al., 2020). That being said, resources should be dedicated to targeting those who are most likely to return to prison, or high-risk offenders (Latessa et al., 2020; Bonta and Wormith, 2013).

Need

The second component of the RNR model encompasses targeting the needs of particular offenders (Andrews & Bonta, 2010; Cullen, 2013). The need principle concentrates on the factors most related to criminal behavior, which are referred to as criminogenic needs. The criminogenic needs contribute to deficiencies in prosocial behavior that encourage forms of criminality (Cullen, 2013). Criminogenic needs or risk factors for offenders are often marked by individual differences that are specific to the offender. As an example, criminogenic risk factors may include, "attitudes, orientations, and values favorable to law violations; antisocial peer associations; problems associated with alcohol/drug abuse; anger/hostility level, self-control, self-management, and problem-solving skills; use of leisure time; attitudes/skills associated with school/work; family affection/communication; and relapse prevention" (Smith et al., 2009, p. 153). That being said, high risk offenders and those with low educational skills are the most optimal type of person who could be served by the program interventions (Cullen & Gendreau, 2000; Gendreau & Ross, 1979, 1987).

Differentiating between criminogenic and non-criminogenic needs is influential in aiding correctional agencies in determining program targets and treatment precedence (Caudy, et al., 2013). Those with low educational attainment may have little to no verbal or literacy skills and therefore will have trouble obtaining employment upon release (Berg & Huebner, 2011; Caudy, et al., 2013). Therefore, low educational attainment creates a stress in a person's life, one that is

often coupled with other stressors such as lack of employment (Caudy, et al., 2013). By directly targeting these factors, a reduction in recidivism may be achieved. Additional research is needed on the relationship between education and recidivism outcomes and the positive results of correctional education programs.

Responsivity

Lastly, the final component of the RNR model is the responsivity principle. The responsivity principle encompasses a dual complex that pertains to both general and specific responsivity. General responsivity points out that the most efficient and effective interventions should include cognitive, social learning and behavioral programs (Smith et al., 2009). Here, importance is placed on treating the attribute that makes the offender deviant, or the derivative of the criminal behavior. Overall, the general responsivity approach adopts a proactive and intensive approach to modify the individual's behavior (Cullen, 2013). On the contrary, specific responsivity focuses on methods of program delivery that match a particular individual's abilities (Cullen, 2013; Smith et al., 2009). For instance, people may have cognitive deficiencies such as a low IQ that may prevent them from being able to perform to their highest capabilities. In such a case, adjustments may need to be made to accommodate the person's learning abilities (Cullen, 2013).

Overall, the RNR model informs correctional agencies on who to target for intervention, which criminogenic needs the intervention should focus on, and matching treatment to the appropriate individuals (Latessa et al., 2020). By focusing on these components, correctional agencies can effectively reduce the recidivism rates of previously incarcerated individuals while creating lasting effects. This goal is crucial to the formation of evidence based correctional practices (Latessa et al., 2020; Smith et al., 2009).

Evidence Based Corrections

The accumulation of research supporting RNR has led to the push to incorporate evidence-based corrections (EBC) (Latessa, 2020; Smith, 2009). From an evidence- based perspective, emphasis is placed on constructing effective guidelines in reducing crimes. Guidelines that stem from the evidence-based approach are not to be concrete but fluid in its evaluations. Additionally, this approach underlines the importance of accountability and quality. Accountability and quality then engender ethical considerations in the analysis of program results (Cullen & Gendreau, 2000). Evidence based programs (EBP) must adhere to the 5 following dilemmas.

First, programs must examine program participants in addition to program policies to establish program efficacy. Second, relevant research is needed to confirm whether or not a program works in the way it was designed. Third, effective programming is founded upon the ability to reduce recidivism. Therefore, it is imperative to use the analysis from current research to generate new programs and advance existing programs. Fourth, evaluation of program participants should be addressed and analyzed to certify that the offender's behavior has been modified. Modified behavior can be observed through learning skills and adopting prosocial attitudes and norms. In addition, the evaluation process should include data that measures performance and contributes to program improvement. Fifth, and the most important of EBC, should be the incorporation of qualified staff members who are knowledgeable about program guidelines, expected results and are committed to changing the offender's behavior (Latessa et al., 2020).

Questions about achieving the presumed outcome from correctional education programs has engendered much concern. That being said, there is a need to analyze the current effects of

correctional education on not only post-release outcomes but pre-release outcomes. In order to accomplish this task, the incorporation of representative samples, inclusion of recent literature and the application of rigorous methodological guidelines should be examined. In doing so, collective research will guide correctional agencies and staff in determining which programs are the most effective and how to implement such programs. Therefore, the inclusion of high-quality studies is needed to reinforce the positive results of such programs. Therefore, the aim of this study is to aid in the attainment of knowledge and comprehension about the effectiveness of correctional education on prison misconduct and provide further recommendations on post-release outcomes (Davis, Bozick, Steele, Saunders, & Miles, 2013).

Importance of Correctional Education

Education has been an important component of correctional programming since Zebulon R. Brockway proposed his theory of rehabilitation at the first Conference of the American Prison Association (Reagen, Stoughton, Smith, & Davis, 1976). Central to his proposal was the notion that law-abiding behavior was attainable through legitimate industry and education (Reagen et al., 1976). The early focus of educational programming was on religious instructions and helping offenders achieve spiritual enlightenment (Cecil et al., 2000). Education programs did not become popular in the U.S. until the 1930s, when the focus changed from religious instruction to programming to help offenders remain crime-free upon release from correctional supervision. Presently, educational programs include adult basic education, such as reading and writing, GED courses, and even college level courses (Cecil et al., 2000).

Education then acts as a protective factor that examines participation, academic performance and attachment to school settings. Educational environments play a pertinent role in the control and fostering of socially acceptable behaviors (Oliver, Wehby, & Reschly, 2011).

Supportive educational environments can engender motivational skills during the learning process which may derive from encounters of mentorship from teachers and interactions with similar peers (Logan-Greene et al., 2011; Quint, 2006). The importance of education is often analyzed outside of correctional settings. However, one major turning point that is often ignored in the literature is the role of education as a positive turning point and its effect on social ties and direction to other methods of desistence to crime such as employment.

From a sociological perspective, Emil Durkheim emphasized the importance of education on forming attachments and providing stake in conformity in his book Moral Education (Ottaway, 1968). Durkheim's theory begins with three important proponents. The first analyzes the way in which the spirit of discipline is established. Secondly, Durkheim argues that education contributes to the attachment to a greater social group. Lastly, education allows for individuals to develop autonomy and self-determination (Ottaway, 1968). In addition to the three concepts mentioned, Durkheim pays special attention to the role of teachers in educational settings. Teachers are representative of authority figures and thus hold conventional ideals and morals analogous to the larger context of society. Similar to Durkheim's ideologies on the importance of teachers in educational settings, Rose and Rose (2014) emphasized the attitudes of authority figures such as correctional officers, teachers and argues that bonding to such activities may become difficult if the experience is tied to negative connotations for the prisoners. This section pays special attention to Durkheim's theory on attachment developed in educational settings. Morality is suggestive of the need to attach to a social group. Children determining their role in society is largely influenced by several institutions including one's family and education. The knowledge of one's place in society is then learned through practice with the incorporation of education and becoming a member collective group in action. Durkheim points out that

educational settings reinforce local norms and standards in which conformity to these norms and standards is valued (Ottaway, 1968).

Given that people entering the correctional system often have low levels of education, providing educational programs not only provides them with viable skills to successfully re-enter society, but provides prosocial groups in which societal norms and values are upheld. It would seem that inmates who obtain social capital through improved academic performance and attachment to educational programs should be more likely to redirect behavior trajectories in a positive direction upon release. Therefore, it is quite possible that correctional education can be a triggering event in reducing involvement in crime and increasing involvement in conventional activities after release, thereby affecting long-term outcomes in adulthood (Department of Education, 2003).

Historically, correctional education policies have been limited. Lyndon Johnson administered the Higher Education Act in 1965 which allowed inmates to receive funding for college courses in prison. However, in 1993 and 1994 the Violent Crime Control and Law Enforcement Act and the Higher Education Reauthorization Act was removed and was no longer applied to eligible inmates to receive financial funding from Pell Grants (Mallory, 2015). This devastating move reduced funding for educational resources and programs therefore restricting opportunities for inmates. Currently correctional education policies are in the process of being revived. The Workforce and Community Transition Training for Incarcerated Youth Offenders (IYO) Program, is a unique program that provides funding along with employment counseling for previously incarcerated youth (Winterfield, Coggeshall, Burke-Storer, Correa, & Tidd, 2009). Following the execution of the (IYO) program, the Reauthorization of the Higher Education Opportunity was signed into effect in 2007 and increased the funding for post-secondary prison

education (Lowry, 2009). Furthermore in 2008, the Second Chance Act allocated funding to a myriad of re-entry programs for previously incarcerated offenders (Calleja, Dadah, Fisher, & Fernandez, 2016). Inconsistencies in correctional education policy enactment is largely due to the variability in correctional research results. Research limitations are often attributed to methodological dilemmas which pertain to lack of causal mechanism, limited research designs, selection biases, and restrictive abilities to measure and conceptualize recidivism (Batiuk, Lahm, McKeever, Wilcox, & Wilcox, 2005; Jancic, 1998; Jupp, 2006; Lewis-Beck, Bryman, & Liao, 2004; Riemer, 1942; Scott, 2016)

Correctional Education and Post-Release Outcomes

Very early studies of correctional education and its effects generated mixed results. "Studies by Leopold in Illinois during the period 1933-1939, by Schnur in Wisconsin in 1948, by Saden at Michigan State Prison from 1945-1949, and by Zink in Delaware in 1962 all generally resulted in a positive correlation between prison school attendance and socially-acceptable post-release behavior (Johnson, Shearon, & Britton, 1974). On the other hand, studies reported by MacSpeiden in 1966 in Indiana, Glenn in Missouri in 1966, and Glaser in 1969 showed no significant differences in recidivism rates between participants and non-participants in academic educational programs" (Johnson et al., 1974, p. 22). Additionally, a survey of six academic and vocational programs for adult male offenders between 1948 and 1965 concluded that recidivism was unaffected by academic attainment (Martinson, 1974). Following Martinson's (1974) study, similar findings were also observed (Glaser, 1964; Jacobson & McGee, 1965; Zivan, 1966).

Nevertheless, the inability to establish a relationship between correctional education and its effects has largely disappeared and current research on this topic is quite supportive.

Lockwood and colleagues (2012) found that educational level was a deterministic characteristic for recidivism rates. Those who had low levels of educational attainment were more likely to recidivate than their counterparts who had higher levels of educational attainment (Lockwood et al., 2012). A study conducted in Ohio concluded that inmates who participated and completed college course within a college-based program had a reduced recidivism rate of 72% in comparison to those who did not participate (Vacca, 2004).

As previously mentioned, individuals that enter the criminal justice system often have low educational attainment creating a barrier in the re-entry process (Duwe & Clark, 2014). That being said, the low educational status of an individual is considered to be a common criminogenic need (Andrews et al, 2006). Generally, correctional education programs, especially higher education programs, have proven to have the most significant results (Duwe & Clark, 2014). Therefore, providing educational programming to inmates is beneficially at the micro and macro level. At the micro level, correctional programs increase cognitive skills, prosocial behaviors and engender the adoption of life skills (Lee, 2016). In addition, the positive effects of correctional programming have been linked to other positive post- release outcomes such as the securement of employment (Duwe & Clark, 2014). Similarly, at the macro level, the utilization of education programs in correctional facilities is fiscally beneficial for the community. For instance, Aos and Drake (2013) found that for those who participated in educational programs, the return on investment was estimated to be almost twenty dollars. In continuance, Duwe (2013) examined the Minnesota Department of Corrections and concluded that when at least one dollar was spent on correctional education programs the cost avoidance interest was close to four dollars. Although this revenue may seem small, when considering the

large amount of participants in correctional education programs, the cost avoidance interest was expected to be over 3 million dollars (Duwe, 2013). Overall, correctional education programs can close the educational gap, reduce recidivism rates, and reduce the costs for correctional facilities. Therefore, the implementation of correctional education programming is necessary.

Gender and Correctional Education

In terms of gender differences on educational participation and recidivism rates, literature shows that the results differentiate between genders. For adult men, there seems to be an overwhelming amount of support that educational and vocational programs lead to a reduction in recidivism rates, disciplinary violations, and increases in employment opportunities and participation in education after being released (Davis et al., 2013; Gerber & Fritsch, 1995; Jensen & Reed, 2006). As for completion of programs, male inmates who graduated with a certificate from GED studies or a certificate in college studies were less likely to recidivate upon release (Anderson & Moore, 1995; Batiuk et al., 2005; Bozick, Steele, Davis, & Turner, 2018; Brewster & Sharp, 2002; Hall, 2015; Jancic, 1998; Nally, Lockwood, Knutson, & Ho, 2012; Vacca, 2004). An analysis of post- secondary education conducted by Wilson (2000) concluded that those who participated in post-secondary education had the lowest rate of recidivism when compared to those who completed vocational education programs, Adult Basic Education (ABE) or GED programs (Batiuk et al., 2005). General educational developmental programs are more likely to have an impact on reducing recidivism rates as well as college and vocational programs. The programs that are least likely to have an effect in its entirety are ABE Programs (Anderson & Moore, 1995). This result is largely due to the lack of methodological rigor utilized to identify the definitive results of the relationship between adult basic education and recidivism (Cecil, 2000; Cho et al, 2013).

Using a technique known as propensity score matching (PSM), a study conducted by (Kim & Clark, 2013) examined male inmates who had completed college correctional education programs. While utilizing the PSM technique, researchers matched individuals based on similar characteristics and found that the promising results of correctional are susceptible to inflation due to self- selection bias by not controlling for confounding effects (Kim and Clark, 2013). Results portrayed that prior to applying, those who did not participate and complete their college programs while incarcerated were more likely to recidivate by 35.9% or 3.8 times compared to those who had completed their program (Kim & Clark, 2013). However, once PSM was applied the likelihood of recidivism between the control group (those who did not participate) and the experimental group (those who did participate) was reduced to 17.1% or only 1.8 times more likely to recidivate (Kim & Clark, 2013). Although prone to self-selection bias, when such a dilemma was controlled through propensity score matching, results were statistically significant in portraying a slightly lower recidivism rate for those who participate in college correctional education programs (Kim & Clark, 2013). In continuation, logistical regression analysis revealed that the likelihood that an inmate will recidivate after receiving a college degree while in prison were less likely to recidivate than those who did not (Kim & Clark, 2013). Similarly, the probability of risk of recidivating over time also decreased for those who earned their college degree while incarcerated compared to their counterparts, thus leading to the belief that inmates who participate in college based correctional education are less likely to recidivate (Kim &Clark, 2013).

When examining the rate of recidivism with a closer lens, the type of program in which an inmate participated in had little effect on the variation in the rate of recidivism (Sedgley, Scott, Williams, & Derrick, 2010). To demonstrate, (Sedgley et al., 2010) found that inmates

who participated in educational programs recidivated within 3 years of their release and this percentage increased at the 10-year marker to 46- 50 %. Nevertheless, inmates who did not participate in correctional education programs were observed to recidivate at a higher rate at both the 3 year and 10-year marker (64 % and 73 %) and more quickly (Sedgley et al., 2010). Overall, results support the belief that educational programs do have an effect on reducing the rate of recidivism however, the time upon release and participation seems to erode the beneficial effects (Sedgley et al., 2010).

When comparing recidivism rates between men and women who were incarcerated, studies find that men are more likely to recidivate than women by 1.2 to 1.5 times (Duke, 2018). A primary example of this phenomenon can be observed in a study conducted by "Rose (2004) that found that nearly half of the female population released from federal correctional facilities recidivate within 5 years of being released" (Flores, Barahona-Lopez, Hawes, & Syed, 2020, p. 2). In comparison to male offenders, female offenders are also more likely to have less educational achievements while in prison (Flores, 2016). A pattern in offending populations is the lack of literacy and educational attainment. Similar disparities are observed with female offenders. For example, earlier studies concluded that about 20% of female inmates have poor academic and literacy skills, while 60% come from low socioeconomic statuses and are unemployed (Owen & Bloom, 1995). However, there is a lack of literature and research on participation in correctional education and recidivism rates for women offenders. The studies that do include this demographic are generally small in sample size and yield little results. In a study conducted by Johnson et al. (1974), researchers analyzed a small sample of 100 female offenders and found that 80 out of the 100 women examined were less likely to be recidivate when they obtained a GED certificate while they were incarcerated. Conversely, using the same

sample, 77% of women who did not obtain a GED certificate did not recidivate. The results suggest that educational attainment by female offenders is inconclusive when determining its effect on recidivism (Johnson et al., 1974).

For females, youth and racially diverse offenders, participation in college programs had the most success in reducing recidivism rates. In addition to educational programs, vocational programs also proved to beneficial to the same demographic mentioned above. Adult Basic Education (ABE) Programs are more likely to have a positive influence on recidivism rates for older offenders, female, inmates with longer sentences and inmates with at least one prior incarceration experience (Anderson & Moore, 1995). Clarification about why ABE work for certain populations is unclear. Similarly, when educational programs for women are combined with visitation rights by family and children, women were less likely to recidivate and were less likely to have behavioral problems while incarcerated (Rose, 2004). Studies conducted on female offenders and their participation in educational programs are often subjected to gender biases (Case & Fasenfest, 2004). An analysis of expectations and opportunities for female inmates and participants revealed that programs geared toward incarcerated women included gendered occupations such as office skills and cosmetology (Case & Fasenfest, 2004). In addition, educational programs available to female offenders are often low in quantity and are even more so than they were a couple of decades ago (Pollock-Byrne & Pollock-Byrne, 2002). When educational programs are offered to incarcerated women, higher education programs such as Bachelor and or Master's degree programs are not universally offered in all facilities (Parrotta & Thompson, 2011). When such programs are offered and available, bureaucratic challenges are observed including high tuition rates, limited seating and lack of funding (Chlup, 2006). Therefore, low participation rates in higher education in correctional facilities for female

offenders may be due to limited programs offered and lack of funding for such programs (Dillon & Colling, 2010).

Race and Correctional Education

An abundance of research finds that race is an important predictor of recidivism (Costopoulos, Plewinski, Monaghan, & Edkins, 2017; Folk et al., 2018; Lilley, DeVall, & Tucker-Gail, 2019; Lockwood, Nally, & Ho, 2016). In terms of the effects of correctional education on race, the results vary. For one, a meta- analysis examined by Duke (2018) found that Caucasian inmates are more likely than corresponding races such as Hispanic or African American inmates to recidivate. Conversely, Riggs (2015) concluded that African American inmates are more likely to recidivate in comparison to both Caucasian and Hispanic inmates (Duke, 2018).

Additionally, in a study conducted by Lockwood and colleagues (2012), Caucasian inmates had lower recidivism rates upon release by 67.9% compared to 73.6% exhibited by African American inmates. This comparison was measured by inmates who had an educational level that was below secondary school (Lockwood et al., 2016). In terms of inmates who had an educational level that was above secondary education such as a GED certification, African American inmates had a slightly lower recidivism rate of 49.3% compared 50% by Caucasian inmates. Pertaining to each of these results, the participants were under the age of 30 (Lockwood et al., 2016). Following the low educational attainment of African American offenders, the rates of recidivism for African Americans are often plagued by complexity that is derived from their higher rates of imprisonment than their Caucasian counterparts (Gibbons & Katzenbach, 2006). Following the logic of Christensen (2013) and Papagiorgakis (2014), they noted that correctional education would be an inadequate tool to reduce the recidivism rates of Caucasian inmates due to

their higher rates of educational achievement. Comparatively, Riggs (2015) argues that African American inmates are more likely to recidivate and are less likely to have obtained educational achievement prior to being incarcerated and are therefore more likely to benefit from correctional education (Duke, 2018).

Employment

Given the unemployment rate among American citizens, the unemployment rate for previously incarcerated individuals is higher than the US population due to an inmate's low education level, criminal background, inadequate job skills, and job market competition (Nally et al., 2012). However, Nally and colleagues (2012) found that when analyzing inmates on their post release outcome, those who had participated in correctional education had improved their rate of employment from 7.2% to 17.3%. Similar findings were addressed in supportive studies (Davis et al., 2013; Gerber & Fritsch, 1995; Vacca, 2004). In addition, adult basic education, GED programs and postsecondary education (PSE) program participation was found to have positive relationship with post-release employment and negatively relationship with future criminal behavior (Scott, 2016). In a study conducted by Lockwood and colleagues concluded that offenders who had college education were more likely to obtain employment by 67% from 2005-2009 compared to those who had a lower educational level. Similarly, participation in correctional education programming, specifically obtaining secondary degrees in prison increased the likelihood of obtaining employment by 59% within the first 2 years of release (Duwe & Clark, 2014). In terms of offenders, those who were most likely to obtain employment included younger offenders, probation violators, chemical dependency participants, and offenders placed on work release and those who were released early. Conversely, male offenders,

drug offenders, property offenders and those with institutional discipline convictions were less likely to secure appropriate employment (Duwe & Clark, 2014). Valuable jobs for this target population include temporary jobs in help service agencies and food or lodging services (Nally et al., 2012).

In addition to successful employment, Nally et al. (2012) also examined post- release income rates. Results concluded that individuals what had obtained successful employment upon their release and had participated in correctional education programs while they were incarcerated were more likely than their counterparts to achieve higher quarterly income. Specifically, inmates in the comparison group who did not participate in correctional education programs but did obtain employment, generally received a quarterly income of less than 1,000 dollars and were labeled as marginally employed. The inmates that were marginally employed were more likely to secure jobs in the help service agencies and were less likely to become financially stable and socially independent. Additionally, those in the comparison group were likely to recidivate at a rate of 65.4%. Hourly wage calculated only for offenders who obtained post-release employment who earned post-secondary degrees (71%) was slightly higher than that of the prisoners in the comparison group (68%). Offenders in both educational degree groups fared better than their comparison group counterparts regarding total hours worked and total wages earned (Duwe & Clark, 2014).

La Vigne et al. (2008), summarized the crucial role of employment in determining the successful integration into the community among released offenders, and state that at its most basic level, employment provides former prisoners with a consistent source of funding for necessary food, shelter, clothing, transportation, and other basic amenities. It also increases

feelings of self-efficacy and self-sufficiency, building confidence in released prisoners that they can support themselves without needing to resort to criminal activities or reliance on family members or "handouts," and providing a new social network that supports positive behaviors and serves as a protective factor against future criminal activity (Lockwood et al., 2012).

In conjunction with studies of recidivism, research on the effects of prison misconduct have become more popular. Specifically, researchers have examined how rates of prison misconduct contribute to community forms of recidivism and encourage further examination of one's risk to recidivate (Cochran, 2014). Overall, previous literature regarding the correlation between prison misconduct and risk have resulted in mixed conclusions. For instance, O'Leary and Glaser (1972) found that there was no association or very little association between prison misconduct and recidivism rates. A study conducted by Trulson et al.'s (2011) reached the same conclusion. In contrast, Hill's (1985) study results revealed an acceptable correlation between recidivism and prison misconduct. The fluctuation in overall study results regarding prison misconduct may be attributed to the lack of control for other variables that predict recidivism such as age or one's criminal history (Cochran, 2014). However, when studies did control for such factors, the link between recidivism and prison conduct generated an inverse relationship (Gottfredson & Adams, 1982; Lattimore, Visher, & Linster, 1995; Heil, Harrison, English, & Ahlmeyer, 2009; Huebner, Varano, & Bynum, 2007; Lattimore, MacDonald, Piquero, Linster, & Visher, 2004; Spivak & Damphousse, 2006; Trulson, Marquart, Mullings, & Caeti, 2005; Trulson, 2007; Gendreau et al., 1997). Due to the inconsistency in literature results, more recent studies are needed to further analyze the relationship between prison misconduct and recidivism.

Predictors of Prisoner Misconduct

There is an array of factors that contribute to prisoner misconduct including individual, situational and environmental factors (Gendreau, Goggin, & Law, 1997; Goodstein & Wright, 1989; Toch, Adams, & Grant, 1989). However, for the purpose of this paper, focus will pertain to individual factors. Analysis of prison misconduct has often been explained by two important perspectives, deprivation theory and importation theory (Gaes & McGuire, 1985; Goffman, 1961; Harer & Steffensmeier, 1996; Hochstetler & DeLisi, 2005; Lahm, 2008; Paterline & Petersen, 1999; Sykes, 1958; Thomas, 1977). Components of the deprivation theory suggest behaviors exhibited by inmates are a product of structural features in prison and the ability for an inmate to cope within correctional settings (Clemmer, 1940; Hayner & Ash, 1940; Sykes, 1958). Conversely, importation theory suggests that explanations for inmate behavior can be understood through beliefs, experiences and characteristics (Irwin & Cressey, 1962). Therefore, there is a relationship between propensity to commit crimes within society and prison misconduct (Duwe, 2020; Duwe & Clark, 2014; French & Gendreau, 2006; Lahm, 2009). Correspondingly, the factors that contribute to prison misconduct are synonymous to the factors that contribute to recidivism in the community and are therefore contingent upon static factors (Caudy, Durso, & Taxman, 2013; Gendreau et al., 1997). One such static factor that is a predictor of both recidivism and prison misconduct is an individual's criminal history.

In terms of examining criminal history on prison misconduct, there has been an overwhelming support for such a relationship (Lahm, 2008; Steiner & Wooldredge, 2009a; Wooldredge, Griffin, & Pratt, 2001). However, some studies have found the opposite effect and instead have revealed that there was no significant relationship between criminal history and prison misconduct or that inmates with a criminal history were less likely to have prison infractions (Cao et al., 1997; Morris, Longmire, Buffington-Vollum, & Vollum, 2010;

Wooldredge, 1994). When investigating the relationship between violent offenses committed by inmates and violent forms of prison misconduct, research seems to support such a connection (Steiner & Wooldredge, 2009b). In particular, specific violent offenses such as robbery and assault have been observed to have an impact on violent rates of prison misconduct. On the other hand, violent offenses that included acts of murder sexual assault had the opposite effect on rates of prison misconduct (Drury & DeLisi, 2011; Sorensen & Davis, 2011).

Age

Research conducted on the effect of individual factors on prisoner misconduct has yielded inclusive results. Previously, several individual factors have been identified to have an impact on prison misconduct include age, marital status, and employment, where education, previous criminal history, ethnicity and time served have yet to produce significant results (Chapman & Alexander, 1981; Gendreau et al., 1997). Conversely, Motiuk (1994) concluded that criminal history, age, race, employment, family ties, deviant peers, prison crowding, employment and education were all considerable factors related to prison misconduct (Gendreau et al., 1997). However, one such factor shown to have a consistent significant impact on prisoner misconduct is age (Adams, 1983; Brown & Spevacek, 1971; Ellis, Grasmick, & Gilman, 1974; Faily, Roundtree, & Miller, 1980; Flanagan, 1980, 1983; Jaman, 1971; Johnson, 1966; Mabli, Holley, Patrick, & Walls, 1979; Steiner et al., 2014; Steiner & Wooldredge, 2008; Toch, 1976; Toch & Adams, 1986; Wolfgang, 1961; Zink, 1957). For instance, in a study conducted by Steiner et al. (2014), results concluded that younger inmates were more likely to commit acts of misconduct while in prison. Specifically, inmates who were under the age of 21 were found to have more infractions will in prison while inmates who were older than 36 were found to have less infractions in prison (Steiner et al., 2014).

Race and Ethnicity

Like much of the research mentioned previously, the effects of race and ethnicity on prison misconduct have also resulted in mixed conclusions. Some studies have found that ethnicity, specifically ethnic minorities are a profound predictor of prisoner misconduct (Cao et al., 1997; Carroll, 1974, 1982; Craddock, 1996; Flanagan, 1983; Goetting & Howsen, 1983, 1986; Hewitt, Poole, & Regoli, 1984; Jaman, 1971; Myers & Levy, 1978; Petersilia, Honig, Hubay, & Corporation, 1980; Sorensen, Wrinkle, & Gutierrez, 1998; Toch & Adams, 1986; Wooldredge et al., 2001; Wooldredge, 1994; Zink, 1957). Similarly, other researchers have concluded that African Americans and Hispanics have higher rates of prison misconduct violations than their Caucasian counterparts (Berg & DeLisi, 2006; Bonner, Rodriguez, & Sorensen, 2017; Fuller & Orsagh, 1977; Gaes, Wallace, Gilman, Klein-Saffran, & Suppa, 2002; Harer & Steffensmeier, 1996; Huebner, 2003; Sorensen & Davis, 2011; Steiner & Wooldredge, 2009a). Alternatively, Bonner et al. (2017) found that Hispanics were less likely to take part in forms of prison misconduct. However, alternative researchers have found that Caucasian inmates are more likely to have prison misconduct violations and that African Americans are less likely to have prison violations (Johnson, 1966; Petersilia Honig, 1980; misconduct (Camp, Gaes, Langan, & Saylor, 2003; Ellis et al., 1974; Finn, 1995; Flanagan, 1983; Hewitt et al., 1984; Johnson, 1966; MacDonald, 1999; Paterline & Petersen, 1999; Poole & Regoli, 1979; Ramirez, 1983; Wright, 1989). In addition, some researchers have concluded that race/ethnicity has little to no effect on an inmate's propensity to receive a violation for misconduct while in prison (Ellis et al., 1974; Petersilia et al., 1980; Senese & Kalinich, 1993; Wolfgang, 1961).

Gender

When analyzing the effects of gender on prison misconduct, results tend to be biased given the overwhelming research collected utilizing male samples. That being said, when female offenders have been included in the sample research has found that females commit forms of prison misconduct at the same rate as male offenders but are less likely to engage in violent forms of prison misconduct (Camp et al., 2003; Craddock, 1996; Harer & Langan, 2001; Wolff, Blitz, Shi, Siegel, & Bachman, 2007). As an example, research conducted on male and female inmates in prisons within Minnesota found that "10% of the male prisoners in Minnesota accounted for 70 % of all discipline convictions, 79% of all misconduct resulting in a segregation or restrictive housing penalty (i.e., more serious misconduct), and 100 % of assaults against other inmates and staff (i.e., violent misconduct)" (Duwe, 2020, pg.175). Similarly, about "10% of the female inmate population in Minnesota was responsible for 62 % of all discipline convictions, 71% of misconduct resulting in segregation, and 100% of all violent misconduct" (Duwe, 2020, pg. 175). Additionally, Duwe (2020) found that 25% of male inmates and 43% of female inmates institutionalized within Minnesota's prison had a minimum of one prison infraction while incarcerated.

Although generally female inmates may have the same rates of prison violations, particular factors may have more of an impact on their propensity to engage in prison misconduct than male inmates. To demonstrate, an inmate's marital status and relationship with their children is of greater importance to female inmates and their propensity to engage in prison misconduct (Heilbrun et al., 2008; Mumola, 2000; Wright et al., 2013). Therefore, maintaining ties with family members, spouses and children through visitation and early release may act as a positive reinforcement to obey the rules (Houser, Belenko, & Brennan, 2012; Steiner & Wooldredge, 2009b). Additionally, a history of drug use may be more distinct and more

indicative of prison misconduct for female inmates than male inmates given the disparate motives for drug use by each sex (Bloom, Owen, Covington, et al., 2003; Covington, 1999; Daly, 1992; Houser et al., 2012; McClellan, Farabee, & Crouch, 1997; Steiner & Wooldredge, 2009a, 2009b; Van Voorhis, Wright, Salisbury, & Bauman, 2010; Wright, Van Voorhis, Salisbury, & Bauman, 2012). Lastly, commitment to education and employment are more important as a predictor of prison misconduct for men than female inmates (Houser et al., 2012; Huebner, 2003; Morris et al., 2010; Steiner & Wooldredge, 2008, 2009a; Toch et al., 1989; Wooldredge et al., 2001). This finding may be attributed to a higher educational status upon entrance into prison by female rather than male inmates and the adoption of the female caretaker. Therefore, education and employment may have less of an effect on the likelihood for female inmates to commit violations while in prison (Harer & Langan, 2001).

Visitation

Similar to the previous predictors of misconduct mentioned above, research on the relationship between visitation and prisoner misconduct has often reached mixed results. For instance, many researchers found that inmates who received visitation were less likely to engage in prison misconduct and saw a reduction recidivism rates as well (Atkin-Plunk & Armstrong, 2018; Cochran 2012, 2014; Cochran et al., 2017). However, some researchers found the opposite effect or no effect at all (Liebling, 1999; Ross & Richards, 2009; Siennick, Mears, & Bales, 2013). Additionally, there is a branch of research that has considered the theoretical importance of visitation in reducing forms of misconduct and recidivism rates. Specifically, components of the developmental perspective have been considered. In examining the visitation patterns of offenders, research revealed that when using trajectory modeling, those who received higher and early forms of visitation were less likely to engage in prison misconduct (Cihan, Reidy,

Sorensen, & Chism, 2020). An explanation for this result can be observed through the lack of social interaction an inmate receives thus contributing to social deprivation (Cochran, 2014; Conover, 2010). In doing so, increasing visitation bolster the formation of social and communal ties, therefore contributing to a reduction in prison misconduct and recidivism (Atkin-Plunk & Armstrong, 2018; Cochran et al., 2017).

Educational and Vocational Programming

There is little research on the relationship between correctional program participation and inmate misconduct and when research is supplied it is often inconsistent. When examining the effects of correctional education programs on prison misconduct, Adams et al. (1994) found that inmates experienced higher rates of recidivism and prison infractions an than those who did not participate in such programs (Lahm, 2009). In addition, when analyzing the number of hours of academic or vocational program participation, inmates who had more hours of participation were more likely to engage in prison misconduct than those who had less hours of participation (Adams et al., 1994; Lahm, 2009). Specifically, "with every 100-hour increase in program participation, minor and major rule violations also increased" (Adams et al., 1994; Lahm, 2009). Similarly, through additional observation, there was an increase in minor infraction by two times and three for major infractions for inmates who had more than 300 hours of participation in educational or vocational programs (Adams et al., 1994; Lahm, 2009). These results were replicated by Gendreau, Ross, and Izzo (1985) and Lahm (2009). In another study conducted by Langenbach et al. (1990) examining the effects of televised educational programs on prisoner misconduct, there was no substantial difference on prison infractions observed by those who participated in the program versus those who did not. Conversely, Linden, Perry, Ayers, and Parlett (1984), found a negative relationship between participation in college education programs

and prison misconduct. In contrast to the study conducted by Linden et al. (1984), Lahm (2009) concluded that inmates who participated in college education programs were less likely to have prison infractions when compared to other educational programs.

In another study conducted by Langenbach et al. (1990) examining the effects of televised educational programs on prisoner misconduct, there was no substantial difference on prison infractions observed by those who participated in the program versus those who did not. Conversely, Linden et al. (1984), found a negative relationship between participation in college education programs and prison misconduct. When focusing on vocational participation and prisoner misconduct, Alston (1981) examined the number of rule violations upon participation of vocational programs over a period of 3 months and found that prisoners who participated in vocational programs had less prison infractions than those who did not participate. Additionally, inmates who participated in vocational programs were less likely to recidivate upon re-entry and more likely to obtain employment, secure housing at a half-way house and less likely to have their parole revoked (Saylor & Gaes, 1992).

Therefore, this study will further examine the relationship between participation in educational programming and an individual's propensity to engage in prison misconduct while controlling for other important risk factors. Specifically, this study will include age, gender, race, criminal history, number of prior sentences, counseling, visitation, and vocational or job programming. By controlling for these variables, this study aims to provide clarification on the relationship between participation in correctional education programming and engagement in prison misconduct. In doing so, an increase in the confidence of the results will be observed when considering such factors. Therefore, given the similarities in the previous literature on the

predictors of prison misconduct and prison post-release outcomes three hypothesis have been generated:

1. Participants of vocational or educational programming are less likely than non-participants to engage in prison misconduct

2. Women are less likely than men to engage in forms of prison misconduct

3. African Americans are more likely than those from other racial groups to engage in prison misconduct

CHAPTER 3: METHODS

Data

The data utilized for this study is titled the 2004 survey of Inmates in State and Federal Correctional facilities (SISFCF) and was collected by the Bureau of Justice Statistics (BJS) and

included a nationally representative sample. The data for the current study included phone surveys collected from October 2003 through May of 2004 with inmates in federal correctional facilities. Interview data generally encompassed information about an offender's offense status, criminal history, familial history, personal characteristics, substance use, prison activities, programs and services. Prior to the start of the interviews, inmates were verbally and formally told in writing that participation was voluntary, and all information obtained would be confidential. Additionally, participants were also informed that the data collected would be used only for research purposes and that there was no identifying information in the survey results.

Sample

Researchers employed a two-stage clustered sampling technique by inmate and facility. In the first sampling stage, prison facilities were randomly selected and included an analysis of female, male and co-ed correctional facilities. In the second sampling stage, inmates were randomly selected based on the total number of facilities generated in the first sampling stage. Here, oversampling and subsampling methods were established in order to increase representation of non-drug offenders within the sample while also including drug offenders therefore creating a dependable estimate of the drug offender population. For the purpose of this study, data focuses on the nationally representative sample of inmates at federally owned and operated prisons. In the first stage of the sampling plan, 40 federal prisons were selected for this study, however only 39 prisons were interviewed (Table 1). In terms of prison selection, the federal prison dataset includes 131 male only facilities, 17 female only prisons, and no coed facilities. The sampling resulted in selection of 32 male facilities and 8 female facilities (see Table 2). The remaining male prisons were grouped into five strata based on security level

(administrative, high, medium, low, and minimum); similarly, the remaining female prisons were grouped into two strata based on security level (minimum and all other security levels). Within each stratum, facilities were ordered by size of population and selected with probability proportional to size. Of the 40 Federal facilities sampled, 1 resulted in non-interviews. For the second stage of the sampling plan, approximately 4,253 inmates were included in the sample as observed in Table 1. However, only 3,686 inmates were interviewed due 567 inmates refusing to participate (Table 2).

Table 1. Summary of the Sample Design for the Survey of Inmates in Federal Correctional Facilities, 2004

		Male Inmates				Female Inmates				Total
Stratum	**Administrative**	**High**	**Low**	**Medium**	**Minimum**	**Total male**	**Minimum**	**Other**	**Total female**	**Total**
Number of Prisons	6	14	21	33	57	131	13	4	17	148
Number of Inmates	5,465	18,032	28,847	45,903	22,830	121,077	4,558	4,861	9,419	130,496
Stage 1: Selection of Prisons										
Number of Prisons selected	3	5	8	11	5	32	4	4	8	40
Number of Prisons Participating	3	5	8	10	5	31	4	4	8	39
Stage 2: Selection of inmates										
Number of inmates in the sample	205	661	809	1,146	423	3,244	499	510	1,009	4,253
Number of inmates interviewed	188	459	721	960	400	2,728	474	484	958	3,686

Table 2. Response Rate for the 2004 SISCF and SIFCF

	SISCF	**SIFCF**
Second Stage response rate		
Number sampled	16,152	4,253
Number interviewed	14,499	3,686
Number Refused	1,653	567
Nonresponse rate	10.23	13.33
First Stage nonresponse *		
Estimated number of refusals	117	103
Total nonresponse rate	10.88	15.38

Measures

Dependent Variable

The dependent variable of this study is whether an inmate engaged in prison misconduct. Here prison misconduct is conceptualized as any violation that received disciplinary action while in prison. Within the data, prison misconduct was identified as being written up or found guilty of committing misconduct during their incarceration. Additional data was collected on the top 13 types of misconduct and primarily included physical or verbal assaults of staff or inmates, alcohol or drug violations, possession of stolen property, weapons, or other unauthorized substances, attempted escape, being out of place, disobeying orders, and any other major rule. However, the inclusion of the variety of different forms of prison misconduct yielded little significance. Originally, the responses of those who were written up or found guilty of committing prison misconduct were coded as (1) yes, (2), no, (7) don't know, (8) refused. Nevertheless, for the purpose of this analysis, the dependent variable was collapsed and re-coded as a dichotomous variable (1) Yes, (0) No. Table 3 illustrates the results.

Table 3. Misconduct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	2499	67.8	67.8	67.8
	Yes	1083	29.4	29.4	97.2
	missing	104	2.8	2.8	100.0
	Total	3686	100.0	100.0	

Independent Variable

The main focus of this study is to examine the relationship between correctional education and prison misconduct. In doing so, the independent variable utilized for this study is participation in a correctional educational program. Similar to the dependent variable, the educational variable was coded in the same format (1) Yes, (2) No. Those that answered yes were asked to provide additional information about the which program they participated in and included basic classes up to 9th grade, high school or GED classes, college level classes, English as a second language classes and any other educational classes that were not previously mentioned. Additionally, for those who had participated in GED level classes, additional questions were asked about an inmate's completion of such a program since admission.

Table 4. Education

		Frequency	%	Valid %	Cumulative %
Valid	Yes	1566	42.5	43.2	43.2
	No	2019	54.8	55.7	99.0
	Don't know	11	.3	.3	99.3
	Refused	26	.7	.7	100.0
	Total	3622	98.3	100.0	
Missing	Blank	64	1.7		
Total		3686	100.0		

Control Variables

Given that this study encompasses a non-random design, a number of control variables that may influence one's propensity to engage in prison misconduct were included (Caudy, Durso, & Taxman, 2013; Cihan et al., 2020; Gendreau et al., 1997; Lahm, 2009; Steiner et al., 2014; Wooldredge et al., 2001).

Age: Previous research concluded that inmates who were under the age of 21 were found to have more infractions will in prison while inmates who were older than 36 were found to have less infractions in prison (Steiner et al., 2014). Given this result, age was included as a control variable within this sample. Age of the inmate at the time of survey for this sample was only available as a categorical variable. The youngest age of an offender was less than 25 years and the highest age recorded was 96 years. The age variable was categorized into groups which include (1) less than 25 years of age, (2) 25-34 years of age, (3) 35-44 years of age, and (4) 45-96 years of age. The results can be found in Table 5.

Table 5. Age

		Frequency	%	Valid %	Cumulative %
Valid	< 25 yrs	345	9.4	9.4	9.4
	25-34	1288	34.9	34.9	44.3
	35-44	1107	30.0	30.0	74.3
	45-54	655	17.8	17.8	92.1
	55-64	240	6.5	6.5	98.6
	65-96	51	1.4	1.4	100.0
	Total	3686	100.0	100.0	

Gender: When examining the effects of gender on rates of prison misconduct, studies find that females commit forms of prison misconduct at the same rate as male offenders but are less likely to engage in violent forms of prison misconduct (Camp et al., 2003; Craddock, 1996; Harer & Langan, 2001; Wolff, Blitz, Shi, Siegel, & Bachman, 2007). That being said, gender is included as a control variable within this sample given its correlation with prison misconduct. Sex of the inmate was categorized as a dichotomous as male (1) or female (2). The results can be found in Table 6.

Table 6. Gender

		Frequency	%	Valid %	Cumulative %
Valid	Male	2728	74.0	74.0	74.0
	Female	958	26.0	26.0	100.0
	Total	3686	100.0	100.0	

Race: The relationship between race and prison misconduct is often unclear (Cao et al., 1997; Carroll, 1974, 1982; Craddock, 1996; Flanagan, 1983; Bonner 2017, Berg & DeLisi, 2006; Bonner, Rodriguez, & Sorensen, 2017). This study includes race as a variable that may have some impact on the trajectory of prison misconduct and therefore aims to provide some clarity on such a relationship. The race of the inmate was originally categorized as independently with each race variable having a prescribed alphanumeric code. Instead, each individual race variable was combined under one single code titled "race" and then was categorized as Caucasian (1), African American (2), and Hispanic (3) and other (4). Although originally the dataset included unique racial demographics on Asian, Pacific Islander, Native American and mixed offenders, only a small quantity of offenders fell into these categories. For the multivariate models race was dichotomized into African Americans (1) vs all other racial groups (0). The results can be found in Table 7.

Table 7. Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Caucasian non-Hispanic	1075	29.2	29.2	29.2
	African American non-Hispanic	1434	38.9	38.9	68.1
	Hispanic	909	24.7	24.7	92.7
	American Indian, Alaska Native non-Hispanic	102	2.8	2.8	95.5
	Asian, Pacific Islander, Native Hawaiian non-Hispanic	63	1.7	1.7	97.2
	Multiple races reported, non-Hispanic	97	2.6	2.6	99.8
	Missing	6	.2	.2	100.0
	Total	3686	100.0	100.0	

Criminal History: There has been an overwhelming support that an individual's criminal history is a predictor of engagement in prison misconduct (Lahm, 2008; Steiner & Wooldredge, 2009a; Wooldredge, Griffin, & Pratt, 2001). Therefore, an inmate's criminal history was examined within this sample. Questions regarding an individual's criminal were simply posed as whether the individual had a previous criminal history. Responses were dichotomized and re-coded as first timers (1) and recidivists as (0). The results can be found in Table 8.

Table 8. Criminal History

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Recidivists	2083	56.5	56.9	56.9
	First timers	1578	42.8	43.1	100.0
	Total	3661	99.3	100.0	
Missing	System	25	.7		
Total		3686	100.0		

Number of Prior Sentences: Similar to one's criminal history and prior sentence record, the number of sentences also has an effect on propensity to engage in prison misconduct (Craddock, 1996; Drury et al., 2010). Specifically, this variable examined the number of sentences an inmate received prior to ever being sentenced to probation or incarceration for their current offense. Responses were categorized as no prior sentence (0), one prior sentence (1), two prior sentences (2), three to five prior sentences (3), six to ten prior sentences (4), eleven or more prior sentences (5). The results can be found in Table 9.

Table 9. Number of Prior Sentences to Probation or Incarceration

		Frequency	%	Valid %	Cumulative %
Valid	No prior sentence	1530	41.5	41.5	41.5
	One prior sentence	548	14.9	14.9	56.4
	Two prior sentences	481	13.0	13.0	69.4
	Three to five prior sentences	689	18.7	18.7	88.1
	Six to ten prior sentences	272	7.4	7.4	95.5
	Eleven or more prior sentences	123	3.3	3.3	98.8
	Missing	43	1.2	1.2	100.0
	Total	3686	100.0	100.0	

Counseling: Although not originally included in the literature review about prison misconduct, very few studies examined the effects of counseling on prison misconduct. However, Lahm (2009) did analyze such a relationship in conjunction with educational and vocational programming and found that the results were insignificant. Due to the gap in the literature on the effects of counseling and prison misconduct, this study chose to include this variable and examine this relationship further. In doing so, the counseling variable examined

whether an inmate had received counseling while incarcerated. Responses were categorized as Yes (1), No (2), Don't know (7), Refused (8), Blank (9). From here, the data was recoded as a dichotomous variable with (1) yes and (0) no. The results can be found in Table 10.

Table 10. Counseling

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	2941	79.8	81.9	81.9
	yes	649	17.6	18.1	100.0
	Total	3590	97.4	100.0	
Missing	System	96	2.6		
Total		3686	100.0		

Visitation: Generally, correctional literature found that inmates who received visitation while they were incarcerated were less likely to engage in prison misconduct and saw a reduction recidivism rates as well (Atkin-Plunk & Armstrong, 2018; Cochran, 2012, 2014; Cochran et al., 2017). Due to the strong correlation between visitation and prison misconduct, visitation was included as a control variable for this sample. The visitation variable examined whether an inmate received visitation within the last month. Responses were categorized as Yes (1), No (2), Don't know (7), Refused (8), Blank (9). The data was then recoded as a dichotomous variable with (1) yes and (0) no. The results can be found in Table 11.

Table 11. Visits

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	2520	68.4	70.1	70.1
	yes	1073	29.1	29.9	100.0
	Total	3593	97.5	100.0	
Missing	System	93	2.5		
Total		3686	100.0		

Vocational and Job Training: Similar to educational programming, vocational programming and job training programs have shown to reduce rates of prison misconduct (French et al., 2006; Duwe, 2015; Pompocco, 2017). Examined whether an inmate had participated in a vocational or job training program while they were incarcerated. This variable was mutually exclusive from the educational variable. Responses were categorized as Yes (1), No (2), Don't know (7), Refused (8), Blank (9). Again, the data was recoded as a dichotomous variable with (1) yes and (0) no. The results can be found in Table 12.

Table 12. Vocational or Job Training Program

		Frequency	%	Valid %	Cumulative %
Valid	Yes	1136	30.8	31.4	31.4
	No	2451	66.5	67.7	99.0
	Don't know	10	.3	.3	99.3
	Refused	25	.7	.7	100.0
	Total	3622	98.3	100.0	
Missing	Blank	64	1.7		
Total		3686	100.0		

Analysis Plan

The objective of this study is to determine the relationship between correctional education and propensity to engage in prison misconduct. The analysis will proceed using SPSS statistical software and will proceed in two stages. First, the study will explore the bivariate relationship between each of the independent variables and the dependent variable. In the second stage, bivariate logistic regression model will be used to examine the study hypotheses. Given that the dependent variable is binary in its response (1= yes, 0= no), and the independent variable is also binary following similar coding guidelines mentioned above, a logistic regression model is beneficial in determining predictions and finding associations between these variables.

CHAPTER 4: RESULTS

Bivariate results

The primary objective of this study is to examine the effect of correctional education on prison misconduct. To begin, the tables below summarize the bivariate relationship between each of the independent variables and the dependent variable. The results are as follows:

As shown in Tables 13, education is significantly related (X^2 =50.115; p=0.000) to the dependent variable with 36.4 percent of those participating in educational programming more likely to engage in prison misconduct when compared to 25.4 percent of those who did not participate in a correctional education program. Next, age is significantly related (X^2=40.397; p= 0.000) to the dependent variable with 37.4 percent of inmates below the age of 25 are more likely to engage in prison misconduct when compared to inmates who are between 25-34 years of age (34.4 percent), 35-44 years of age (29.0 percent) and more than 45 years of age (23.3 percent). The bivariate results for age can be seen in table 14. As seen in Table 15, gender is significantly related (X^2=60.232; p= 0.000) to the dependent variable with males being more likely to engage in prison misconduct (33.8 percent) compared to females (20.2 percent).

Table 13. Education

			Education		
			No	Yes	Total
Misconduct	No	Count	1498	996	2494
		% within Education	74.6%	63.6%	69.8%
		% of Total	41.9%	27.9%	69.8%
	Yes	Count	510	569	1079
		% within Education	25.4%	36.4%	30.2%
		% of Total	14.3%	15.9%	30.2%
Total		Count	2008	1565	3573
		% within Education	100.0%	100.0%	100.0%
		% of Total	56.2%	43.8%	100.0%

Table 14. Age

			Age				
			< 25 yrs	25-34	35-44	45 and up	Total
Misconduct	no	Count	211	827	759	702	2499
		% within Age	62.6%	65.6%	71.0%	76.7%	69.8%
		% of Total	5.9%	23.1%	21.2%	19.6%	69.8%
	yes	Count	126	434	310	213	1083
		% within Age	37.4%	34.4%	29.0%	23.3%	30.2%
		% of Total	3.5%	12.1%	8.7%	5.9%	30.2%
Total		Count	337	1261	1069	915	3582
		% within Age	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	9.4%	35.2%	29.8%	25.5%	100.0%

Table 15. Gender

			Gender		
			Male	Female	Total
Misconduct	no	Count	1753	746	2499
		% within GENDER	66.2%	79.8%	69.8%
		% of Total	48.9%	20.8%	69.8%
	yes	Count	894	189	1083
		% within GENDER	33.8%	20.2%	30.2%
		% of Total	25.0%	5.3%	30.2%
Total		Count	2647	935	3582
		% within GENDER	100.0%	100.0%	100.0%
		% of Total	73.9%	26.1%	100.0%

Race is significantly related (X^2=62.718; p= 0.000) to the dependent variable. Table 16 reveals some interesting findings, specifically, the high percentage of engagement in prison misconduct by both African American and American Indian inmates. Such a relationship is of

much interest and is examined further in the multivariate regression analysis below. Next, criminal history is significantly related (X^2=76.926; p=0.000) to the dependent variable with 36.5 percent of recidivists engaging in prisoner misconduct at a higher rate when compared to first time offenders (33.2 percent). Such results may be observed in Table 17. Additionally, the number of prior sentences is significantly related (X^2=114.958; p=0.000) to the dependent variable with 46.6 percent of those with six or more prior sentences more likely to engage in prison misconduct. Finally, counseling is significantly related (X^2=0.122; p= 0.380) to the dependent variable with those receiving counseling more likely to engage in prison misconduct by 30.7 percent when compared to those without counseling (30.0 percent). The corresponding tables for the number of prior sentences and counseling can be found in Tables 18 and 19.

Table 16. Race

			Race						
			Caucasians	African American	Hispanic	American Indian	Asian	Multiple Races	Total
Misconduct	no	Count	780	874	676	61	43	60	2494
		% within Race	73.9%	63.2%	76.6%	60.4%	69.4%	64.5%	69.7%
		% of Total	21.8%	24.4%	18.9%	1.7%	1.2%	1.7%	69.7%
	yes	Count	275	509	206	40	19	33	1082
		% within Race	26.1%	36.8%	23.4%	39.6%	30.6%	35.5%	30.3%
		% of Total	7.7%	14.2%	5.8%	1.1%	0.5%	0.9%	30.3%
Total		Count	1055	1383	882	101	62	93	3576
		% within Race	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0 %
		% of Total	29.5%	38.7%	24.7%	2.8%	1.7%	2.6%	100.0 %

Table 17. Criminal History

			Criminal History		
			Recidivists	First timers	Total
Misconduct	no	Count	1300	1182	2482
		% within CRIMINAL HISTORY	63.8%	77.6%	69.7%
		% of Total	36.5%	33.2%	69.7%
	yes	Count	737	342	1079
		% within CRIMINAL HISTORY	36.2%	22.4%	30.3%
		% of Total	20.7%	9.6%	30.3%
Total		Count	2037	1524	3561
		% within CRIMINAL HISTORY	100.0%	100.0%	100.0%
		% of Total	57.2%	42.8%	100.0%

Table 18. Number of Prior Sentences

			No prior sentence	One prior sentence	Two prior sentences	Three to five prior sentences	Six to ten prior sentences	Eleven or more prior sentences	Total
Misconduct	no	Count	1166	366	305	432	141	72	2482
		% within Number of Prior Sentences	78.9%	67.9%	64.5%	64.3%	53.4%	59.5%	70.0%
		% of Total	32.9%	10.3%	8.6%	12.2%	4.0%	2.0%	70.0%
	yes	Count	312	173	168	240	123	49	1065
		% within Number of Prior Sentences	21.1%	32.1%	35.5%	35.7%	46.6%	40.5%	30.0%
		% of Total	8.8%	4.9%	4.7%	6.8%	3.5%	1.4%	30.0%
Total		Count	1478	539	473	672	264	121	3547
		% within Number of Prior Sentences	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0 %
		% of Total	41.7%	15.2%	13.3%	18.9%	7.4%	3.4%	100.0 %

Table 19. Counseling

			Counseling		
			no	yes	Total
Misconduct	no	Count	2044	446	2490
		% within Counseling	70.0%	69.3%	69.8%
		% of Total	57.3%	12.5%	69.8%
	yes	Count	878	198	1076
		% within Counseling	30.0%	30.7%	30.2%
		% of Total	24.6%	5.6%	30.2%
Total		Count	2922	644	3566
		% within Counseling	100.0%	100.0%	100.0%
		% of Total	81.9%	18.1%	100.0%

As shown in Tables 20 and 21, visits are statistically related (X^2=24.429; p= 0.000) to the dependent variable with those who receive less visits are more likely to engage in prison misconduct (32.7 percent) when compared with those who did receive visits (24.4 percent). Lastly, vocational/ Job training is significantly related (X^2=71.187; p=0.000) to the dependent variable with those participating in vocational/job programming are more likely to engage in prison misconduct when compared to those who did not participate in vocational/ job programming (39.7 percent versus 25.8 percent). Given the results mentioned above, a rejection of the null hypothesis is necessary.

Table 20. Visits

			Visits		
			no	yes	Total
Misconduct	No	Count	1685	810	2495
		% within Visits	67.3%	75.6%	69.8%
		% of Total	47.2%	22.7%	69.8%
	Yes	Count	817	261	1078
		% within Visits	32.7%	24.4%	30.2%
		% of Total	22.9%	7.3%	30.2%
Total		Count	2502	1071	3573
		% within Visits	100.0%	100.0%	100.0%
		% of Total	70.0%	30.0%	100.0%

Table 21. Vocational/ Job Programming

			Vocational/Job		
			No	Yes	Total
Misconduct	No	Count	1808	684	2492
		% within Voc/Job	74.2%	60.3%	69.8%
		% of Total	50.6%	19.1%	69.8%
	Yes	Count	629	451	1080
		% within Voc/Job	25.8%	39.7%	30.2%
		% of Total	17.6%	12.6%	30.2%
Total		Count	2437	1135	3572
		% within Voc/Job	100.0%	100.0%	100.0%
		% of Total	68.2%	31.8%	100.0%

Finally, further analyses were conducted on whether gendered forms of misconduct existed within such a dataset. In order to accomplish this task, a thorough examination was conducted within the codebook to verify whether such information was accessible. However, no results were observed. To remedy this situation, four cross tabulations were created that included gender and violent forms of prison misconduct. Here violent forms of misconduct were

conceptualized as either verbal or physical assaults. In doing so, the goal is to examine if violent forms of prison misconduct are affected by gender. Results concluded that men and women engage in different forms of misconduct but none of the findings regarding gender and prison misconduct were statistically significant. When examining gender and acts of physical assault of another inmate males were just as likely to assault another inmate when compared to female inmates (22.0 vs. 18.0 percent). In addition, males were just as likely to be found guilty of verbal assault on staff members when compared to their female counterparts (13.1 vs. 12.7 percent). In contrast, when examining the effect of gender on verbal assaults on another inmate, females were just as likely to have been written up for such actions compared to male inmates (6.9 vs. 4.4 percent). Lastly following the trend of the results previously mentioned, male inmates were just as likely to be written up for physically assaulting a staff member when compared to female inmates (3.1 vs. 2.6 percent). Such tables can be found in the Appendix A.

Multivariate Results

The study's three hypotheses were tested using a bivariate logistical regression model. The hypotheses included: 1. Participants of vocational or educational programming are less likely than non-participants to engage in prison misconduct. 2. Women are less likely than men to engage in forms of prison misconduct. 3. Inmates who identify as African American are more likely than those from other racial groups to engage in prison misconduct.

The results of the analysis are found in Table 22. Several of the variables were significantly related to prison misconduct. Results concluded that visits, age, gender, race, vocational/ job programming, and educational programming remained statistically significant to the dependent variable. The analysis revealed that the first hypothesis was not supported. In fact,

the results suggest that those who participated in educational or vocational programming were more likely to engage in prison misconduct.

The results find support for the second hypothesis as men were more likely to engage in prison misconduct. Finally, the third hypothesis was also supported. The analysis finds that African American inmates were more likely to engage in prison misconduct as compared to those from other racial groups.

Table 22. Multivariate Regression Model: Prison Misconduct

	B	S.E.	Wald	df	Sig.	Exp(B)
African Americans	.258	.080	10.500	1	.001	1.294
Counseling	.199	.103	3.773	1	.052	1.221
Visits	-.307	.088	12.194	1	.000	.736
Age	-.188	.041	20.719	1	.000	.829
Voc/Job	.539	.082	43.530	1	.000	1.714
Education	.355	.078	20.654	1	.000	1.426
Gender	-.587	.099	35.045	1	.000	.556
Criminal History	-.136	.124	1.201	1	.273	.873
Number of Prior Sentences	.142	.039	13.398	1	.000	1.152
Constant	-.200	.211	.897	1	.344	.819

Given that the bivariate tests revealed a fairly complex relationship between race and misconduct, a separate set of analyses by race were conducted. A dummy variable was created for each of the six separate race variables that pertain to an array of different ethnic and racial

backgrounds. Six models were estimated omitting one group at a time to examine the relationship between them. The final results concluded that gender, age, visits, vocational/ job programming, education, and number of prior sentences remained statistically significant to the dependent variables. In contrast, while using “African Americans versus other” as a reference variable, results revealed that only Caucasians and Hispanics are statically significant, which reaffirm the results found in the bivariate analysis of race. In other words, African Americans are more likely to engage in prison misconduct when compared to their Caucasian and Hispanic counterparts, however, they were not significantly different to the other three categories (American Indian, Asian, and the multi-racial group). The remaining models (found in Appendix A) find mixed results for understanding differences between the other racial groups. However, sample size is likely a limiting factor. Regardless, this analysis illustrates that the relationship between race and misconduct is likely more complex than predicted in the original hypothesis.

Table 23. Multivariate Regression Model: Comparing African Americans to Other Racial Groups

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1[a]	Criminal History	-.164	.124	1.740	1	.187	.849
	Number of Prior Sentences	.126	.039	10.431	1	.001	1.134
	Gender	-.605	.100	36.869	1	.000	.546
	Counseling	.174	.104	2.786	1	.095	1.190
	Visits	-.312	.088	12.427	1	.000	.732
	Age	-.192	.042	20.940	1	.000	.826
	Voc/Job	.541	.082	43.855	1	.000	1.718
	Education	.366	.078	21.768	1	.000	1.442
	Multi Race vs. Other	.040	.039	1.003	1	.317	1.040
	Caucasian vs. Other	-.236	.097	5.838	1	.016	.790
	Hispanic vs. Other	-.141	.034	16.846	1	.000	.868
	American Indian vs. Other	.052	.057	.856	1	.355	1.054
	Asian vs. Other	.034	.060	.318	1	.573	1.035
	Constant	.122	.209	.341	1	.559	1.130

CHAPTER 5: DISCUSSION

Understanding prison misconduct is important for a variety of reasons. First, preserving stability and order within a correctional institution is of utmost importance. Therefore, the threat of misconduct by an inmate poses a risk not only to staff members but to other prisoners as well (Bosama, 2020). In addition, engagement in prison misconduct undermines the correctional institution and has financial consequences (Bosama, 2020). Furthermore, engagement in prison misconduct has detrimental effects on the lives of prisoners. For one, when an inmate is found guilty of engaging in prison misconduct it could increase their sentence length or add additional consequences such as solitary confinement. Finally, institutional behavior such as prisoner misconduct is indicative of behavior outside of prison as well (Bosama, 2020). That being said, there is a need to conduct research on effective programs used to reduce forms of prisoner misconduct.

The purpose of this study was to examine the relationship between correction education and prison misconduct. More specifically, this study examined whether those who had participated in correctional education programming were less likely to engage in prison misconduct. Here within a nationally represented federal prison sample, the dependent variable, prison misconduct, was conceptualized as whether an inmate had been written up or found guilty of committing any form of prison misconduct. Conversely, participation in correctional education programming was conceptualized as participation in either an educational or vocational program. There are three hypotheses that have been generated from this analysis. The first hypothesis proposed that those who participated in correctional education or vocational programs were less likely to engage in prison misconduct. Additionally, the second hypothesis suggested that in regard to gender, females were less likely to engage in prison misconduct.

Lastly, the third and finally hypothesis, argued that race is a statistically significant predictor of prison misconduct and that African Americans are more likely to engage in prison misconduct.

To address the first hypothesis regarding correctional education and prison misconduct, a bivariate analysis was conducted and concluded that there was indeed a relationship between the dependent variable and independent variable. Such a relationship was examined further, and the multivariate analysis found that correctional education and vocational programming was significant to prison misconduct, thereby rejecting the null hypothesis. Furthermore, the results revealed that those who participated in correctional education programs were more likely to engage in prison misconduct. Findings from this study reaffirm conclusions made in previous studies about the effects of correctional educational programs on prison misconduct. For instance, a handful of studies found that inmates experienced higher rates of recidivism and prison infractions than those who did not participate in such programs (Lahm, 2009; Adam, 1994)). However, when focusing on vocational participation and prisoner misconduct, previous studies concluded that upon participation of vocational programs over a period of 3 months, prisoners who participated in vocational programs had less prison infractions than those who did not participate (Alston, 1981). Additionally, inmates who participated in vocational programs were less likely to recidivate upon re-entry and more likely to obtain employment, secure housing at a half-way house and less likely to have their parole revoked (Saylor & Gaes, 1992). The mixed results regarding correctional education may be attributed to the unknown ordering of when inmates were receiving their infractions.

Similarly, for the second hypothesis, the bivariate analysis revealed that there was a relationship between gender and prison misconduct. Specifically, the results from the bivariate analysis rejected the null hypothesis and concluded that males were indeed more likely to engage

in forms of prison misconduct. Previous research on the effects of gender on prison misconduct is often biased utilizing a male sample. Therefore, this project is beneficial in that it includes both female and male inmates in the analysis. That being said, when female offenders have been included in the sample research has found that females commit forms of prison misconduct at the same rate as male offenders but are less likely to engage in violent forms of prison misconduct (Camp et al., 2003; Craddock, 1996; Harer & Langan, 2001; Wolff, Blitz, Shi, Siegel, & Bachman, 2007). To examine difference in the rates of violent forms of prison misconduct, an additional bivariate analysis was conducted on whether specific violent forms of prison misconduct were statistically different across both genders. However, such results were insignificant. Within the multivariate analysis, results supported the findings from the original bivariate analysis on gender and prison misconduct.

As noted in the results section, the relationship between misconduct and race is complex. Again, for the third hypothesis regarding race, the bivariate analysis revealed some interesting results. First, there was a statistically significant relationship between race and the dependent variable. More specially, such results revealed that African Americans were indeed more likely to engage in prison misconduct. However, the bivariate results also concluded that there were other racial groups that had high rates of prison misconduct. To investigate this further, a multivariate analysis was conducted by using 6 different dummy variables for each racial category. In doing so, the multivariate analysis further supported the original hypothesis, and the bivariate analysis results that African Americans are more likely to engage in prison misconduct. The results from the bivariate and multivariate analysis align with previous research. For example, some studies have found that ethnicity, specifically ethnic minorities are a profound predictor of prisoner misconduct (Cao et al., 1997; Carroll, 1974, 1982; Craddock, 1996;

Flanagan, 1983; Goetting & Howsen, 1983, 1986; Hewitt, Poole, & Regoli, 1984; Jaman, 1971; Myers & Levy, 1978; Petersilia, Honig, Hubay, & Corporation, 1980; Sorensen, Wrinkle, & Gutierrez, 1998; Toch & Adams, 1986; Wooldredge et al., 2001; Wooldredge, 1994; Zink, 1957). Similarly, other researchers have concluded that African Americans and Hispanics have higher rates of prison misconduct violations than their Caucasian counterparts (Berg & DeLisi, 2006; Bonner, Rodriguez, & Sorensen, 2017; Fuller & Orsagh, 1977; Gaes, Wallace, Gilman, Klein-Saffran, & Suppa, 2002; Harer & Steffensmeier, 1996; Huebner, 2003; Sorensen & Davis, 2011; Steiner & Wooldredge, 2009a). Overall, the results from this study confirm that race is a significant predictor of prison misconduct.

However, the analysis revealed that several other important factors were predictive of misconduct in the bivariate analysis. To begin, an inmate's age was a considerable predictor of prisoner misconduct and was statistically significantly to the dependent variable. Specifically, inmates under the age of 25 were more likely to engage in prison misconduct when compared to older inmates. This finding is consistent with previous research (Steiner, 2014). Similarly, an inmate's criminal history was found to be statistically significant to the dependent variable, with those categorized as recidivists being more likely to engage in prison misconduct. Previous research also supports such a finding (Lahm, 2008; Steiner & Wooldredge, 2009a; Wooldredge, Griffin, & Pratt, 2001). In contrast, during the multivariate analysis for race, one's criminal history was an insignificant predictor of misconduct when African Americans were compared to all other racial groups but remained significant when each dummy variable was compared to the "African American vs. other variable". Such results provide more insight of the power of race on misconduct. Additionally, the number of prior sentences was a significant predictor of prisoner misconduct and was statistically related to the dependent variable. Specifically, those sentenced

as a juvenile were more likely to engage in prisoner misconduct. Finally, within the bivariate analysis, counseling was found to be significantly related to the dependent variable with those receiving counseling more likely to engage in prison misconduct when compared to those without counseling. Although counseling was included in the analysis, there is a lack of relevant literature to explain this relationship and may be useful to explore in future research. Finally, visits were also statistically related to the dependent in the bivariate analysis with those who receive less visits are more likely to engage in prison misconduct when compared with those who did receive visits. Research on the relationship between visitation and prison misconduct is often mixed. However, the finding on the relationships between visitation and misconduct in the bivariate analysis is consistent with the majority of current research (Atkin-Plunk and Armstrong, 2018; Cochran 2012, 2014; Cochran et al., 2017).

While the study did not find support for the main hypothesis, it is worth noting that the risk-need-responsivity model would suggest that participation in education and vocational programming alone may be insufficient in changing behavior. As previously mentioned, the RNR model has outlined criminogenic factors that may directly affect one's criminal behavior. However, Andrew and Bonta (2010) have also highlighted dynamic non-criminogenic factors that indirectly affect one's criminality. Such factors include, low educational attainment, poor housing, mental instability, little to no employment history and an absence of prosocial activities. That being said, these factors alone are not indicative of criminal behavior but may exacerbate the factors that lead to criminal behavior (Taxman et al. 2013). More specifically, these factors affect how an individual will adjust in correctional programming and society (Taxman et al. 2013).

Education is a non-criminogenic factor that remains important. As stated earlier, offenders who enter the criminal justice system are often met with educational deficiencies that pertain to their literacy skills (Taxman et al., 2013). However, the lack of education alone does not define the causality of criminal behavior. The lack of education then affects other factors of criminality such as employment or the lack thereof (Taxman et al., 2013). From the RNR model, the responsivity factor may help explain the lack of significant results found within this study. In particular, programs should employ cognitive behavioral programming in prison as a way to reduce misconduct. As discussed earlier, targets of general responsivity include modifying agents of anti-social attitudes and feeling, values and skill deficiencies that pertain to methods of problem solving (Latessa et al., 2020). Therefore, treatment approaches should focus on three common practices. The first examines structured social learning programs where clients are taught new skills where prosocial behaviors are modeled and upheld. The second approach includes cognitive behavioral interventions which seek to modify attitudes, values about their social circle, emotional in- stability, employment, substance use as well as alternative criminogenic needs. Finally, the last approach encompasses family-based interventions that teaches families how to effectively encourage prosocial behavior skills so they can aid in the encouragement of positive choices of other family members (Latessa et al., 2020). In doing so, the responsivity component of the RNR model encompasses the belief that individualized factors that are important to the offender should be addressed in treatment. That being said, individualized factors that may affect one's ability to perform well in their program include cognitive skills, emotional regulation and mental health problems (Taxman et al., 2013). Therefore, the importance is placed on matching offenders with the correct treatment programs.

That being said, there is a need to analyze the current effects of correctional education on not only post-release outcomes but pre-release outcomes. In order to accomplish this task, the incorporation of representative samples, inclusion of recent literature and the application of rigorous methodological guidelines should be examined. In addition, programs should include components from the RNR model as it will guide correctional agencies and staff in determining which programs are the most effective and how to implement such programs (Davis, Bozick, Steele, Saunders, & Miles, 2013; Taxman et al., 2013; Latessa et al., 2020). Therefore, this study supports the utilization of cognitive behavior therapy approaches in addition to correctional education programs to examine how thoughts influence the behavior of individuals while increasing program efficacy (Latessa et al., 2020).

CHAPTER 6: LIMITATIONS

Causal Mechanisms

Although this study seems promising it does not go without limitations. The first limitation is the temporal ordering of the dependent and independent variable. Researchers within the social science discipline commonly refer to the concept of causality as a change in the independent variable produces change in the dependent variable (Miller, 2000). Therefore, the assumption is that the time order of the relationship between the independent variable and the dependent variable has already been defined (Miller, 2000). That being said, this particular study focuses on the effect of correctional education on prison misconduct. However, without the dates of when the inmate first participated in their educational program and when they received their first infraction, it is impossible to establish the temporal ordering of such events. In addition, it is very possible that the infraction occurred before the expected participation in the educational program therefore, creating even more confusion about the direction of the relationship between the independent and dependent variable. Overall, the lack of causal mechanisms provided in the research analysis of the effectiveness of correctional education programs on prison misconduct, creates concern on the internal validity of the intervention strategy and ultimately the validity of the results. Additionally, without providing a casual mechanism, difficulty arises in the generation of effective policies on prison education for correctional populations.

Study Design and Sampling

The lack of a valid causal mechanism on the relationship between correctional education and recidivism rates may be attributed to the design of the study. Although there are many beneficial

aspects to cross sectional designs, such designs do not go without their limitations. One major dilemma of cross-sectional designs and previously mentioned is the inability to observe the temporal ordering of the independent variable on the dependent variable (Solem, 2015). In other words, in the absence of a longitudinal design the ability to determine the direct relationship between the cause and the effect becomes challenging (Solem, 2015).

Another threat to external and internal validity is attrition rates. Attrition occurs when cases are lost from a sample over time or over a series of sequential processes (Jupp, 2006). Attrition rates are generally high for studies that use pre- and post-test quasi-experimental designs (Jupp, 2006). Although attrition itself does not automatically become an issue, the issue becomes problematic when the variation of people who leave and the people who stay. For example, if you have a diverse sample of participants within your study and you experience attrition of minority participants, this variation in participation may skew the results to weigh more heavily and therefore will restrict the ability to generalize the estimates outside the population that share the same characteristics as those who did not leave the study. The original purpose of this study was to analyze the effect of correctional education on recidivism rates. However, after further examination of the community-based variables, the high attrition rates yielded very little valuable results and in doing so shifted the focus to prison-based variables such as prisoner misconduct. One benefit to including prison-based variables is the reduction of the influence of confounding variables.

Measures, Conceptualization, and Operationalization

Criminological research has yet to fully determine the causal mechanism behind the effects of correctional education on recidivism rates. In an overall analysis of correctional research,

there is an absence of an explanation as to why the expected outcome was observed. The lack of a causal mechanism to explain the effect of correctional education on recidivism rates calls into question the internal validity of the program. The construction of causal mechanisms through theoretical framework ultimately contributes to an explanation of why outcome was achieved (Riemer, 1942). From a theoretical perspective, a few correctional studies have included the foundations of Hirschi's (1969) Social Bond Theory to explain the effect of educational programs on recidivism rates. According to the Social Bond Theory, delinquency and the like can be attributed to weaker or low social bonds (Akers et al, 2017). Therefore, strong social bonds including attachment, commitment, involvement and belief reinforce conformity, values and norms (Akers et al, 2017). Correctional research has specifically focused on the measurement of commitment as it pertains to relationship of education to one's criminality (Smith, 2017).

Although this theory is promising in its empirical validity, the concepts of social bonding are not enough to provide a direction for correctional education program results. Instead, the original intent of this study argued for the inclusion of a life course perspective on correctional education in conjunction with social bonding theory. Social Bonding theory proposes that delinquency results from weak or broken social bonds. Social bonds therefore are measure by attachment, commitment, involvement and belief. From the lens of the Life Course Perspective, abrupt turning points and gradual changes such as aging, finding employment and getting married increase one's social bonds to society (Akers et al, 2017). Therefore, individuals that lack good stable marriages or employment are more likely to engage in criminal behavior (Akers et al, 2017). Modifications were made to the original concepts of the Age- Graded Informal Social control theory to include differential life course trajectories. Trajectories are defined as the

socially structured sequences of events and roles that have an effect on individuals (Akers et al, 2017). Timing and desistance from crime were affect by four factors including: employment, military service, incarceration and marriage (Akers et al, 2017). Attachment pertains to parents, parental supervision and peers are important to controlling delinquency and maintain conformity. For the purpose of this paper, the exchange of one institution (family) is replaced with another incarceration. The new rehabilitative ideology of penitentiary systems is presumed to aim at controlling and reforming the criminal behavior of offenders and successfully re-entering these individuals into society. Many offenders are detained in correctional settings early in their adolescence and are released during their adulthood. Given this premise, offenders experience a gap in their developmental life course one that is replaced with incarceration. Henceforth, the administration of educational programs in prison may help decrease the developmental gap and contribute to positive trajectories such as employment upon release (Ramakers, et al., 2017). In doing so, the reconsideration and implementation of a causal mechanism into correctional research may be able to increase and reaffirm program success based on the reduction of prison misconduct and indirectly recidivism rates. In contrast, given the design of this study, the data is not reflective of a longitudinal design and therefore the measures are inadequate for theoretical testing.

Secondary Data

Lastly, in conjunction with the study design, the utilization of secondary data can also be problematic. For one, the original data collection may be unacceptable in answering additional questions that pertain to theory, policy, and or research (Laub, 1990). That being said, the questionability of using such data may jeopardize the external validity of the overall outcome.

Concerns generally include whether such measures accurately measure the content of interest. Without originally collecting the data, this study fails in its ability to produce generalizable results.

CHAPTER 7: POLICY IMPLICATIONS

General Responsivity Expanded and the Effectiveness of CBT

As previously mentioned, there are an array of individual factors that contribute to rates of prison misconduct (Duwe et al., 2017). For instance, factors such as one's criminal history, their age and their criminal behavior and corresponding attitudes are indicative of one's propensity to engage in prison misconduct (Duwe, 2017). Furthermore, additional components such as educational attainment, race and family factors are considered to be moderately related to rates of prison misconduct (Duwe, 2017). That being said, one of the foundations of effective correctional treatment is the incorporation of the Risk, Needs and Responsivity (RNR) model (Taxman et al., 2006). Within this model, emphasis is placed on placing those are deemed high risk within programs that both intensive and highly structured. In doing so, treatment programs should be tailored to the individual and focus on their criminogenic needs (Taxman et al., 2006). Therefore, in congruence with the RNR model, policy implications for this study include the utilization of cognitive behavioral (CBT) programs to effectively reduce rates of prison misconduct. Although educational attainment remains important, an inmate's behavior and attitude may affect how they perform within their program (Taxman et al., 2013).

Theoretical models that support cognitive behavioral interventions derive from cognitive theories and social learning theories. The cognitive theory argues that individuals process information differently which produce distorted methods of thinking which in turn creates psychological dilemmas (Latessa et al., 2020). Coupled with cognitive theories, Bandura (1965, 1973, 1977) proposed a social learning theory that analyzes the ways in which people interact and learn from their environments. A salient component of this theory includes the process of

modeling, imitation and conditioning from social networks which aids in the formulation of attitudes, behaviors, and knowledge. A combination of these theories has contributed to the foundation of correctional intervention practices (Latessa et al., 2020). Cognitive behavioral interventions (CBI) are important in several ways. First, CBI examine current risk factors rather than past or antiquated events. Secondly, CBI programs focus on actions rather than discussions. Here, the promotion of new skills adopted to combat highly perilous behavior. Thirdly, CBI programs terminate negative or deviant behaviors by engendering prosocial behavior (Latessa et al., 2020). Part of the process of CBI embodies the ability to re-structure cognitive operations. In order to accomplish this task, the client must be able to recognize the effect their thoughts and emotions on their behavior (Latessa et al., 2020). Therefore, part of cognitive restructuring process includes identifying negative emotions and thoughts formed during a high-risk situation and combating such processes with cognitive skills such as positive coping mechanisms (Latessa et al., 2020).

Overall, CBI programs have several benefits. For one, they are applicable in a myriad of different settings. Additionally, CBI programs provided direction in proper formatting, the identification of specific targets as well as activities that promote the utilization of new skills. Moreover, CBI programs are financially economical (Latessa et al., 2020). Empirically, Cognitive Behavioral Therapy (CBT) has been quite effective in reducing recidivism rates with an average rate of reduction between 25-30 percent (Golden, Gatchel, & Cahill, 2006; Landenberger & Lipsey, 2005; Lipsey, 2009; L ̈osel & Schmucker, 2005; Mpofu, Athanasou, Rafe, & Belshaw, 2018; Pearson, Lipton, Cleland, & Yee, 2002; Wilson, Bouffard, & MacKenzie, 2005). In addition, research on the effects of CBT programs in reducing prison misconduct have also been supportive (Duwe, 2017, French & Gendreau, 2006). As for specific

populations, additional research has concluded that CBT aligns with the risk component of the RNR model and is especially beneficial for disparate high-risk offenders in correctional settings (Barnes, Hyatt, & Sherman, 2017; Mpofu et al., 2018). In terms of age, CBT is not only effective for adult populations but juvenile populations as well. Lipsey (2009) found that in a meta-analysis of juvenile interventions, CBT was ranked one the highest programs with the most successful rate in reducing recidivism by 20 percent. As for ethnically and racially diverse populations, there is a paucity in the literature regarding the effectiveness for minorities. In doing so, the conclusion about whether CBT works for such populations are often mixed (Spiropoulos, Van Voorhis, & Salisbury, 2018). For instance, Van Voorhis, Spiropoulos, Ritchie, Seabrook, and Spruance (2013) found that when examining the effects of R. R. Ross and Fabiano (1985) Reasoning and Rehabilitation Cognitive Behavioral Therapy Program, effects were higher for Caucasian parolees versus African American parolees. Similar results have been addressed by Golden (2002), Hudley and Graham (1993), Leiber and Mawhorr (1995), and Rubino, Petkus, and Anderson (2020) when comparing Caucasian and African American offenders and CBT programs. Conversely, Usher and Stewart (2014) found that CBT interventions were equally statistically significant for both Caucasian and African American correctional populations. Lastly, observation on the effects of CBT for female offenders has proved to have a positive effect and portrayed a reduction in re-arrest and revocation rates Duwe and Clark (2015); Gehring, Van Voorhis, and Bell (2010).

References

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

Adams, K., Bennett, K. J., Flanagan, T. J., Marquart, J. W., Cuvelier, S. J., Fritsch, E., ... Burton Jr, V. S. (1994). A large-scale multidimensional test of the effect of prison education programs on offenders' behavior. The Prison Journal, 74(4), 433–449.

Akers, R. L., Sellers, C. S., & Jennings, W. G. (2017). Criminological theories: introduction, evaluation, and application. New York, NY: Oxford University Press.

Alper, M., Durose, M. R., & Markman, J. (2018). 2018 update on prisoner recidivism: a 9-year follow-up period (2005-2014). US Department of Justice, Office of Justice Programs, Bureau of Justice . . . .

Alston, J. G. (1981). Preparation for life after incarceration.

Anderson, S. V., & Moore, E. A. (1995). Evaluation of the impact of correctional education programs on recidivism. Ohio Department of Rehabilitation and Correction, Bureau of Planning and . . . .

Andrews, D. A., & Bonta, J. (2010). Rehabilitating criminal justice policy and practice. Psychology, Public Policy, and Law, 16(1), 39.

Aos, S., & Drake, E. (2013). Prison, Police and Programs: Evidence-Based Options That Reduce Crime and Save Money (Doc. No. 13-11-1901). Olympia, WA: Washington State Institute for Public Policy

Atkin-Plunk, C. A., & Armstrong, G. S. (2018). Disentangling the relationship between social ties, prison visitation, and recidivism. Criminal Justice and Behavior, 45(10), 1507–1526.

Austin, J. (2006). How much risk can we take-the misuse of risk assessment in corrections. Fed. Probation, 70, 58.

Austin, J., Coleman, D., Peyton, J., & Johnson, K. D. (2003). Reliability and validity study of the lsi-r risk assessment instrument. Washington: The Institute on Crime, Justice, and Corrections, George Washington University.

Bachmann, R., & Schutt, R. K. (2017). The practice of research in criminology and criminal justice. SAGE.

Baird, C. (2009). A question of evidence: A critique of risk assessment models used in the justice system. National Council on Crime and Delinquency Madison, WI.

Bandura, A. (1965). Influence of models' reinforcement contingencies on the acquisition of imitative responses. Journal of personality and social psychology, 1(6), 589.

Bandura, A. (1973). Aggression: A social learning analysis. prentice-hall. Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. Psychological review, 84(2), 191.

Barnes, G. C., Hyatt, J. M., & Sherman, L. W. (2017). Even a little bit helps: an implementation and experimental evaluation of cognitive-behavioral therapy for high-risk probationers. Criminal Justice and Behavior, 44(4), 611–630.

Batiuk, M. E., Lahm, K. F., McKeever, M., Wilcox, N., & Wilcox, P. (2005). Disentangling the effects of correctional education: Are current policies misguided? an event history analysis. Criminal justice, 5(1), 55–74.

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

Berg, M. T., & Huebner, B. M. (2011). Reentry and the ties that bind: An examination of social ties, employment, and recidivism. Justice quarterly, 28(2), 382–410.

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

Bloom, B., Owen, B., Covington, S., et al. (2003). Gender-responsive strategies. Research, practice and guiding principles for women offenders, 31–48.

Bonner, H. S., Rodriguez, F. A., & Sorensen, J. R. (2017). Race, ethnicity, and prison disciplinary misconduct. Journal of Ethnicity in Criminal Justice, 15(1), 36–51.

Bonta, J., & Wormith, J. S. (2013). Applying the risk-need-responsivity principles to offender assessment. *What works in offender rehabilitation: An evidence-based approach to assessment and treatment*, 71-93.

Bosma, A. Q., C. van Ginneken, E. F. J., Sentse, M., & Palmen, H. (2020). Examining Prisoner Misconduct: A Multilevel Test Using Personal Characteristics, Prison Climate, and Prison Environment. *Crime & Delinquency*, *66*(4), 451–

484. https://doi.org/10.1177/0011128719877347

Bozick, R., Steele, J., Davis, L., & Turner, S. (2018). Does providing inmates with education improve postrelease outcomes? a meta-analysis of correctional education programs in the united states. Journal of Experimental Criminology, 14(3), 389–428.

Brewster, D. R., & Sharp, S. F. (2002). Educational programs and recidivism in Oklahoma: Another look. The Prison Journal, 82(3), 314–334.

Brown, B. S., & Spevacek, J. D. (1971). Disciplinary offenses and offenders at two differing correctional institutions. Corrective Psychiatry & Journal of Social Therapy.

Calleja, N. G., Dadah, A. M., Fisher, J., & Fernandez, M. (2016). Reducing juvenile recidivism through specialized reentry services: A second chance act project. Journal of Juvenile Justice, 5(2), 1.

Camp, S. D., Gaes, G. G., Langan, N. P., & Saylor, W. G. (2003). The influence of prisons on inmate misconduct: A multilevel investigation. Justice Quarterly, 20(3), 501–533.

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

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

Carroll, L. (1982). Race, ethnicity, and the social order of the prison. The pains of imprisonment, 181–203.

Carson, A. E. (2020). Prisoners in 2019. Retrieved December 03, 2020, from https://www.bjs.gov/content/pub/pdf/p19.pdf

Case, P., & Fasenfest, D. (2004). Expectations for opportunities following prison education: A discussion of race and gender. Journal of Correctional Education, 24–39.

Caudy, M. S., Durso, J. M., & Taxman, F. S. (2013). How well do dynamic needs predict recidivism? implications for risk assessment and risk reduction. Journal of Criminal Justice, 41(6), 458–466.

Caudy, M. S., Tang, L., Ainsworth, S. A., Lerch, J., & Taxman, F. S. (2013). Reducing recidivism through correctional programming: Using meta-analysis to inform the rnr simulation tool. In Simulation strategies to reduce recidivism (pp. 167–193). Springer.

Cecil, D. K., Drapkin, D. A., MacKenzie, D. L., & Hickman, L. J. (2000). The effectiveness of adult basic education and life-skills programs in reducing recidivism: A review and assessment of the research. Journal of Correctional Education, 207–226.

Chapman, W., & Alexander, J. (1981). Adjustment to prison: A review of inmate characteristics associated with misconduct, victimization, and self injury in confinement. State of New York, Department of Correctional Services, Program Planning . . . .

Chlup, D. T. (2006). The legacy of miriam van waters: The warden who would be their teacher first. Journal of Correctional Education, 158–187.

Cihan, A., Reidy, T. J., Sorensen, J., & Chism, K. A. (2020). Assessing the developmental patterns of visitation on prison misconduct: do visitation patterns matter? Criminal Justice Studies, 33(2), 153–169.

Clear, T. R. (2009). *Imprisoning communities: How mass incarceration makes disadvantaged neighborhoods worse*. Oxford University Press.

Clemmer, D. (1940). (1958). the prison community. new york: Holt, rinehart & winston.

Cochran, J. C. (2012). The ties that bind or the ties that break: Examining the relationship between visitation and prisoner misconduct. Journal of Criminal Justice, 40(5), 433–440.

Cochran, J. C. (2014). Breaches in the wall: Imprisonment, social support, and recidivism. Journal of research in crime and delinquency, 51(2), 200–229.

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

Cochran, J. C., Mears, D. P., & Bales, W. D. (2017). Who gets visited in prison? individual-and community-level disparities in inmate visitation experiences. Crime & Delinquency, 63(5), 545–568.

Conover, T. (2010). Newjack: Guarding sing sing. Vintage.

Costopoulos, J. S., Plewinski, A. M., Monaghan, P. L., & Edkins, V. A. (2017). The impact of us government assistance on recidivism. Criminal Behaviour and Mental Health, 27(4), 303–311.

Covington, S. S. (1999). Creating gender-specific treatment for substance abusing women and girls in community correctional settings. Offender Programs Report, 3(3), 1–43.

Craddock, A. (1996). A comparative study of male and female prison misconduct careers. The

Prison Journal, 76(1), 60–80.

Cullen, F. T. (2013). Rehabilitation: Beyond nothing works. Crime and justice, 42(1), 299–376.

Cullen, F. T., & Gendreau, P. (2000). Assessing correctional rehabilitation: Policy, practice, and prospects. Criminal justice, 3(109-175).

Daly, K. (1992). Women's pathways to felony court: Feminist theories of lawbreaking and problems of representation. S. Cal. Rev. L. & Women's Stud., 2, 11.

Davis, L. M., Bozick, R., Steele, J. L., Saunders, J., & Miles, J. N. (2013). Evaluating the effectiveness of correctional education: A meta-analysis of programs that provide education to incarcerated adults. Rand Corporation.

Dillon, L., & Colling, K. (2010). Effectiveness of written materials in a rehabilitative program for female offenders: a case study at the Montana women's prison. Journal of Correctional Education, 61(4), 335–347.

Dilulio Jr, J. J. (1995). The Coming of the Super-Predators, Wkly. *Standard, Nov*, *27*.

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

Duke, B. (2018). A meta-analysis comparing educational attainment prior to incarceration and recidivism rates in relation to correctional education. Journal of Correctional Education (1974-), 69(1), 44–59.

Duwe, G. (2017). The use and impact of correctional programming for inmates on pre-and post-release outcomes. US Department of Justice, Office of Justice Programs, National Institute of . . ..

Duwe, G. (2020). The development and validation of a classification system predicting severe and frequent prison misconduct. The Prison Journal, 100(2), 173–200.

Duwe, G., & Clark, V. (2014). The effects of prison-based educational programming on recidivism and employment. The Prison Journal , 94 (4), 454–478.

Duwe, G., & Clark, V. (2015). Importance of program integrity: Outcome evaluation of a gender-responsive, cognitive-behavioral program for female offenders. Criminology & Public Policy, 14(2), 301–328.

Duwe, G. (2013a). What Works with Minnesota Prisoners: A Summary of the Effects of Correctional Programming on Recidivism, Employment and Cost Avoidance. St. Paul, MN: Minnesota Department of Corrections.

Ellis, D., Grasmick, H. G., & Gilman, B. (1974). Violence in prisons: A sociological analysis. American Journal of Sociology, 80(1), 16–43.

Faily, A., Roundtree, G. A., & Miller, R. K. (1980). A study of the maintenance of discipline with regard to rule infractions at the Louisiana correctional institute for women. Corrective & Social Psychiatry & Journal of Behavior Technology, Methods & Therapy.

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

Flanagan, T. J. (1980). Time served and institutional misconduct: Patterns of involvement in disciplinary infractions among long-term and short-term inmates. Journal of Criminal Justice, 8(6), 357–367.

Flanagan, T. J. (1983). Correlates of institutional misconduct among state prisoners: A research note. Criminology, 21(1), 29–40.

Flores, J. (2016). Caught up: Girls, surveillance, and wraparound incarceration (Vol. 2). Univ of California Press.

Flores, J., Barahona-Lopez, K., Hawes, J., & Syed, N. (2020). High points of learning behind bars: Characteristics of positive correctional education experiences for incarcerated girls. International Journal of Educational Development, 77, 102210.

Folk, J. B., Stuewig, J. B., Blasko, B. L., Caudy, M., Martinez, A. G., Maass, S., . . . Tangney, J. P. (2018). Do demographic factors moderate how well criminal thinking predicts recidivism? International journal of offender therapy and comparative criminology, 62(7), 2045–2062.

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

Fuller, D. A., & Orsagh, T. (1977). Violence and victimization within a state prison system. Criminal Justice Review, 2(2), 35–55.

Gaes, G. G., & McGuire, W. J. (1985). Prison violence: The contribution of crowding versus other determinants of prison assault rates. Journal of research in crime and delinquency, 22(1), 41–65.

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

Gehring, K., Van Voorhis, P., & Bell, V. (2010). What works" for female probationers? An evaluation of the moving on program. Women, Girls, and Criminal Justice, 11(1), 6–10.

Gendreau, P., Andrews, D. A., & Th´eriault, Y. (2001). Correctional program assessment inventory—2000 (cpai-2000). Saint John, Canada: University of New Brunswick.

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

Gendreau, P., & Ross, B. (1979). Effective correctional treatment: Bibliotherapy for cynics. Crime & Delinquency, 25(4), 463–489.

Gendreau, P., & Ross, R. R. (1987). Revivification of rehabilitation: Evidence from the 1980s. Justice Quarterly, 4(3), 349–407.

Gendreau, P., Ross, R. R., & Izzo, R. (1985). Institutional misconduct: The effects of the uvic program at matsqui penitentiary. Canadian J. Criminology, 27, 209.

Gerber, J., & Fritsch, E. J. (1995). Adult academic and vocational correctional education programs: A review of recent research. Journal of Offender Rehabilitation, 22(1-2), 119–142.

Gibbons, J. J., & Katzenbach, N. d. (2006). Confronting confinement-a report of the commission on safety and abuse in america's prisons. Wash. UJL & Pol'y, 22, 385.

Glaser, D. (1964). The effectiveness of a prison and parole system. indianapolis: Bobbs-merrill co. Inc.

Goetting, A., & Howsen, R. M. (1983). Blacks in prison: A profile. Criminal Justice Review, 8(2), 21–31.

Goetting, A., & Howsen, R. M. (1986). Correlates of prisoner misconduct. Journal of Quantitative Criminology, 2(1), 49–67.

Gottfredson, M. R., & Adams, K. (1982). Prison behavior and release performance. Law and Policy Quarterly, 4, 373-391.

Goffman, E. (1961). Asylums: essays on the social situation of mental patients and other inmates.

Golden, L. S. (2002). Evaluation of the efficacy of a cognitive behavioral program for offenders on probation: Thinking for a change (Unpublished doctoral dissertation). University of Texas Southwestern Medical Center at Dallas.

Golden, L. S., Gatchel, R. J., & Cahill, M. A. (2006). Evaluating the effectiveness of the national institute of corrections' "thinking for a change" program among probationers. Journal of Offender Rehabilitation, 43(2), 55–73.

Goodstein, L., & Wright, K. N. (1989). Inmate adjustment to prison. In The American prison (pp. 229–251). Springer.

Gottfredson, S. D., & Moriarty, L. J. (2006). Statistical risk assessment: Old problems and new applications. Crime & Delinquency, 52(1), 178–200.

Haigler, K. O., Harlow, C., O'Connor, P., & Campbell, A. (1994). Literacy behind prison walls. Washington, DC: US Department of Education, National Center for Education Statistics, NCES-1994-102.

Hall, L. L. (2015). Correctional education and recidivism: Toward a tool for reduction. Journal of Correctional Education (1974-), 66(2), 4–29.

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

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

Hayner, N. S., & Ash, E. (1940). The prison as a community. American Sociological Review, 5(4), 577–583.

Heilbrun, K., Dematteo, D., Fretz, R., Erickson, J., Yasuhara, K., & Anumba, N. (2008). How "specific" are gender-specific rehabilitation needs? an empirical analysis. Criminal Justice and Behavior, 35(11), 1382–1397.

Heil, P., Harrison, L., English, K., & Ahlmeyer, S. (2009). Is prison sexual offending indicative of community risk? Criminal Justice and Behavior, 36, 892-908.

Hewitt, J. D., Poole, E. D., & Regoli, R. M. (1984). Self-reported and observed rule-breaking in prison: A look at disciplinary response. Justice Quarterly, 1(3), 437–447.

Hill, G. (1985). Predicting recidivism using institutional measures. In D. P. Farrington & T. Roger (Eds.), Prediction in criminology (pp. 96-118). Albany, NY: State University of New York Press.

Hirschi, T. (1983). Causes of delinquency. 1969. University of California, Berkeley.

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

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

Hudley, C., & Graham, S. (1993). An attributional intervention with African American boys labeled as aggressive. Child Development, 64, 124–138.

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

Huebner, B. M., Varano, S. P., & Bynum, T. S. (2007). Gangs, guns, and drugs: Recidivism among serious, young offenders. Criminology and Public Policy, 6, 187-222.

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

Jacobson, F., & McGee, E. (1965). Englewood project: Re-education: A radical correction of incarcerated delinquents. Federal Correctional Institution, Englewood, Colorado (mimeo).(Cited in Lipton et al., 1975.).

Jaman, D. R. (1971). Behavior during the first year in prison: As related to parole outcome. Department of Corrections.

Jancic, M. (1998). Does correctional education have an effect on recidivism? Journal of Correctional Education, 152–161.

Jensen, E. L., & Reed, G. E. (2006). Adult correctional education programs: An update on current status based on recent studies. Journal of Offender Rehabilitation, 44(1), 81–98.

Johnson, D. C., Shearon, R. W., & Britton, G. M. (1974). Correctional education and recidivism in a woman's correctional center. Adult Education, 24(2), 121–129.

Johnson, E. H. (1966). Pilot study: Age, race and recidivism as factors in prison infractions. Canadian Journal of Corrections, 8(4), 268–283.

Jupp, V. (2006). The sage dictionary of social research methods. SAGE.

Kim, R. H., & Clark, D. (2013). The effect of prison-based college education programs on recidivism: Propensity score matching approach. Journal of Criminal Justice, 41(3), 196–204.

Lahm, K. F. (2008). Inmate-on-inmate assault: A multilevel examination of prison violence. Criminal justice and behavior, 35(1), 120–137.

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

Landenberger, N. A., & Lipsey, M. W. (2005). The positive effects of cognitive– behavioral programs for offenders: A meta-analysis of factors associated with effective treatment. Journal of experimental criminology, 1(4), 451– 476.

Langenbach, M., North, M. Y., Aagaard, L., & Chown, W. (1990). Televised instruction in oklahoma prisons: A study of recidivism and disciplinary actions. Journal of Correctional Education, 87–94.

Latessa, E. J., Johnson, S. L., & Koetzle, D. (2020). What works (and doesn't) in reducing recidivism. Routledge.

Latessa, E. J., Lugo, M., Pompoco, A., Sullivan, C., & Wooldredge, J. (2015). Evaluation of ohio's prison programs. University of Cincinnati Corrections Institute Cincinnati, OH.

Lattimore, P. K., Visher, C. A., & Linster, R. L. (1995). Predicting rearrest for violence among serious youthful offenders. Journal of Research in Crime and Delinquency, 32, 54-83.

Lattimore, P. K., MacDonald, J. M., Piquero, A. R., Linster, R. L., & Visher, C. A. (2004). Studying the characteristics of arrest frequency among paroled youthful offenders. Journal of Research in Crime and Delinquency, 41, 37-57.

Laub J.H., Sampson R.J., Kiger K. (1990) Assessing the Potential of Secondary Data Analysis: A New Look at the Gluecks' Unraveling Juvenile Delinquency Data. In: Kempf K.L. (eds) Measurement Issues in Criminology. Springer, New York, NY. https://doi.org/10.1007/978-1-4613-9009-1_10

La Vigne, N., Davies, E., Palmer, T., & Halberstadt, R. (2008). Release planning for successful reentry. A guide for corrections, service providers, and community groups.

Lee, D. R. (2016). Correctional Education and Social Reintegration. *Issues in Corrections: Research, Policy, and Future Prospects*, *175*.

Leiber, M. J., & Mawhorr, T. L. (1995). Evaluating the use of social skills training and employment with delinquent youth. Journal of Criminal Justice, 23(2), 127–141.

Lewis-Beck, M., Bryman, A. E., & Liao, T. F. (2004). The sage encyclopedia of social science research methods. Sage Publications.

Liebling, A. (1999). Prison suicide and prisoner coping. Crime and Justice, 26, 283–359.

Lilley, D. R., DeVall, K., & Tucker-Gail, K. (2019). Drug courts and arrest for substance possession: Was the African American community differentially impacted? Crime & Delinquency, 65(3), 352–374.

Linden, R., Perry, L., Ayers, D., & Parlett, T. (1984). An evaluation of a prison education program. Canadian J. Criminology, 26, 65.

Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. Victims and offenders, 4(2), 124–147.

Lockwood, S., Nally, J. M., Ho, T., & Knutson, K. (2012). The effect of correctional education on postrelease employment and recidivism: A 5- year follow-up study in the state of Indiana. Crime & delinquency, 58(3), 380–396.

Lockwood, S. K., Nally, J. M., & Ho, T. (2016). Race, education, employment, and recidivism among offenders in the united states: An exploration of complex issues in the

Indianapolis metropolitan area. International Journal of Criminal Justice Sciences, 11(1), 57.

Logan-Greene, P., Nurius, P. S., Herting, J. R., Hooven, C. L., Walsh, E., & Thompson, E. A. (2011). Multi-domain risk and protective factor predictors of violent behavior among at-risk youth. Journal of youth studies, 14(4), 413–429.

L ̈osel, F., & Schmucker, M. (2005). The effectiveness of treatment for sexual offenders: A comprehensive meta-analysis. Journal of Experimental Criminology, 1(1), 117–146.

Lowry, R. C. (2009). Reauthorization of the federal higher education act and accountability for student learning: The dog that didn't bark. Publius: The Journal of Federalism, 39(3), 506–526.

Mabli, J., Holley, C., Patrick, J., & Walls, J. (1979). Age and prison violence: Increasing age heterogeneity as a violence-reducing strategy in prisons. Criminal justice and behavior, 6(2), 175–186.

MacDonald, J. M. (1999). Violence and drug use in juvenile institutions. Journal of Criminal Justice, 27(1), 33–44.

Makarios, M., Lovins, L., Latessa, E., & Smith, P. (2016). Staff quality and treatment effectiveness: An examination of the relationship between staff factors and the effectiveness of correctional programs. Justice Quarterly, 33(2), 348–367.

Mallory, J. (2015). Denying pell grants to prisoners: Race, class, and the philosophy of mass incarceration. International Social Science Review, 90 (1).

Martinson, R. (1974). What works?-questions and answers about prison reform. The public interest, 35, 22.

McClellan, D. S., Farabee, D., & Crouch, B. M. (1997). Early victimization, drug use, and criminality: A comparison of male and female prisoners. Criminal justice and behavior, 24(4), 455–476.

Miller, W. (2000). Temporal Order and Causal Inference. *Political Analysis, 8*(2), 119-140. Retrieved March 8, 2021, from http://www.jstor.org/stable/25791601

Morris, R. G., Longmire, D. R., Buffington-Vollum, J., & Vollum, S. (2010). Institutional misconduct and differential parole eligibility among capital inmates. Criminal Justice and Behavior, 37(4), 417–438.

Motiuk, L. L. (1994). Antecedents and consequences of prison adjustment: a systematic assessment and reassessment approach.

Mpofu, E., Athanasou, J. A., Rafe, C., & Belshaw, S. H. (2018). Cognitive- behavioral therapy efficacy for reducing recidivism rates of moderate-and high-risk sexual offenders: A scoping systematic literature review. Inter- national journal of offender therapy and comparative criminology, 62(1), 170–186.

Mumola, C. J. (2000). Incarcerated parents and their children. US Department of Justice, Office of Justice Programs, Bureau of Justice . . . .

Myers, L. B., & Levy, G. W. (1978). Description and prediction of the in- tractable inmate. Journal of Research in Crime and Delinquency, 15(2), 214–228.

Nally, J., Lockwood, S., Knutson, K., & Ho, T. (2012). An evaluation of the effect of correctional education programs on post-release recidivism and employment: An empirical study in indiana. Journal of Correctional Education (1974-), 63(1), 69–89.

National Institute of Justice (2008). Recidivism. https://niij.ojp.gov/topics/corrections/recidivism

O'Leary, V., & Glaser, D. (1972). The assessment of risk in parole decision making. In J. West Donald (Ed.), The future of parole (pp. 135-198). London: Duckworth.

Oliver, R. M., Wehby, J. H., & Reschly, D. J. (2011). Teacher classroom management practices: Effects on disruptive or aggressive student behavior. Campbell Systematic Reviews, 7(1), 1–55.

Ottaway, A. (1968). Durkheim on education. British Journal of Educational Studies, 16(1), 5–16.

Owen, B. A., & Bloom, B. (1995). Profiling the needs of California's female prisoners: A needs assessment. NIC Information Center.

Parrotta, K. L., & Thompson, G. H. (2011). Sociology of the prison class- room: Marginalized identities and sociological imaginations behind bars. Teaching Sociology, 39(2), 165–178.

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

Pearson, F. S., Lipton, D. S., Cleland, C. M., & Yee, D. S. (2002). The effects of behavioral/cognitive-behavioral programs on recidivism. Crime & Delinquency, 48(3), 476–496.

Petersilia, J., Honig, P., Hubay, C., & Corporation, R. (1980). The prison experience of career criminals. US Department of Justice, National Institute of Justice.

Pollock-Byrne, J. M., & Pollock-Byrne, J. M. (2002). Women, prison & crime. Brooks/Cole Publishing Company Pacific Grove, CA.

Poole, E. D., & Regoli, R. M. (1979). Race, institutional rule breaking, and disciplinary response: A study of discretionary decision making in prison. Law & Soc'y Rev., 14, 931.

Pompoco, A., Wooldredge, J., Lugo, M., Sullivan, C., & Latessa, E. J. (2017). Reducing inmate misconduct and prison returns with facility education programs. *Criminology & Public Policy*, *16*(2), 515-547.

Pope, A., Vanchieri, C., Gostin, L. O., et al. (2007). Ethical considerations for research involving prisoners. National Academies Press.

Quint, J. (2006). Meeting five critical challenges of high school reform. lessons from research on three reform models. MDRC.

Ramakers, A., Nieuwbeerta, P., Van Wilsem, J., & Dirkzwager, A. (2017). Not Just Any Job Will Do: A Study on Employment Characteristics and Recidivism Risks After Release. *International journal of offender therapy and comparative criminology*, *61*(16), 1795–1818. https://doi.org/10.1177/0306624X16636141

Ramirez, J. (1983). Race and the apprehension of inmate misconduct. Journal of Criminal Justice, 11(5), 413–427.

Reagen, M. V., Stoughton, D. M., Smith, T., & Davis, J. (1976). School behind bars: A

descriptive overview of correctional education in the American prison system. Scarecrow Press Metuchen, NJ.

Riemer, S. (1942). Theory and quantitative analysis in criminological research. American journal of sociology, 48(2), 188–201.

Riggs, C. (2015). What do three year recidivism rates look like by region and county? (Rep.). Retrieved April 12, 2017.

Rose, C. (2004). Women's participation in prison education: What we know and what we don't know. Journal of Correctional Education, 78–100. Rose, K., & Rose, C. (2014). Enrolling in college while in prison: Factors that promote male and female prisoners to participate. Journal of Correctional Education (1974-), 65(2), 20–39.

Ross, J. I., & Richards, S. C. (2009). Beyond bars: Rejoining society after prison. Penguin.

Ross, R. R., & Fabiano, E. A. (1985). Time to think: A cognitive model of delinquency prevention and offender rehabilitation. Inst of Social Sc & Arts Incorporated.

Rubino, L., Petkus, A., & Anderson, V. R. (2020). Cognitive and psychological programming for correctional populations. Routledge Handbook on American Prisons, 243–260.

Saylor, W. G., & Gaes, G. G. (1992). Prep study links unicor work experience with successful post-release outcome. Department of Justice, Federal Bureau of Prisons, Office of Research and . . . .

Scott, K. J. (2016). Corrections and education: The relationship between education and recidivism. Journal of Intercultural Disciplines, 15, 147.

Sedgley, N. H., Scott, C. E., Williams, N. A., & Derrick, F. W. (2010). Prison's dilemma: Do education and jobs programmes affect recidivism? Economica, 77(307), 497–517.

Senese, J. D., & Kalinich, D. B. (1993). A study of jail inmate misconduct: An analysis of rule

violations and official processing. Journal of Crime and Justice, 16(1), 131–147.

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

Smith, P., Gendreau, P., & Swartz, K. (2009). Validating the principles of effective intervention: A systematic review of the contributions of meta-analysis in the field of corrections. Victims and Offenders, 4(2), 148–169.

Smith, M. (2017). Prison Programming and Recidivism as a Method of Social Bond Theory: A Meta-Analysis of Research from 2000-2015.

Solem, R. C. (2015). Limitation of a cross-sectional study. *American Journal of Orthodontics and Dentofacial Orthopedics*, *148*(2), 205.

Sorensen, J., & Davis, J. (2011). Violent criminals locked up: Examining the effect of incarceration on behavioral continuity. Journal of Criminal Justice, 39(2), 151–158.

Sorensen, J., Wrinkle, R., & Gutierrez, A. (1998). Patterns of rule-violating behaviors and adjustment to incarceration among murderers. The Prison Journal, 78(3), 222–231.

Spangenberg, G. (2004). Current issues in correctional education: A compilation & discussion council for advancement of adult literacy.

Spiropoulos, G. V., Van Voorhis, P., & Salisbury, E. J. (2018). Programmatic moderators of cbt correctional treatment for Whites and african americans. International journal of offender therapy and comparative criminology, 62(8), 2236–2258.

Spivak, A. L., & Damphousse, K. R. (2006). Who returns to prison? A survival analysis of recidivism among adult offenders in Oklahoma, 1985–2004 Justice Research and Policy, 8, 57-88.

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

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

Steiner, B., & Wooldredge, J. (2009a). Individual and environmental effects on assaults and nonviolent rule breaking by women in prison. Journal of Research in Crime and Delinquency, 46(4), 437–467.

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

Sykes, G. (1958). The pains of imprisonment. The society of captives: A study of a maximum-security prison, 63–78.

Taxman, F. S., Pattavina, A., Caudy, M. S., Byrne, J., & Durso, J. (2013). The empirical basis for the RNR model with an updated RNR conceptual framework. In *Simulation strategies to reduce recidivism* (pp. 73-111). Springer, New York, NY.

Thomas, C. W. (1977). Theoretical perspectives on prisonization: A comparison of the importation and deprivation models. J. Crim. L. & Criminology, 68, 135.

Thomas, M. (2020). An exploration of recidivism based on education and race. Toch, H. (1976). A psychological view of prison violence. Prison violence. Lexington, MA: DC Heath and Company.

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

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

Trulson, C. R., DeLisi, M., & Marquart, J. W. (2011). Institutional misconduct, delinquent background, and rearrest frequency among serious and violent delinquent offenders. Crime and Delinquency, 57, 709-731.

Trulson, C. R., Marquart, J. W., Mullings, J. L., & Caeti, T. J. (2005). In between adolescence and adulthood: Recidivism outcomes of a cohort of state delinquents. Youth Violence and Juvenile Justice, 3, 355-387.

Trulson, C. R. (2007). Determinants of disruption: Institutional misconduct among state committed delinquents. Youth Violence and Juvenile Justice, 5, 1-28.

Usher, A. M., & Stewart, L. A. (2014). Effectiveness of correctional programs with ethnically diverse offenders: A meta-analytic study. International journal of offender therapy and comparative criminology, 58(2), 209–230.

Vacca, J. S. (2004). Educated prisoners are less likely to return to prison. Journal of Correctional Education, 297–305.

Van Voorhis, P., Spiropoulos, G., Ritchie, P. N., Seabrook, R., & Spruance, L. (2013). Identifying areas of specific responsivity in cognitive–behavioral treatment outcomes. Criminal Justice and Behavior, 40(11), 1250–1279.

Van Voorhis, P., Wright, E. M., Salisbury, E., & Bauman, A. (2010). Women's risk factors and their contributions to existing risk/needs assessment: The current status of a gender-responsive supplement. Criminal Justice and Behavior, 37(3), 261–288.

Wilson, D. B., Bouffard, L. A., & MacKenzie, D. L. (2005). A quantitative review of structured, group-oriented, cognitive-behavioral programs for offenders. Criminal Justice and Behavior, 32(2), 172–204.

Winterfield, L., Coggeshall, M., Burke-Storer, M., Correa, V., & Tidd, S. (2009). The effects of postsecondary correctional education:" final report". Urban Institute (NJ1).

Wolff, N., Blitz, C. L., Shi, J., Siegel, J., & Bachman, R. (2007). Physical violence inside prisons: Rates of victimization. Criminal justice and behavior, 34(5), 588–599.

Wolfgang, M. E. (1961). Quantitative analysis of adjustment to the prison community. The Journal of Criminal Law, Criminology, and Police Science, 51(6), 607–618.

Wooldredge, J., Griffin, T., & Pratt, T. (2001). Considering hierarchical models for research on inmate behavior: Predicting misconduct with multilevel data. Justice Quarterly, 18(1), 203–231.

Wooldredge, J. D. (1994). Inmate crime and victimization in a southwestern correctional facility. Journal of Criminal Justice, 22(4), 367–381.

Wright, E. M., DeHart, D. D., Koons-Witt, B. A., & Crittenden, C. A. (2013). 'buffers' against crime? exploring the roles and limitations of positive relationships among women in

prison. Punishment & Society, 15(1), 71– 95.

Wright, E. M., Van Voorhis, P., Salisbury, E. J., & Bauman, A. (2012). Gender- responsive lessons learned and policy implications for women in prison: A review. Criminal Justice and Behavior, 39(12), 1612–1632.

Wright, K. N. (1989). Race and economic marginality in explaining prison adjustment. Journal of Research in Crime and Delinquency, 26(1), 67– 89.

Zink, T. M. (1957). Are prison troublemakers different? The Journal of Criminal Law, Criminology, and Police Science, 433–434.

Zivan, M. (1966). Youth in trouble: A vocational approach. Children's Village.

APPENDIX A: ADDITIONAL BIVARIATE AND MULTIVARIATE RESULTS

Gender vs. Violent Forms of Misconduct- Physical Assault on Another Inmate

			Yes	No	Refused	Total
Gender	Male	Count	197	695	2	894
		% within Gender	22.0%	77.7%	0.2%	100.0%
	Female	Count	34	154	1	189
		% within Gender	18.0%	81.5%	0.5%	100.0%
Total		Count	231	849	3	1083
		% within Gender	21.3%	78.4%	0.3%	100.0%

Gender vs. Violent Forms of Misconduct- Physical Assault on a Staff Member

			Yes	No	Refused	Total
Gender	Male	Count	28	864	2	894
		% within Gender	3.1%	96.6%	0.2%	100.0%
	Female	Count	5	183	1	189
		% within Gender	2.6%	96.8%	0.5%	100.0%
Total		Count	33	1047	3	1083
		% within Gender	3.0%	96.7%	0.3%	100.0%

Gender vs. Violent Forms of Misconduct- Verbal Assault on a Staff Member

			Yes	No	Refused	Total
Gender	Male	Count	117	775	2	894
		% within Gender	13.1%	86.7%	0.2%	100.0%
	Female	Count	24	164	1	189
		% within Gender	12.7%	86.8%	0.5%	100.0%
Total		Count	141	939	3	1083
		% within Gender	13.0%	86.7%	0.3%	100.0%

Gender vs. Violent Forms of Misconduct- Verbal Assault on Another Inmate

			Yes	No	Refused	Total
Gender	Male	Count	39	853	2	894
		% within Gender	4.4%	95.4%	0.2%	100.0%
	Female	Count	13	175	1	189
		% within Gender	6.9%	92.6%	0.5%	100.0%
Total		Count	52	1028	3	1083
		% within Gender	4.8%	94.9%	0.3%	100.0%

Multivariate Regression Model: Comparing Caucasians to Other Racial Groups

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Criminal History	-.162	.124	1.704	1	.192	.850
	Number of Prior Sentences	.126	.039	10.429	1	.001	1.134
	Gender	-.607	.100	37.015	1	.000	.545
	Counseling	.173	.104	2.766	1	.096	1.189
	Visits	-.309	.088	12.221	1	.000	.734
	Age	-.192	.042	21.046	1	.000	.825
	Voc/Job	.536	.082	42.853	1	.000	1.708
	Education	.365	.078	21.641	1	.000	1.441
	MultiRace vs. Other	.079	.040	3.882	1	.049	1.082
	Hispanic vs. Other	-.063	.038	2.706	1	.100	.939
	AmerIndian vs. Other	.111	.058	3.721	1	.054	1.118
	Asian vs. Other	.081	.061	1.763	1	.184	1.084
	African Americans	.239	.098	5.991	1	.014	1.270
	Constant	-.110	.226	.236	1	.627	.896

a. Variable(s) entered on step 1: CRIMINAL HISTORY COLLAPSED, NUMBER OF PRIOR SENTENCES TO PROBATION OR INCARCERATION, GENDER, CounselingRev, VisitsRev, AGE CATEGORY, VocJobRev, EduRev, MultiRacevsother, Hispanicvsother, AmerIndianvsother, Asianvsother, Blacks.

Multivariate Regression Model: Comparing Hispanics to Other Racial Groups

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Criminal History	-.162	.124	1.704	1	.192	.850
	Number of Prior Sentences	.126	.039	10.429	1	.001	1.134
	Gender	-.607	.100	37.015	1	.000	.545
	Counseling	.173	.104	2.766	1	.096	1.189
	Visits	-.309	.088	12.221	1	.000	.734
	Age	-.192	.042	21.046	1	.000	.825
	Voc/Job	.536	.082	42.853	1	.000	1.708
	Education	.365	.078	21.641	1	.000	1.441
	MultiRace vs. Other	.110	.041	7.352	1	.007	1.117
	AmerIndian vs. Other	.158	.059	7.286	1	.007	1.171
	Asian vs. Other	.119	.061	3.746	1	.053	1.126
	African Americans	.427	.103	17.097	1	.000	1.532
	Caucasian vs. Other	.188	.114	2.706	1	.100	1.207
	Constant	-.298	.215	1.917	1	.166	.742

a. Variable(s) entered on step 1: CRIMINAL HISTORY COLLAPSED, NUMBER OF PRIOR SENTENCES TO PROBATION OR INCARCERATION, GENDER, CounselingRev, VisitsRev, AGE CATEGORY, VocJobRev, EduRev, MultiRacevsother, AmerIndianvsother, Asianvsother, Blacks, Whitevsother.

Multivariate Regression Model: Comparing American Indians to Other Racial Groups

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Criminal History	-.162	.124	1.704	1	.192	.850
	Number of Prior Sentences	.126	.039	10.429	1	.001	1.134
	Gender	-.607	.100	37.015	1	.000	.545
	Counseling	.173	.104	2.766	1	.096	1.189
	Visits	-.309	.088	12.221	1	.000	.734
	Age	-.192	.042	21.046	1	.000	.825
	Voc/Job	.536	.082	42.853	1	.000	1.708
	Education	.365	.078	21.641	1	.000	1.441
	MultiRace vs. Other	.005	.053	.008	1	.929	1.005
	Asian vs. Other	-.008	.073	.012	1	.913	.992

	African Americans	-.206	.226	.830	1	.362	.814
	Caucasian vs. Other	-.445	.231	3.721	1	.054	.641
	Hispanic vs. Other	-.211	.078	7.286	1	.007	.810
	Constant	.335	.303	1.222	1	.269	1.398

a. Variable(s) entered on step 1: CRIMINAL HISTORY COLLAPSED, NUMBER OF PRIOR SENTENCES TO PROBATION OR INCARCERATION, GENDER, CounselingRev, VisitsRev, AGE CATEGORY, VocJobRev, EduRev, MultiRacevsother, Asianvsother, Blacks, Whitevsother, Hispanicvsother.

Multivariate Regression Model: Comparing Asians to Other Racial Groups

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Criminal History	-.162	.124	1.704	1	.192	.850
	Number of Prior Sentences	.126	.039	10.429	1	.001	1.134
	Gender	-.607	.100	37.015	1	.000	.545
	Counseling	.173	.104	2.766	1	.096	1.189
	Visits	-.309	.088	12.221	1	.000	.734
	Age	-.192	.042	21.046	1	.000	.825
	Voc/Job	.536	.082	42.853	1	.000	1.708
	Education	.365	.078	21.641	1	.000	1.441
	MultiRace vs. Other	.011	.062	.034	1	.854	1.011
	African Americans	-.166	.302	.302	1	.582	.847
	Caucasian vs. Other	-.405	.305	1.763	1	.184	.667
	Hispanic vs. Other	-.198	.102	3.746	1	.053	.821
	AmerIndian vs. Other	.010	.092	.012	1	.913	1.010
	Constant	.295	.362	.665	1	.415	1.343

a. Variable(s) entered on step 1: CRIMINAL HISTORY COLLAPSED, NUMBER OF PRIOR SENTENCES TO PROBATION OR INCARCERATION, GENDER, CounselingRev, VisitsRev, AGE CATEGORY, VocJobRev, EduRev, MultiRacevsother, Blacks, Whitevsother, Hispanicvsother, AmerIndianvsother.

Multivariate Regression Model: Comparing Multiple Races to Other Racial Groups

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Criminal History	-.162	.124	1.704	1	.192	.850
	Number of Prior Sentences	.126	.039	10.429	1	.001	1.134
	Gender	-.607	.100	37.015	1	.000	.545
	Counseling	.173	.104	2.766	1	.096	1.189
	Visits	-.309	.088	12.221	1	.000	.734
	Age	-.192	.042	21.046	1	.000	.825
	Voc/Job	.536	.082	42.853	1	.000	1.708
	Education	.365	.078	21.641	1	.000	1.441
	African Americans	-.234	.237	.981	1	.322	.791
	Caucasians vs. Other	-.473	.240	3.882	1	.049	.623
	Hispanic vs. Other	-.220	.081	7.352	1	.007	.802
	AmerIndian vs. Other	-.007	.079	.008	1	.929	.993
	Asian vs. Other	-.014	.075	.034	1	.854	.986
	Constant	.364	.315	1.328	1	.249	1.438

a. Variable(s) entered on step 1: CRIMINAL HISTORY COLLAPSED, NUMBER OF PRIOR SENTENCES TO PROBATION OR INCARCERATION, GENDER, CounselingRev, VisitsRev, AGE CATEGORY, VocJobRev, EduRev, Blacks, Whitevsother, Hispanicvsother, AmerIndianvsother, Asianvsother.